

**Examining Disproportionality in School Discipline Practices for Native American Students
in Canadian Schools Implementing PBIS**

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Abstract

The purpose of this exploratory study was to investigate the extent to which Canadian students with Aboriginal status (i.e., Native American students) receive disproportionate levels of Office Discipline Referrals (ODRs) and more severe administrative consequences relative to students without Aboriginal status. The participants were all 1750 students in five British Columbia and Alberta elementary and middle schools implementing PBIS, with adaptations to be more responsive to Aboriginal culture. Binary multilevel logistic regression was used to determine to what extent disproportionality was present. Contrary to hypotheses, Students with Aboriginal status were no more likely to receive ODRs than students without Aboriginal status. Students with Aboriginal status were more likely, but not statistically significantly more likely, to receive suspensions and harsh administrative consequences from ODRs. Potential factors for these encouraging findings include the small sample, the Canadian context, and implementation of PBIS with culturally responsive adaptations for students from Aboriginal cultures. Results are discussed with respect to how these findings may contribute to reducing disproportionate discipline for Native American students in the United States.

Examining Disproportionality in School Discipline Practices for Native American Students in Canadian Schools Implementing PBIS

Because of the well-documented racial and ethnic disproportionality in school discipline in the US (Losen, 2011) and the relative dearth of research regarding school discipline for American Indian students (Krezmien, Leone, & Achilles, 2006; Wallace, Goodkind, Wallace, & Bachman, 2008), it may be beneficial to examine discipline practices in other countries for further understanding and possible remedies. In Canada, it has long been acknowledged that individuals with Aboriginal status¹ (those who self-identify as having Aboriginal ancestry, including First Nations, Métis, and Inuit heritage; Ministry of Education, n.d.) experience significant disparities in health, socio-economic status and employment outcomes (Department of Justice Canada, 2004; Ministry of Advanced Education and Labour Market Development, 2008; Ministry of Child and Family Development, 2009; Office of the Provincial Health Officer, 2007). Individuals with Aboriginal status are at greater risk for infant mortality, teenage pregnancy, youth suicide, childhood obesity, diabetes, and substance abuse (Office of the Provincial Health Officer, 2007). Moreover, a higher proportion of Aboriginal families live below the federal Low-Income Cut-Off (LICO) criteria. In 2005, the average annual income for Aboriginal households was \$23,888, which is significantly lower than the average income of \$35,872 for non-Aboriginal households (Library of Parliament, 2009). Children with Aboriginal status are 12 times more likely to be in custody of the government, and youth aged 12-17 are 8 times more likely to be incarcerated (Department of Justice Canada, 2004; Ministry of Child and Family Development, 2009).

¹ Aboriginal is the Canadian federal term for American Indian or Native American.

Disparities in School Outcomes for Students with Aboriginal Status

Students with Aboriginal status also experience significant disparities in their academic achievement compared to students without Aboriginal status. According to a recent report published by the Ministry of Education (2012) in British Columbia, students with Aboriginal status scored lower than students without Aboriginal status in all three domains (reading comprehension, writing, and numeracy) of the Foundational Skills Assessment (FSA) across all grades for the most recent two years of data. In British Columbia in 2010-2011, the percent of students graduating from secondary school within 6 years was 54% for Aboriginal students, compared to 83% of students without Aboriginal status (Ministry of Education, 2012). Furthermore, students with Aboriginal status in Grade 12 were twice as likely as students without Aboriginal status to require one or more additional years to complete high school (Fraser Institute, 2011). The Assembly of First Nations reported that the national dropout rate for Aboriginal students has been over 50% since 1972 (Assembly of First Nations, 2010). This statistic is concerning because high school dropouts of any ethnicity are likely to have difficulty finding employment, and those holding jobs will have fewer benefits and lower job quality (Statistics Canada, 2010). In addition, fewer students with Aboriginal status go on to pursue postsecondary school (Ministry of Advanced Education and Labour Market Development, 2008).

Moreover, similar to the US, there is evidence that students with Aboriginal status are overrepresented in special education. Students with Aboriginal status are also designated at higher rates for learning disabilities and behavior disorders compared to students without Aboriginal status (Ministry of Education, 2012). McBride and McKee (2001) reported that students with Aboriginal status were almost 4 times more likely to receive a diagnosis of a severe behavior disorder than students without Aboriginal status.

Potential Disparities in School Discipline Practices

One potential cause of divergent educational outcomes is disproportionate school discipline practices. In school, inappropriate or disruptive student behavior can result in the student being referred to the principal's office and in more serious cases can lead to out-of-school suspension. Office Discipline Referrals (ODRs) and suspensions serve as temporary and reactive solutions to student problem behavior (Tidwell, Flannery, & Lewis-Palmer, 2003). Although initial ODRs may identify a student for needed support, regular receipt of ODRs by students results in limited access to instruction and preventive behavior interventions (Levy & Chard, 2001; Scott & Barrett, 2004) and can lead to harmful long term outcomes for students (Gregory, Skiba, & Noguera, 2010). Tobin and Sugai (1996) found that receipt of ODRs strongly predicted suspensions, and the number of suspensions strongly predicted school failure. Suspension creates a negative cycle, in which students who are chronically suspended lose valuable instructional time in the classroom and experience decreased feelings of school belonging (Catalano, Oesterle, Fleming, & Hawkins, 2004; Townsend, 2000).

It is important to note that it is becoming common to issue suspensions for less harmful behavior, such as noncompliance and disrespect, as opposed to more harmful behaviors, such as bringing a weapon to school (McIntosh, Fisher, Kennedy, Craft, & Morrison, 2012). Raffaele Mendez, Knoff, and Ferron (2002) found that 20% of schools suspensions were for disobedience or insubordination, 13% for disruptive behaviors and fighting, 11% for inappropriate behavior, 7% for noncompliance, and 1% for weapon and drug possession. These findings suggest that harsh administrative consequences (i.e., suspensions) are increasingly used to respond to less harmful behaviors. Similarly, Skiba, Peterson, and Williams (1997) found that disobedience, disrespect, and fighting were the most common ODRs, whereas, more serious behavioral

infractions, such as weapon possession, vandalism, and fire setting, were the least common. The findings from these two studies indicate that suspensions are being misused in school. Ideally, suspensions are issued sparingly to students and only when safety is a concern, however, the data suggest that they are issued more frequently and for less harmful behavior.

Because the federal government in Canada does not collect and report school discipline data, nationally representative data are not available, and to date there have been no published empirical studies of disproportionality for Canadian students with Aboriginal status. However, the differing rates of identification for behavior disorders indicate that such disparities may exist. Studies in the US examining disproportionality for American Indian students have yielded mixed results (Gregory et al., 2010; Skiba, Michael, Nardo, & Peterson, 2002). Krezmien et al. (2006) found that between 1998 and 2003, American Indian students were 1.5 to 1.8 times more likely to be suspended than their Caucasian peers. However, the authors did not find disparities between American Indian and Caucasian students from 1995 to 1998. Similarly, Wallace et al. (2008) found that when controlling for socio-economic status, male American Indian students were 1.6 times more likely to receive ODRs and 1.7 times more likely to be suspended than male Caucasian students. Furthermore, female American Indian students were 1.7 times more likely to receive ODRs and 2.1 times more likely to be suspended. However, analyses have been hampered by the low prevalence of American Indian students in US schools.

Potential Causes of Disproportionality in School Discipline for Aboriginal Students

Given the similar disparate educational outcomes, discipline practices for Canadian students with Aboriginal status could be analogous to patterns seen with students of color in the US. Due to the lack of credible evidence of differences in levels of problem behavior by race or ethnicity (Skiba et al., 2002), racial or ethnic disparities in exclusionary school discipline suggest

that contextual factors play a role in school discipline practices. Specific contextual factors that may contribute to the disproportionality for students with Aboriginal status in Canada include intergenerational trauma, poverty, and cultural bias.

Intergenerational trauma of residential school and loss of cultural identity. In the 20th century, Canadian government policies resulted in the removal of a significant proportion of Aboriginal children and youth from their homes and communities to be placed in residential schools, where they were forced to assimilate into Western culture. The lasting effects of residential schools have been devastating for the Aboriginal population and have resulted in a loss of culture, identity, and traditional ways of life (Smith, Varcoe, & Edwards, 2005). Many individuals who attended residential schools experienced sexual, physical, and emotional abuse and neglect, received substandard education, and were made to feel ashamed of their Aboriginal heritage (Smith et al., 2005). It is evident that the aftermath of residential schools still affects the Aboriginal population, and as a result, Aboriginal communities continue to experience higher levels of fear and mistrust of school systems (Cummins, 1997; McBride & McKee, 2001). Furthermore, McBride and McKee (2001) found that many Aboriginal peoples continue to view schools as an unwelcoming place that continues to perpetuate institutional racism. In addition, Aboriginal parents often feel less comfortable advocating for their children's needs. These factors are likely to directly affect Aboriginal students today. They may feel less school bonding and have lower parental involvement when compared to students without Aboriginal status.

Poverty. Aboriginal children are regularly noted as the most impoverished group in Canada. In 2005, 27.5% of children with Aboriginal status under the age of 15 were living in low income homes in Canada, compared to 12.9% of children without Aboriginal status (Library of Parliament, 2009). Research indicates that poverty can have a disproportionate influence on

school discipline practices. Wu, Pink, Crain, and Moles (1982) found that students whose fathers were employed part-time were more likely to be suspended than students whose fathers were employed full-time. Wu et al. (1982) also found that students who attended schools that provided free or reduced lunch programs were more likely to receive school suspensions compared to those without these programs. Similarly, Raffaele Mendez et al. (2002) found that schools with low neighborhood SES and a higher proportion of students from ethnic minorities had higher suspension rates. The results from this study were correlational, therefore it cannot be inferred that the results were causal; however, they do give some indication that poverty, ethnicity, and suspensions may be related. Conversely, studies conducted by Wallace et al. (2008) and Skiba et al. (2002) have found that ethnic disparities in school discipline practices exist even controlling for socio-economic status. These findings suggest that poverty cannot solely explain racial disparities in school discipline, and further investigation of other contributing factors is necessary.

Cultural bias. Another factor to consider is the role of cultural bias in issuing ODRs and suspensions. Given that the majority of ODRs are issued within the classroom, it is important to acknowledge that issuing ODRs and suspensions can be dependent on the teacher's experience and strategies for dealing with problem behavior (McIntosh et al., 2012; Skiba et al., 1997). In addition, contextual factors outside of the classroom, such as the school climate (e.g., use of proactive school-wide behavior support practices) and administrative support can influence how teachers and administrators deal with difficult behavior. A sizeable amount of research has emerged from the US indicating that students of color, particularly African American students, are more likely to receive ODRs and suspensions when compared to Caucasian students (Krezmien et al., 2006; Raffaele Mendez et al., 2002; Skiba et al., 2002; Wallace et al., 2008).

Students of color may be more likely to receive ODRs for more subjective behaviors (i.e., those requiring a value judgment to determine the intensity of the behavior). For example, Skiba et al. (2002) found that Caucasian students were more likely to receive ODRs for smoking, vandalism, leaving without permission, and obscene language, whereas African American students were more likely to be referred for disrespect, excessive noise, threat, and loitering, which were considered to be more subjective behaviors. Additionally, the study provided evidence that African American and Caucasian students receive ODRs at different rates. African American students received a disproportionately higher numbers of ODRs and suspensions than Caucasian students. It is possible that cultural bias play a role in the use of ODRs and suspensions for Canadian students with Aboriginal status, but no studies to date have examined this phenomenon.

PBIS as a Potential Remedy for Reducing Disproportionality

School-wide Positive Behavioral Interventions and Supports (PBIS) is a framework that supports the implementation of evidence-based practices within schools to prevent problem behavior through instruction and environmental redesign (Sugai & Horner, 2006). It has been implemented in over 18,000 schools in the US (Sugai, 2012, October), and schools in Canada have been implementing PBIS for over 15 years (Chapman & Hofweber, 2000). PBIS has been shown across multiple randomized controlled trials (conducted at different universities) to reduce levels of problem behavior, decrease suspensions, and increase academic achievement in US schools (Horner, Sugai, & Anderson, 2010). In addition, there are documented positive effects of PBIS on problem behavior, suspensions, and achievement in Canada as well (Good, McIntosh, & Gietz, 2011; Kelm & McIntosh, 2012; McIntosh, Bennett, & Price, 2011; McIntosh, Craft, Moniz, Golby, & Steinwand-Deschambeault, 2013).

Because of its effectiveness in reducing both problem behavior and exclusionary discipline, PBIS has been viewed as a potentially effective approach for reducing racial and ethnic disparities in school discipline (McKinney, Bartholomew, & Gray, 2010; Vincent, Randall, Cartledge, Tobin, & Swain-Bradway, 2011). Three potential mechanisms by which PBIS may reduce the discipline gap are by a) reducing rates of problem behavior for all students, minimizing the need for ODRs and suspensions in general, b) providing teachers with strategies for handling misbehavior without resorting to exclusionary discipline, and c) establishing more objective guidelines for issuing ODRs and administrative consequences, reducing the effect of cultural bias on discipline decision making. However, research findings regarding the effects of PBIS on reducing the discipline gap are mixed. Although research has shown PBIS to reduce ODRs and suspensions for students of all ethnicities (Vincent, Cartledge, May, & Tobin, 2009, October), such reductions have not necessarily decreased the discipline gap. In the US, Skiba et al. (2011) and Vincent and Tobin (2011) found that African American students who attended schools that were implementing PBIS continued to receive disproportionately higher rates of school exclusion. As a result, investigating the extent of disproportionality in schools implementing PBIS may provide further insights into its promise as an approach to reduce disparities, both for students with Aboriginal status in Canada and students of American Indian ancestry in the US.

Gaps in the Literature

It is evident that students with Aboriginal status face many challenges in school. Despite the apparent need to improve educational outcomes for these students, there is sparse empirical research on the topic. To develop effective ways to support students with Aboriginal status, more research is needed to gain a deeper understanding of why this group remains disproportionately

represented in special education, school dropout, and incarceration. In the US, there is a substantial amount of literature that indicates that African American students are more likely to receive more punitive forms of school discipline, such as being referred to the office or suspended from school when compared to their Caucasian peers. There is also some evidence that American Indian students also experience disproportionate rates of ODRs and suspensions in schools; however, this evidence is somewhat limited, meriting further investigation (Skiba et al., 2002). In addition, there are to date no published research studies examining disproportionality in school discipline for students with Aboriginal status in Canada. An examination of school disciplinary practices is the next logical step needed to determine to what extent students with Aboriginal status receive disproportionate school discipline. This knowledge may help inform culturally responsive practices within the school and classroom to support students with Aboriginal status.

The Purpose of the Current Study

The original purpose of this study was to investigate to what extent students with Aboriginal status experience disproportional rates of and consequences for school discipline contacts in Western Canada. Given the disparities in outcomes for students with Aboriginal status in Canada (McBride & McKee, 2001; Ministry of Education, 2012), it is worth investigating whether disproportionality in school discipline practices may be a significant contributor. This study investigated the extent to which students with Aboriginal status receive disproportionate numbers of ODRs and suspensions compared to students without Aboriginal status. Furthermore, it examined the extent to which students are referred for different problem behaviors by Aboriginal status. This study is the first known quantitative study comparing school

discipline for students with and without Aboriginal status in Canada. The following research questions were investigated.

1. To what extent are students with Aboriginal status more likely to receive ODRs than students without Aboriginal status in schools implementing PBIS?
2. To what extent are students with Aboriginal status more likely to receive subjective ODRs than students without Aboriginal status in schools implementing PBIS?
3. To what extent are students with Aboriginal status more likely to receive school suspensions than students without Aboriginal status in schools implementing PBIS?
4. To what extent are ODRs more likely to result in harsh administrative consequences for students with Aboriginal status in schools implementing PBIS?

Method

Settings and Participants

The participants were all 1750 students in four elementary schools and one middle school in rural regions of Western Canada. Three elementary schools were in a public school district in the Fraser Valley, British Columbia, and one elementary school and one middle school were in a public school district in central Alberta. Of the total sample, 362 students were identified with Aboriginal status (as identified from school enrollment forms), and the Aboriginal student populations ranged among schools from 14% to 38% per school. Twenty-eight percent ($n = 487$) of the sample attended the middle school (Grade 6 to 8) and 72% ($n = 1,263$) attended elementary schools (Kindergarten to Grade 6).

The British Columbia school district had an enrollment of 14,003 students. In that district, 16% of the students had Aboriginal status, 4% were English Language Learners, 3% students were in French immersion, and 0.7% students were non-residents. Furthermore, 3% students had a learning disability designation, and 2% students had moderate to severe behavior

designations. The high school completion rate for students with Aboriginal status in the 2010-2011 academic year was 54%, and the rate for students without Aboriginal status was 83%. A total of 20 elementary schools were in the school district.

The Alberta school district had an enrollment of 9,850 students. Of these students, 8% had Aboriginal status, 10% of students were enrolled in French Immersion, and 5% were English Language Learners. The high school completion rate for students with Aboriginal status in the 2010-2011 academic year was 47% and the rate for students without Aboriginal status was 80%. A total of 14 elementary and 3 middle schools (i.e., Grade 6 to 8) were in the school district.

All five schools were implementing PBIS prior to the start of this study. PBIS was implemented in response to high rates of problem behavior and suspensions in the schools. Three of the schools had been implementing PBIS for over 10 years (Andreou & McIntosh, 2013), and two of the schools, including the middle school, had been implementing PBIS for three to four years (Good et al., 2011). Regarding fidelity of implementation of PBIS, the three BC schools were administered the School-wide Evaluation Tool (Sugai, Lewis-Palmer, Todd, & Horner, 2001), a research validated external evaluation of PBIS fidelity of implementation (Horner et al., 2004), during the year of the study. The SET scores showed 78%, 82%, and 83% overall implementation. The two Alberta schools completed the Self-Assessment Survey (Sugai et al., 2001), a research validated self-report fidelity measure, and reported scores of 82% of school-wide features in place (98% in place or partially in place) and 72% in place (96% in place or partially in place), during the 2009-10 school year. As another indicator of PBIS implementation, each of the schools had adopted the *School-Wide Information System* (May et al., 2008) an online web application that school personnel use to document incidences of challenging behavior through Office Discipline Referrals (ODRs). There are over 8600 schools

using SWIS in 5 countries, including Canada and the US (Educational and Community Supports, 2012).

Measures

Measures for the study were derived from SWIS discipline records, including the number and types of problem behavior incidents recorded for each student and administrative consequences recorded for each specific incident. In further analyses, incidents and administrative consequences were further categorized with the assistance of an expert panel of four researchers in school discipline, racial disproportionality, and culturally responsive behavior support. The expert panel rated specific types of problem behaviors as either less subjective or subjective. Additionally, the expert panel rated administrative consequences as either less harsh or harsh. Behaviors and consequences were categorized when there was at least 75% inter-rater agreement. Problem behaviors and administrative consequences that did not meet this criterion were not categorized in the analyses.

ODRs. ODRs are standardized forms used to record incidences of student misbehavior that occur on school property, in contrast to incident reports, which may be used in more schools but lack the standardization that enhances reliability (Sugai, Sprague, Horner, & Walker, 2000). They are documented by school personnel, who indicate information about the incident (McIntosh et al., 2012). The following data are recorded for each ODR: the student's name, school district, ethnicity, the number of ODRs, the type of problem behavior (one of 25 pre-existing types), possible motivation of the behavior, location of the incident, time of the day, if other students contributed to problem behavior, and the administrative consequence (one of 15 options). ODRs can result in either minor or major problem behaviors. For this study, only ODRs for major problem behaviors were included in the analyses. ODRs were coded as a dichotomous

outcome variable: whether each student received one or more ODRs during the school year. The total number of ODRs received by all students in the school studied was 951. Of these ODRs, 202 (21%) were issued to students with Aboriginal status.

There is evidence that ODRs can be used as a valid measure of student externalizing problem behavior (McIntosh, Campbell, Carter, & Zumbo, 2009). McIntosh et al. (2009) found a moderate correlation ($r = .51$) between the number of ODRs received and the externalizing composite score on the *Behavior Assessment Scale for Children – Second Edition* Teacher Report Scale – Child Form (BASC-2; Reynolds & Kamphaus, 2004). Furthermore, students who receive higher rates of ODRs are at greater risk for reduced instructional time in the classroom, academic failure, and school suspension (Irvin, Tobin, Sprague, Sugai, & Vincent, 2004; Tobin & Sugai, 1999; Townsend, 2000).

Schools that adopt SWIS are required to meet 10 requirements before they can use the system. The school must identify school-wide discipline as one of their top priorities and have access to administrative support to help with the implementation of SWIS. The school must have a standardized referral process, in which challenging behaviors and administrative decisions are operationalized and the school's referral process is consistent with SWIS guidelines. There is a support team who is responsible for reviewing referral data monthly, and the school team must undergo a 90-minute training on SWIS, with at least three individuals receiving a minimum of 2.5 hours of additional training. Schools have a SWIS facilitator to the staff collect and use data to make decisions. ODRs with this level of standardization have been shown to be more reliable and valid than less standardized ODRs (McIntosh et al., 2009). SWIS also allows users to access ethnicity reports to assess disproportionate discipline, although the schools in this study did not access them.

Subjective ODRs. For follow-up analyses, the expert panel rated the 24 problem behavior types in SWIS as either subjective or less subjective ("other" behavior was excluded from the expert panel survey). Subjective behaviors were defined as behaviors that require not simply observing a discrete, objective event (e.g., a student smoking), but a significant value judgment regarding whether the intensity or quality of the behavior warrants an ODR (e.g., a student using inappropriate language). The average inter-rater agreement among the expert panel for all 24 problem behaviors was 90%. The following behaviors were categorized as subjective: abusive language/inappropriate language/profanity, defiance/disrespect/insubordination/non-compliance, harassment/bullying, disruption, dress code violation, and inappropriate display of affection. The following behaviors were categorized as less subjective: physical aggression, fighting, tardy, skipping, truancy, property damage/vandalism, forgery/theft, inappropriate location/out of bounds, use/possession of tobacco, alcohol, drugs, combustibles, weapons, bomb threat/false alarm, and arson. Three problem behaviors did not meet the inter-rater reliability criterion and were also not classified as subjective: lying/cheating, technology violation, and gang affiliation display. [The number of subjective ODRs was coded as a dichotomous outcome variable: whether each student received one or more subjective ODRs during the school year. Of the ODRs issued in the study, 63% were categorized as subjective.

Suspensions. Suspensions are a form of school exclusion in which students are removed from school property for a period of time (McIntosh et al., 2012). Suspensions are provided by school administrators in response to serious behavior infractions (e.g., property destruction, possession of a weapon, or possession of drugs) and moderately correlate with standardized rating scales of problem behavior (McIntosh et al., 2009). Suspensions included both in and out-

of-school suspensions. Suspensions were coded as a dichotomous outcome variable: whether each student received one or more suspensions during the school year.

Severity of administrative consequences. For the follow-up analyses, the expert panel rated the 13 administrative consequences identified in SWIS as either harsh or less harsh ("other" and "unknown" administrative decisions were omitted from the expert panel survey). Harsh administrative decisions were defined as significantly punitive and may result in pain, humiliation, or removal from the classroom for an extended period of time, with possible detrimental effects on student outcomes. The average inter-rater agreement for the 13 administrative decisions was 85%. Harsh administrative consequences included: bus suspension, in-school suspension, out-of school suspension, and expulsion. Less harsh administrative consequences included: loss of privileges, conference with student, parent contact, restitution, community service, and individualized instruction. Time in office, time out/detention, and Saturday school were not included in the analyses because their categorization did not meet the inter-rater reliability criterion. The administrative consequences were recorded for each ODR and were represented as a dichotomous outcome variable: whether the administrative consequence for each ODR was harsh. In addition, because of the prevalence of administrative consequences recorded as other or unknown, this consequence was used as a third outcome variable. The administrative consequences issued in the study were categorized as follows: 50% less harsh, 12% harsh, and 10% other or unknown. The remaining ODRs were not analyzed in the follow-up analyses because the consequence did not meet the inter-rater reliability criterion.

Procedure

Consent and feedback were obtained from district administrators, school administrators, and Aboriginal community representatives (including a local First Nation) prior to the study.

Data collection consisted of archival extraction of extant school discipline and student ethnicity data from SWIS (University of Oregon, 2012). Student data from Alberta were retrieved from the 2011-2012 academic year. Student data from British Columbia were retrieved from the 2010-2011 academic year, due to a teacher strike that may have made the 2011-2012 data less reliable.

Data Analysis

Binary multilevel logistic regression was used to predict the likelihood of students with Aboriginal status receiving ODRs and suspensions, as well as the association of Aboriginal status with harshness of administrative consequencesⁱ. For each analysis, beta weights, standard errors, significance levels, and 68% confidence intervals were calculated for each predictor variable. Odds ratios were used as measures of effect size. An odds ratio of more than 1 indicates that students with Aboriginal status are more likely to receive the outcome than students without Aboriginal status (Field, 2009; Wright, 2000). For example, an odds ratio of 2 indicates that such students are twice as likely to receive the outcome. Conversely, an odds ratio of less than 1 indicates that the student group is less likely to receive the outcome. The closer the odds ratio is to 1, the less discrepant the outcome.

The first three analyses were run to test research questions 1 to 3. For each of these analyses, the cases were individual students, the predictor variable was Aboriginal status, and a random intercept was included for school. The outcome variables differed across analyses. For research question 1, the outcome variable was whether each student received an ODR during the school year. For research question 2, the outcome variable was whether each student received a subjective ODR during the school year. For research question 3, the outcome variable was whether the student received a suspension during the year.

Two separate analyses were conducted to test research question 4. Both of these analyses were conducted at the ODR level. Because some students received multiple ODRs, random intercepts were included for both student and school. Student Aboriginal status and gender were set as dichotomous predictors, and grade level was set as a continuous predictor. The outcome variable for the first analysis was the severity of administrative consequence (whether the consequence received was harsh). The outcome variable for the second analysis was whether the consequence was recoded as other or unknown.

Results

ODRs

In the entire sample, 19% of the student population received one or more ODRsⁱⁱ. When disaggregated by Aboriginal status, 19% of students with Aboriginal status received one or more ODRs, and 20% of students without Aboriginal status received one or more ODRs (see Table 1). Aboriginal status was not a statistically significant predictor of receiving ODRs, $b = -0.04$, $p = 0.79$ (see Table 2). The odds ratio for students with Aboriginal status was 0.96, indicating that contrary to hypotheses, students with Aboriginal status were not more likely to receive ODRs than students without Aboriginal status.

Subjective ODRs

In the entire sample, 12% of the student population received one or more subjective ODRsⁱⁱⁱ. When disaggregated by Aboriginal status, 11% received one or more subjective ODRs, and 12% of students without Aboriginal status received one or more subjective ODRs (see Table 1). Contrary to hypotheses, Aboriginal status was not a statistically significant predictor of receiving subjective ODRs, $b = -0.12$, $p = 0.51$ (see Table 2). The odds ratio for students with Aboriginal status was 0.88, indicating that students with Aboriginal status were less likely to receive subjective ODRs, but not to a statistically significant extent.

Suspensions

In the entire sample, 4% of the student population was suspended (a low rate compared to many schools in the US), with 56 of the 77 suspensions used at the middle school^{iv}. When disaggregated by Aboriginal status, 5% of students with Aboriginal status were suspended, and 4% of students without Aboriginal status were suspended (see Table 1). Aboriginal status was not a statistically significant predictor of suspension, $b = 0.28$, $p = 0.33$ (see Table 2). The odds ratio for students with Aboriginal status was 1.32, indicating that students with Aboriginal status were more likely to be suspended, but not to a statistically significant extent.

Administrative Consequence

Harsh administrative consequences. When disaggregated by ethnicity, 19% of the ODRs received by students with Aboriginal status resulted in harsh consequences, and 19% of the ODRs received by students without Aboriginal status resulted in harsh consequences (see Table 3)^v. Aboriginal status was not a statistically significant predictor of receiving harsh administrative consequence for ODRs, $b = 0.59$, $p = 0.13$ (see Table 4). The odds ratio for a harsh administrative consequence from ODRs for students with Aboriginal status was 1.82, indicating that ODRs were more likely to result in harsh administrative consequences for Aboriginal students, but not to a statistically significant extent, and there was a large confidence interval for this odds ratio. Gender was not a statistically significant predictor of harshness of administrative consequences for ODRs, $b = 0.47$, $p = 0.22$. The odds ratio for a harsh administrative consequence from an ODR for male students was 1.60, indicating that ODRs were more likely to result in harsh administrative consequences for male students, but not to a statistically significant extent. Grade was a statistically significant predictor of harsh administrative consequences for ODRs, $b = 0.40$, $p = 0.001$, indicating that ODRs were more

likely to result in harsh administrative consequences for students in upper grades, and this difference was statistically significant.

Other and unknown administrative consequences. When disaggregated by ethnicity, 24% of the other or unknown ODRs were received by students with Aboriginal status, and 6% were received by students without Aboriginal status (see Table 3)^{vi}. Aboriginal status was a statistically significant predictor of other or unknown administrative consequences for ODRs, $b = 0.87$, $p = 0.01$ (see Table 4). The odds ratio for other or unknown consequences from an ODR for students with Aboriginal status was 2.40, indicating that ODRs were statistically significantly more likely to result in other or unknown administrative consequences for students with Aboriginal status. Gender was not a statistically significant predictor for other or unknown ODRs, $b = -0.10$, $p = 0.78$. The odds ratio for other or unknown administrative consequence from ODRs for male students was 0.90, indicating that ODRs were less likely to result in other or unknown administrative consequences for male students, but not significantly. Grade was a statistically significant predictor for other or unknown ODRs, $b = -0.27$, $p < 0.01$, indicating that ODRs were statistically significantly more likely to result in other or unknown administrative consequences for students in lower grades. In follow-up interviews, the administrators at the schools studied reported that they often used the other and unknown administrative consequence when they referred the student to the school Aboriginal support worker for continued support. Actions by the support worker were reported to include counseling, social skills coaching, or activities intended to restore any damaged relationships.

Discussion

Students with Aboriginal status continue to experience disparities in educational outcomes, as seen in the high national dropout rate for the population. However, no empirical studies to date had examined whether disparities are seen in disproportionality in discipline

contacts or administrative consequences in Canada. In an exploratory study, a series of binary multilevel logistic regression analyses were conducted to investigate to what extent students with Aboriginal status received disproportionate levels of ODRs and more harsh administrative consequences when compared to students without Aboriginal status.

The findings indicated that the proportion of students receiving ODRs and subjective ODRs were not significantly different by Aboriginal status. The odds ratios for both ODRs and subjective ODRs were close to one. Therefore, students from both groups were as likely to receive ODRs and subjective ODRs. Students with Aboriginal status were somewhat but not significantly more likely to receive suspensions and harsh administrative consequences than students without Aboriginal status. Although the rates of suspension and harsh administrative consequences were slightly higher for students with Aboriginal status, the results did not indicate significant differences in consequences received. Interestingly, ODRs for students with Aboriginal status were more than twice as likely to result in other or unknown administrative consequences, which was statistically significant.

ODRs

As described, the results of these analyses were unexpected. In this sample, similar proportions of students with and without Aboriginal status received ODRs and subjective ODRs. The results did not provide evidence that Aboriginal students were more likely to receive ODRs, in comparison to students without Aboriginal status. This finding was contrary to the results reported in the US by Wallace et al. (2008), who found that even after controlling for SES, American Indian students were statistically significantly more likely to be referred to the office for problem behaviors. In that study, American Indian students were between 1.6 and 1.7 times more likely to receive ODRs. In this sample, students with and without Aboriginal status were

also referred to the office for subjective ODRs at a similar rate. This finding differed from existing research findings from the US, which indicated that students of color may be more likely to receive ODRs for subjective behaviors (Skiba et al., 2002). Skiba et al. (2002) found that African American students had a higher rate of referrals for disrespect, excessive noise, threat and loitering, which were statistically significant. Similar results were not found in this sample.

Administrative Consequences

Although Aboriginal status slightly elevated the risk of suspensions and harsh administrative consequences, this higher risk was not statistically significant in this sample. The odds ratio for these two outcome variables, 1.3 and 1.8 respectively, are somewhat lower than previous findings in the US, with odds ratios ranging from 1.5 to 2.1 for American Indian students (Krezmien et al., 2006; Wallace et al., 2008). The results from this exploratory study do not indicate that Canadian students with Aboriginal status receive significantly higher rates of suspensions and harsh administrative consequences in schools implementing PBIS. The results do not suggest that Aboriginal students receive suspensions at the same intensity as some groups of students of color in the US (Skiba et al., 2011).

Aboriginal status was a statistically significant predictor for the receipt of other or unknown administrative consequences. However, this finding could reflect either evidence of cultural bias or culturally responsive practices. Assigning other or unknown consequences to students could hide harsh administrative consequences provided to students, but follow-up interviews indicated the use of culturally appropriate administrative decisions that are not available as options in the ODR system used. For example, the follow-up interviews seem to indicate that these other consequences (most commonly a referral to the school Aboriginal support worker) appear to be culturally responsive and effective, given the lack of differences in

rates of ODRs. This additional information is encouraging, but the effectiveness of these approaches may be an important area for further research.

Disproportionality in School Discipline Practices in Canada

Overall, the results from this exploratory study do not provide evidence of disproportionality in school discipline practices for students with Aboriginal status in Canadian schools implementing PBIS. In the US, there is extensive evidence that students of color in general, and American Indian students to a lesser extent, are more likely to receive ODRs and harsher administrative consequences for problem behavior (Gregory et al., 2010; Raffaele Mendez & Knoff, 2003; Skiba et al., 2011; Skiba et al., 2002; Wallace et al., 2008). In Canada, Aboriginal students had similar odd ratios to American Indian students for the receipt of suspensions and harsh administrative consequences (Krezmien et al., 2006; Wallace et al., 2008); however, the differences in this study were not statistically significant.

When considering these findings, there are a number of potential explanations for the findings indicating a lack of disproportionate discipline. First, the sample size was small, and results may be particular to these five schools. Because this study was exploratory and the first of its kind, replication with a larger number of schools would be necessary before drawing firm conclusions regarding the results seen. Second, because there are no national disproportionality figures for comparison or other quantitative studies examining discipline in Canada, it is possible that there is less racial or ethnic disproportionality in school discipline in Canada. Although there are more similarities than differences between Canadian and US schools and society in general, some aspects of the Canadian educational context may reduce disproportionality. For example, the percent of students with Aboriginal status in each school ranged from 14 to 38%. It is likely that school personnel in Canadian schools were more familiar with the challenges students with

Aboriginal status face in school, simply because of this larger proportion. In addition, students in these schools may feel less isolated than American Indian students in the US. Furthermore, students with Aboriginal status in Canada are provided with more targeted resources within schools. In British Columbia, schools are provided with provincial funding to provide students access to Aboriginal support workers within schools and programming designed to preserve Aboriginal culture.

A third potential explanation is that implementing PBIS may have contributed to the results seen. First, schools implementing PBIS use preventive systems and interventions for discouraging problem behavior and supporting prosocial behavior. Therefore, these schools were taking a more proactive approach to school discipline practices, potentially lowering the use of ODRs and harsh administrative consequences with all students. Second, in implementing PBIS, all of the schools implemented SWIS to provide a clearer, more objective ODR process. Schools using SWIS are required to operationalize problem behavior and administrative consequences (May et al., 2008). As a result, these schools may have followed more objective school discipline policies that result in less subjective discipline procedures, reducing the effect of cultural bias. Third, schools implementing PBIS have identified school discipline as one of their top three school improvement goals. Four of the five schools had identified PBIS as one of their top three goals, and the fifth school had recently removed it because of perceptions that PBIS had improved the social culture so such a degree that the school could focus on other priorities. Some evidence supporting this explanation comes from a separate case study of PBIS implementation in the middle school in this study (Good et al., 2011). In that school, suspensions were reduced by over 75% upon implementation of PBIS in 2007-08. Although suspension data were not disaggregated by Aboriginal status before this study, the fact that significant disproportionality

was not observed after implementation indicates that PBIS was likely effective for students with and without Aboriginal status. However, because no schools not implementing PBIS were included in these analyses, this study does not provide any empirical evidence that PBIS reduced disproportionality in these schools. As a result, it should not be assumed that implementing PBIS will reduce racial or ethnic disproportionality in school discipline, and more research is needed to test these hypotheses.

A final consideration is that PBIS was implemented in these schools with specific and intentional adaptations to fit with the local Aboriginal culture. Given their sizable Aboriginal student population and location on traditional (and for some schools, unceded) Aboriginal territories, the PBIS teams had incorporated some aspects of Aboriginal culture into their behavior support systems. At least one of the schools had incorporated Aboriginal values, language, and iconography into their school-wide expectations, which may have led to a more culturally responsive definition of appropriate behavior and more inclusive and welcoming school culture (Jones, Caravaca, Cizek, Horner, & Vincent, 2006; McIntosh et al., 2013). In addition, as part of their PBIS approach, the school administrators reported using culturally responsive school-wide strategies, such as consultation on implementation with local First Nations, bringing in elders and storytellers to teach lessons about respect and social responsibility from an Aboriginal perspective, improving school-home communication with Aboriginal families, and direct teaching of respect, citizenship, and positive behavior that were in line with Aboriginal teachings (Brendtro, Brokenleg, & Van Bockern, 2002). For students requiring additional support to be successful, school teams provided additional behavior support through Aboriginal support workers and Aboriginal focused small group counseling and social skills instruction and identified and implemented strategies to address barriers to school

engagement for students with Aboriginal status (Bain & Sautner, 2007). In a case study of culturally responsive PBIS implementation in a high school with a population of 99% students with Aboriginal status (McIntosh et al., 2013), the days of suspension were reduced from 689 days before PBIS implementation to 395 within two years, with six years of suspension data at or below this level. Although these strategies clearly fit within PBIS best practices regarding contextual fit (Albin, Lucyshyn, Horner, & Flannery, 1996), not all implementation of PBIS is specifically tailored to a culturally and linguistically diverse community (Vincent et al., 2011). As a result, it is unclear whether these positive outcomes can be attributed to implementing PBIS, implementing these culturally responsive strategies, or implementing a combination of the two.

Limitations

Several limitations were noted throughout the course of the study. A limited number of schools participated in the study, and of those schools, only one was a middle school. In addition, that middle school accounted for the vast majority of the suspensions. A larger sample size may have increased statistical power and identify more consistent referral patterns received by students by Aboriginal status. Similarly, the numbers of students with Aboriginal status in the suspension and harsh administrative analyses were small. Only 17 students with Aboriginal status received a suspension and 21 received a harsh administrative consequence. As a result, the confidence intervals for both suspensions and harsh administrative consequences were large. Furthermore, because no discipline data from schools not implementing PBIS or disaggregated pre-post data were available for analysis, any hypotheses regarding the effectiveness of PBIS or the culturally responsive components implemented in these schools are speculative. Finally, it is likely that some students with Aboriginal status were not identified as such, because student

ethnicity was identified on school enrollment forms. It is possible that some students or guardians intentionally did not specify Aboriginal status, possibly to avoid potential discrimination. In addition, some students with Aboriginal status may not have been easily identified as Aboriginal and thus may have not been subject to potential cultural bias. However, based on the lack of significant evidence of disproportionality, this possibility is unlikely.

Implications for Future Research

This study was the first of this nature to be conducted in Canada, and thus, further research is needed to replicate and verify results. Larger sample sizes and examination of schools by type (e.g., elementary vs. middle) may allow for a more clear understanding of ODRs and suspensions rates for students across ethnicities, gender, and grade level. The results obtained represent the first attempt to document referral and suspension rates in Canada; however, these findings are limited in generalizability, as schools in only two rural geographic regions participated in the study. Investigating ODR and suspensions rates across the country and comparing rural and urban locations may provide a greater understanding of school discipline practices in Canada.

PBIS has been shown to have a positive effect on student outcomes in general, such as reducing the use of office discipline referrals and suspensions (Bradshaw, Mitchell, & Leaf, 2010). Given that the participating schools were all implementing PBIS with adequate fidelity of implementation, it would be meaningful to examine the extent of disproportionality in school discipline practices in schools implementing and not implementing PBIS, both in Canada and the US. Furthermore, future studies could examine the extent to which implementation of the culturally responsive PBIS components in these schools has an impact on disproportionality in school discipline practices in Canada.

Implications for Practice

The findings from this exploratory study did not support the hypothesis that students with Aboriginal status receive a disproportional number of ODRs and harsh administrative consequences in schools implementing PBIS in Canada. However, there are some important caveats to highlight that can help inform practice. First, the results indicate that students with Aboriginal status were not referred to the office more often and for more subjective behavior. These results may be attributable to culturally responsive practices, including cultural differences between teachers in Canada and the US, additional support provided to students with Aboriginal status, or attention to creating a positive, predictable school culture within a PBIS framework. It is important for any school to examine its discipline data and practices to assess and reduce any disproportionality, even if schools are implementing proactive practices such as PBIS. SWIS and other ODR programs provide ethnicity reports that can instantly display charts and tables examining disproportionality in ODRs and suspensions by ethnicity. Teams can use these data to set goals and create action plans for ensuring effective and equitable discipline practices.

Although the results indicated that students with Aboriginal status were not statistically significantly more likely to receive a suspension or harsh administrative decision, students with Aboriginal status had an odds ratios that was greater than one. From this study, it appears that some slight differences exist in the distribution of administrative consequences for students with Aboriginal status. As a result, bringing these findings to school personnel can inform school disciplinary practices within schools and help create culturally responsive and equitable approaches to school discipline within a PBIS framework.

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Table 1.

Number and percentage of ODRs, subjective ODRs and suspensions by Aboriginal status and school

Student Outcome	<u>Aboriginal Status</u>			
	<u>Aboriginal Status</u>		<u>Non-Aboriginal Status</u>	
	<i>n</i> (min-max)	% (min-max)	<i>n</i> (min-max)	% (min-max)
1 or more ODRs	68 (3 - 20)	19% (5% - 26%)	271 (28 - 95)	20% (13% - 23%)
School 1	17	26%	95	23%
School 2	3	5%	80	22%
School 3	19	19%	28	17%
School 4	20	22%	30	19%
School 5	9	20%	38	13%
1 or more Subjective ODRs	41 (1-17)	11% (2% - 17%)	172 (16-63)	12% (9%-15%)
School 1	6	9%	63	15%
School 2	1	2%	45	12%
School 3	17	17%	24	15%
School 4	11	12%	16	10%
School 5	6	13%	24	9%
1 or more Suspensions	17 (0 - 10)	5% (0% - 15%)	60 (2 - 46)	4% (1% - 11%)
School 1	10	15%	46	11%
School 2	0	0%	2	1%
School 3	3	3%	4	3%
School 4	4	4%	4	3%
School 5	0	0%	4	1%

Table 2.

Results of prediction of ODRs, subjective ODRs, and suspensions

Outcome variable	Predictor variable	B	SE	P	Odds ratio	68% Confidence Interval for odds ratio	
						Lower	Upper
ODRs	Aboriginal Status	-0.040	0.153	0.794	0.960	0.824	1.119
Subjective ODRs	Aboriginal Status	-0.122	0.187	0.514	0.885	0.734	1.067
Suspensions	Aboriginal Status	0.285	0.298	0.338	1.329	0.987	1.791

Note. Separate analyses were conducted for each outcome.

Table 3.

Number and percentage of harsh and other or unknown administrative consequences by Aboriginal status, gender, and grade

Predictors		Administrative Consequences			
		Harsh Consequences		Other or Unknown Consequences	
		<i>N</i> (min-max)	% (min-max)	<i>N</i> (min-max)	% (min-max)
Aboriginal Status	Aboriginal status	21 (0-14)	19% (0%-67%)	48 (0-32)	24% (0%-43%)
	Without Aboriginal status	92 (2-77)	19% (1%-47%)	45 (0-17)	6% (0%-26%)
Gender	Female	19 (0-14)	17% (0%-34%)	32 (0-19)	14% (0%-32%)
	Male	94 (2-77)	20% (1%-47%)	61 (0-28)	8% (0%-30%)
Grade	Kindergarten	0 (0)	0% (0%)	30 (0-18)	48% (0%-55%)
	Grade 1	1 (0-1)	3% (0%-10%)	10 (0-5)	10% (0%-29%)
	Grade 2	2 (0-1)	2% (0%-13%)	15 (0-10)	11% (0%-44%)
	Grade 3	1 (0-1)	2% (0%-8%)	10 (0-7)	16% (0%-19%)
	Grade 4	5 (1-2)	6% (3%-9%)	13 (0-8)	9% (0%-24%)
	Grade 5	6 (0-5)	10% (0%-23%)	8 (0-6)	9% (0%-20%)
	Grade 6	26 (0-19)	29% (0%-44%)	7 (0-3)	6% (0%-23%)
	Grade 7	40 (40)	65% (65%)	0 (0)	0% (0%)
	Grade 8	32 (32)	33% (33%)	0 (0)	0% (0%)

Note. The ranges provided are combined minimum and maximum values for the 5 participating schools.

Table 4.

Results of prediction of harsh and other and unknown administrative consequences by Aboriginal status, gender, and grade

Outcome variable	Predictor variable	B	SE	P	Odds ratio	68% Confidence Interval for odds ratio	
						Lower	Upper
Harsh Consequence	Aboriginal Status	0.599	0.404	0.138	1.820	1.215	2.726
	Gender	0.471	0.388	0.224	1.601	1.086	2.360
	Grade	0.401	0.128	0.001	1.493	1.313	1.697
Other or Unknown Consequence	Aboriginal Status	0.879	0.355	0.013	2.408	1.688	3.434
	Gender	-0.104	0.389	0.787	0.901	0.610	1.329
	Grade	-0.274	0.089	0.002	0.760	0.695	0.831

Note. Separate analyses were conducted for each outcome.

Endnotes

ⁱ Because the data were nested (students within schools and ODRs within students), random intercepts were included to model variance at the school and student levels. All analyses were conducted using the 'lme4' package Bates, Maechler, and Bolker (2011) in *R* version 2.15.1 (R Development Core Team, 2012). All assumptions of binary logistic regression were met prior to running the analyses.

ⁱⁱ For receipt of ODRs, the proportion of variance explained at the school level was 0.6%, indicating negligible between- school differences.

ⁱⁱⁱ For receipt of subjective ODRs, the proportion of variance that was explained at the school level was 0.6%, indicating minimal between- school differences.

^{iv} For the receipt of suspensions, the proportion of variance explained at the school level was 25%, indicating substantial between-school differences. One school (the middle school) was responsible for 56 of the 77 suspensions, which is likely to account for differences among schools.

^v For harshness of administrative consequences, the proportion of variance explained at the school and student levels was 14% and 21%, indicating that large between-school and between-student differences.

^{vi} For other or unknown administrative consequences, the proportion of variance at the school and student levels was 27% and 16% , indicating large between- school and between-student differences.

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