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The social complexities of disability: Discrimination, belonging and life satisfaction among Canadian youth

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ABSTRACT

Although disability has been on the psychological agenda for some time, there is limited empirical evidence on the life satisfaction of youth with a disability, especially the effect of discrimination and factors that might mitigate it. We address this critical gap by examining the complex social experiences of youth with a disability and the culminating effect on life satisfaction. We ask three questions: (1) Is having a disability associated with lower life satisfaction? (2) Do youth with a disability experience discrimination and, if so, how does this affect life satisfaction? (3) Can a sense of belonging mitigate the negative effect of discrimination? We address these questions using microdata from the Canadian Community Health Survey, which is nationally representative. Our sample consists of 11,997 adolescents, of whom 2193 have a disability. We find that life satisfaction is lower among youth with a disability. Moreover, many experience disability-related discrimination, which has a negative effect on life satisfaction. However, this is mitigated by a sense of belonging to the community. Specifically, youth with a disability do not report lower life satisfaction when high belonging is present, even if they experience discrimination. This is true for boys and girls. We conclude that belonging, even if it is not disability-related, is protective of well-being. This has important implications for policy whereby organizations that cultivate a sense of belonging may alleviate the harm sustained by youth who experience discrimination as a result of their disability.

1. Introduction

The United Nations Convention on the Rights of the Child (1989) states that “a mentally or physically disabled child should enjoy a full and decent life, in conditions which ensure dignity, promote self-reliance and facilitate the child’s active participation in the community” (p. 7). Such international laws affirm the rights of people with a disability to full community participation.¹ Yet, people with a disability are often objectified and excluded from many aspects of life, as well as stereotyped as dependent and incompetent (Dunn, 2015; Nario-Redmond, 2010). Social exclusion and other forms of negative treatment directed toward people with a disability have been documented even among young children (Huckstadt & Shutts, 2014). A meta-analysis of children’s attitudes toward their disabled peers indicates that such negative biases are widespread (Nowicki & Sandieson, 2002). Such exclusion is often perceived to be inevitable based on a person’s medical condition or physical limitations (Dunn & Brody, 2008; Yaker, 1994).

Consequently, discrimination and ostracism toward people with a disability are frequently perceived as normal and justified, rather than intentional and harmful (Dovidio, Pagotto, & Hebl, 2011; Watermeyer & Gorgens, 2014).

Many studies have shown that discrimination negatively affects well-being among Blacks (Branscombe, Schmitt, & Harvey, 1999; Siddiqi, Shahidi, Ramraj, & Williams, 2017), Indigenous peoples (Siddiqi et al., 2017), women (Schmitt, Branscombe, Kobrynowicz, & Owen, 2002), international students (Schmitt, Spears, & Branscombe, 2003) and the elderly (Garstka, Schmitt, Branscombe, & Hummert, 2004). For example, Siddiqi et al. (2017) find that discrimination is a predictor of chronic conditions and their risk factors among Blacks and Indigenous peoples in Canada. In this paper, we focus on discrimination experienced by Canadian youth with a disability. Like other forms of discrimination based on group membership, we anticipate negative consequences for well-being.

In conceptualizing disability, it is possible to focus on diagnosis and

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¹ There is also national legislation, such as the Americans with Disabilities Act of 1990, that protects against disability-related discrimination. In Canada, people with a disability are protected by the Canadian Charter of Rights and Freedoms, as well as the Canadian Human Rights Act.

treatment of different medical conditions. This approach defines people based on their prognosis and does not allow for inclusive group membership across disability types (Smart, 2009). “Considering disability as a medical pathology creates the foundation for prejudice and discrimination ... because disability is then difficult to disentangle from the individuals who live with them” (Dirth & Branscombe, 2017, p. 415). An alternative approach is to consider people with a disability as a vulnerable group with shared challenges that could be addressed by policy (Dirth & Branscombe, 2017; Scotch, 1988). For example, Foley et al. (2012) use focus groups to examine narratives about obstacles and coping among children with a disability. One of the most important themes to emerge is that they want to feel *belonged*. Indeed, many children reported that social exclusion is more troublesome than the physical restrictions associated with their disability. Perhaps this is not surprising given that psychologists have long postulated the need to belong as a fundamental social motive with negative consequences when it is threatened (Baumeister & Leary, 1995).

There is a large literature on the importance of social relationships to well-being among adults, although it is not specific to those with a disability (Helliwell, Barrington-Leigh, Harris, & Huang, 2010; Jetten, Haslam, Haslam, & Branscombe, 2009). The literature on child well-being is smaller (Casas et al., 2007; Huebner, 2004), but again suggests that social relationships, especially within families, are important for well-being (Burton & Phipps, 2008; Holder & Coleman, 2009; Nickerson & Nagle, 2004; Nickerson & Nagle, 2005). Little is known about the life satisfaction of youth with a disability, but some studies have found lower levels of well-being as measured by emotional health and quality of life (Boyce et al., 2009; Edwards, Donald, & Topolski, 2003; Snowdon, 2012). There is also evidence that children with a disability face stigma (Cooney, Jahoda, Gumley, & Knott, 2006), social exclusion (Lindsay & McPherson, 2012) and are more likely to be the target of bullying (Zhang, Osberg, & Phipps, 2014).

In this paper, we focus on the social complexities of disability. Specifically, we examine the importance of belonging for life satisfaction among Canadian youth with a disability, many of whom face discrimination. In doing so, we address three questions:

- (1) Is having a disability associated with lower life satisfaction?
- (2) Do youth with a disability experience discrimination? How does this affect life satisfaction?
- (3) Can a sense of belonging mitigate the negative effect of discrimination on life satisfaction? That is, are the consequences of discrimination smaller if youth with a disability feel as if they belong to their community?

We expect that youth with a disability will have lower life satisfaction. And, to the extent they experience discrimination, the negative effect on life satisfaction may exceed that related to the disability itself. Moreover, we expect that a sense of belonging will help alleviate the negative effect of discrimination on life satisfaction for this vulnerable group.

2. Data

We address the above-questions using cross-sectional microdata from the Canadian Community Health Survey (CCHS), which is administered by Statistics Canada. We use Cycles 2.1 (2003) and 3.1 (2005).² Both are representative of the population aged 12 and older.

² These are the only cycles in which our key variables are available and consistently defined (i.e. life satisfaction, discrimination and belonging). For example, questions about disability-related discrimination are not asked in later cycles, although they contain information about discrimination due to gender, race, age or appearance. Moreover, other than a recent issue of the General Social Survey, which excludes adolescents younger than 15, no other Canadian survey contains the requisite variables. Thus, despite being from the 2000s, our data are unique and appropriate for our research questions. People with a

The CCHS excludes those in the military, institutions and very remote areas, as well as First Nations peoples living on reserve. However, these exclusions represent less than three percent of the Canadian population.

In each cycle, a sample of Canadian households was selected from an area frame (49 percent), list frame (50 percent) and random digit dialing (one percent). Almost three-quarters of those selected from the area frame were interviewed in person. All others were interviewed via telephone. First, a household representative provided basic demographic and socio-economic information. Then, one household member was chosen for a more in-depth interview wherein adolescents were oversampled (i.e. they had a larger selection probability). For those aged 12 to 15, parental consent was obtained prior to the interview. However, the interview was not carried out if privacy could not be guaranteed. For example, if a parent wanted to be present, the interviewer would read the question and the youth would respond directly on a computer.

Proxy interviews were used when respondents were unable to participate due to poor physical or mental health, however personal questions were not asked. We dropped 452 observations for this reason. This is relevant insofar that youth with the most severe disabilities were excluded from the sample. Nevertheless, our sample consists of 11,997 adolescents aged 12 to 17, of whom 2193 have a disability.

3. Key variables

3.1. Life satisfaction

In the CCHS, life satisfaction is based on the question: “How satisfied are you with your life in general: very satisfied; satisfied; neither satisfied nor dissatisfied; dissatisfied; or very dissatisfied?” The scale, which ranges from one (*very dissatisfied*) to five (*very satisfied*), is the dependent variable in our regression analysis. This question is asked early in the survey and not in the section on disability.

3.2. Belonging

Belonging is based on the question: “How would you describe your sense of belonging to your local community? Is it: very strong; somewhat strong; somewhat weak; or very weak?” This question is also asked early in the survey, just after the one about life satisfaction. It is not in the section on disability, and so does not necessarily relate to the community of others with the same disability (e.g. the Deaf community). It is left to the adolescent to define his/her community.

3.3. Disability

In the CCHS, we use questions about activity limitations to infer whether an individual has a disability.³ Specifically, respondents are asked whether they have: “difficulty hearing, seeing, communicating, walking, using stairs, bending or learning due to a long-term physical or mental health condition” where long-term is defined as six months or more. Individuals are first asked if they have difficulty with activities, and then whether they experience a reduction in the kind or amount of activities they can do: at home; at school; or elsewhere. They may answer *often*, *sometimes* or *never* to each of the four questions. We categorize an individual as *often limited* if he/she answers *often* to any of the

(footnote continued)

disability continue to experience widespread discrimination. The Canadian Human Rights Commission (2015) reports that nearly half of all discrimination claims filed between 2009 and 2013 were disability-related. Moreover, 27 percent of people with a disability aged 15 and older reported being bullied between 2007 and 2012, while 35 percent felt avoided or excluded at school (Canadian Human Rights Commission, 2017). Thus, we argue that the process we are interested in is not time-dependent (i.e. factors that mitigate the negative effect of discrimination for youth with a disability).

³ Thus, we use *activity limitations* and *disability* interchangeably.

questions and *sometimes limited* if he/she answers *sometimes* (but not *often*) to any of the questions. These two groups represent youth with a disability, while those who recurrently answer *never* are categorized as non-disabled youth. It is important to note that disability is self-reported and is not contingent on contact with the health care system.

Although we focus on disability as defined by activity limitations, we also consider participation restrictions. Specifically, respondents are asked: “Because of any physical condition, mental condition or health problem, do you have difficulty: dealing with strangers; making new friends or maintaining friendships; with personal care; or moving around the house?” We create dummy variables for each. This allows us to assess the relative importance of social (strangers, friends) versus physical (personal care, moving around) aspects of disability for life satisfaction.

3.4. Discrimination

In the CCHS, youth with a disability are asked: “Because of your condition or health problem, have you ever experienced discrimination or unfair treatment?” If so, they are asked: “In the past 12 months, how much discrimination did you experience: a lot; some; a little; or none at all?” We examine discrimination using dummy variables for never, *none at all* in the past 12 months, *a little* in the past 12 months, *some* or *a lot* in the past 12 months.

3.5. Discrimination/belonging categories

Since we are interested in whether a sense of belonging mitigates the negative effect of discrimination on life satisfaction, we create the following categories: (1) low discrimination and high belonging; (2) low discrimination and low belonging; (3) high discrimination and high belonging; (4) high discrimination and low belonging. The low discrimination category includes non-disabled youth, as well as those with a disability who said they: never experienced discrimination; experienced it previously but *none at all* in the past 12 months; or experienced only *a little* in the past 12 months. The high discrimination category includes youth with a disability who report *some* or *a lot* of discrimination. The high belonging category indicates a *very strong* or *somewhat strong* sense of belonging to the community. The low belonging category includes youth who report a *somewhat weak* or *very weak* sense of belonging.

4. Methods

Using Ordinary Least Squares, we estimate models of life satisfaction for all youth and just those with a disability.⁴ We use a pooled sample of boys and girls, as well as separate samples to examine gender differences. We use sampling weights in all regressions, normalized in each cycle assuming they are random draws on the same population.

4.1. All youth

In Model 1, we determine whether youth with a disability have lower life satisfaction than their non-disabled peers. Thus, we focus on dummy variables related to disability status (*Disability*) whereby we compare youth who are *sometimes* and *often* limited, respectively, to those who are *never* limited.

$$Life = \alpha Disability + \eta X + \varepsilon \quad (1)$$

Life denotes life satisfaction. *X* contains a constant and predictors of life satisfaction as suggested by the literature. These include: gender (in the pooled sample of boys and girls) and age (Proctor, Linley, & Maltby,

⁴ We have also estimated these models using ordered probit techniques. Results are qualitatively similar.

2009); ethnicity (Huebner, Suldo, Valois, Drane, & Zullig, 2004); family structure (Zullig, Valois, Huebner, & Drane, 2005); socio-economic status as proxied by household income and parental education (Ash & Huebner, 2001; Burton & Phipps, 2008); presence of a chronic condition (Langeveld, Koot, & Passchier, 1999); and survey cycle. The latter controls for changes in life satisfaction across time (i.e. 2003 versus 2005). Income is adjusted for inflation and differences in need by household size.⁵ Throughout the paper, we use the log of real equivalent income to address skewness of the linear measure, and to reflect that well-being is more sensitive to differences at the bottom of the income distribution. α and η are parameters to be estimated. ε is the error term.

In Model 2, we add *Discrimination* via dummy variables for *a little* in the past 12 months, *some* or *a lot* in the past 12 months. The base is: never; *none at all* in the past 12 months; and non-disabled youth.⁶ β consists of parameters to be estimated.

$$Life = \alpha Disability + \beta Discrimination + \eta X + \varepsilon \quad (2)$$

In Model 3, we add *Belonging* with a dummy variable for *very strong* or *somewhat strong*, compared to *somewhat weak* or *very weak*. δ is a parameter to be estimated.

$$Life = \alpha Disability + \beta Discrimination + \delta Belonging + \eta X + \varepsilon \quad (3)$$

Model 3 includes disability status, discrimination and belonging as separate predictors of life satisfaction.⁷ For example, *some* or *a lot* of discrimination is assumed to have the same effect on all adolescents with a disability. However, we predict that the consequences of discrimination are smaller for those who have a stronger sense of belonging to their community. Thus, in Model 4, we assign adolescents to one of four categories: (1) low discrimination and high belonging; (2) low discrimination and low belonging (*LowDLowB*); (3) high discrimination and high belonging (*HighDHighB*); (4) high discrimination and low belonging (*HighDLowB*). The first category is our base and includes non-disabled youth.⁸ ρ_i for $i = [1,3]$ are parameters to be estimated.

$$Life = \alpha Disability + \rho_1 LowDLowB + \rho_2 HighDHighB + \rho_3 HighDLowB + \eta X + \varepsilon \quad (4)$$

4.2. Youth with a disability

We re-estimate Models 1 to 4 for youth with a disability to examine: how being *often* limited compares to being *sometimes* limited; how experiencing more discrimination compares to experiencing less; and how the effects of discrimination differ for those with a stronger sense of belonging to their community.

Moreover, to assess the relative importance of social versus physical aspects of disability for life satisfaction, we estimate a model in which disability status, discrimination and belonging are replaced with participation restrictions. Specifically, we include dummy variables to indicate whether the individual has difficulty with strangers (*Strangers*), making or maintaining friends (*Friends*). These variables reflect social restrictions, while difficulty with personal care (*PersonalCare*) and moving around the house (*Moving*) are more physical. γ_j for $j = [1,4]$ are parameters to be estimated.

⁵ We divide by the square root of household size. For example, a family of four with an income of \$80,000 would have the same standard of living as a single individual with an income of \$40,000 (i.e. \$80,000/2).

⁶ We also estimate this model for the sample of youth with a disability where the base is never and *none at all* in the past 12 months. Results are comparable.

⁷ Results are comparable when we replace the dummy variables for disability status, discrimination and belonging with continuous scores, which we constructed from the data.

⁸ We also estimate this model for the sample of youth with a disability where the base low discrimination and high belonging. Results are comparable.

Table 1
Disability status by gender.

	Boys and Girls Percent (Standard Error)	Boys Percent (Standard Error)	Girls Percent (Standard Error)
Never Limited	82.3 (0.5)	82.6 (0.7)	81.8 (0.7)
Sometimes Limited	12.4 (0.4)	12.0 (0.6)	13.0 (0.6)
Often Limited	5.3 (0.3)	5.4 (0.4)	5.2 (0.4)
Number of Observations	11997	6292	5705

$$Life = \gamma_1 Strangers + \gamma_2 Friends + \gamma_3 PersonalCare + \gamma_4 Moving + \eta X + \epsilon \tag{5}$$

5. Results

5.1. Descriptive statistics

Table 1 indicates that 12.4 percent of Canadian youth *sometimes* experience activity limitations, and another 5.3 percent are *often* limited. The difference in disability status between boys and girls is not statistically significant.

In Table 2, we compare life satisfaction and belonging for adolescents with and without a disability. Youth with a disability have lower life satisfaction; only 35.1 percent are *very satisfied* with life, compared to 46.6 percent of non-disabled youth. Moreover, almost three times as many youth with a disability are *dissatisfied* or *very dissatisfied* with life (i.e. 1.9 percent compared to 0.7 percent of their non-disabled peers). In terms of gender differences, girls are less satisfied with life than boys, and this is particularly true among those with a disability. For example, non-disabled boys are 2.4 percentage points more likely to be *very satisfied* with life compared to girls. The difference is 5.4 percentage points between boys and girls with a disability.

Table 2 also indicates that youth with a disability have a lower sense of belonging to their community; 72.2 percent have a *very strong* or *somewhat strong* sense of belonging compared to 78.7 percent of non-disabled youth. Moreover, we find that non-disabled girls are more likely to feel a strong sense of belonging compared to boys, while there is no gender difference among those with a disability.

Table 3 provides more information about youth with a disability. We

Table 2
Life satisfaction and sense of belonging by disability status and gender.

	Never Limited Percent (Standard Error)			Sometimes or Often Limited Percent (Standard Error)		
	Boys and Girls	Boys	Girls	Boys and Girls	Boys	Girls
Life Satisfaction						
Very Satisfied	46.63 (0.70)	47.72 (0.99)	45.37 (1.04)	35.07 (1.47)	37.65 (2.12)	32.26 (2.01)
Satisfied	49.37 (0.70)	48.49 (1.00)	50.38 (1.05)	56.01 (1.52)	55.84 (2.15)	56.20 (2.13)
Neither Satisfied nor Dissatisfied	3.33 (0.30)	3.09 (0.35)	3.61 (0.39)	7.01 (0.68)	5.45 (0.78)	8.72 (1.12)
Dissatisfied or Very Dissatisfied	0.70 (0.20)	0.70 (0.20)	0.64 (0.14)	1.90 (0.41)	1.06 (0.44)	2.82 (0.70)
Sense of Belonging						
Very Strong or Somewhat Strong	78.67 (0.86)	76.99 (0.86)	80.58 (0.86)	72.24 (2.00)	72.35 (2.00)	72.10 (1.97)
Number of Observations	9804	5178	4626	2193	1114	1079

Table 3
Characteristics of youth with a disability.

	Boys and Girls Percent (Std. Error)	Boys Percent (Std. Error)	Girls Percent (Std. Error)
Disability Status			
Sometimes Limited	70.1 (1.4)	68.8 (2.1)	71.6 (1.9)
Often Limited	29.9 (1.4)	31.2 (2.1)	28.4 (1.9)
Disability-Related Discrimination			
None at All in the Past 12 Months	2.3 (0.4)	2.9 (0.7)	1.6 (0.5)
A Little in the Past 12 Months	4.7 (0.6)	4.4 (0.8)	5.0 (0.9)
Some or A Lot in the Past 12 Months	5.1 (0.6)	5.9 (0.9)	4.2 (0.7)
Discrimination/Belonging Categories			
Low Discrimination and High Belonging	68.9 (1.4)	68.4 (2.0)	70.0 (2.0)
Low Discrimination and Low Belonging	26.0 (1.4)	25.7 (2.0)	26.2 (1.9)
High Discrimination and High Belonging	3.3 (0.1)	4.0 (0.7)	2.5 (0.6)
High Discrimination and Low Belonging	1.8 (0.3)	1.9 (0.5)	1.7 (0.5)
Participation Restrictions			
Dealing with Strangers	6.7 (0.7)	6.0 (0.9)	7.6 (1.1)
Making or Maintaining Friends	4.6 (0.6)	3.7 (0.6)	5.6 (0.9)
Personal Care	1.3 (0.3)	1.4 (0.4)	1.3 (0.4)
Moving around the House	0.6 (0.2)	0.5 (0.2)	0.6 (0.3)
Number of Observations	2193	1114	1079

find that 70.1 percent are *sometimes* limited, while 29.9 percent are *often* limited. Moreover, 12.1 percent have experienced discrimination related to their disability (5.1 percent experienced *some* or *a lot* in the past 12 months, 4.7 percent experienced *a little* in the past 12 months and 2.3 percent experienced *none at all* in the past 12 months but have previously).

In considering the discrimination/belonging categories, Table 3 indicates that: 68.9 percent of youth with a disability report low discrimination and high belonging; 26.0 percent report low discrimination and low belonging; 3.3 percent report high discrimination and high belonging; and 1.8 percent report high discrimination and low belonging.

At the bottom of Table 3, we emphasize participation restrictions rather than activity limitations.⁹ The most common difficulty is with strangers (6.0 percent of boys and 7.6 percent of girls), followed by making or maintaining friends (3.7 percent of boys and 5.6 percent of girls). Few adolescents have difficulty with personal care or moving around the house. This suggests that social aspects of disability are more prevalent than physical restrictions.

In Table 4, we examine the predictors of life satisfaction by disability status. It is interesting to note that youth with a disability are slightly older. Moreover, parental education and household income are lower for youth with a disability compared to those without. This may be attributable to the costs of having an adolescent with a disability (Burton & Phipps, 2009; Burton, Chen, Lethbridge, & Phipps, 2017; Corman, Noonan, & Reichman, 2005; Gould, 2004; Powers, 2003).

5.2. Regression analysis for all youth

Table 5 contains Ordinary Least Squares estimates of life satisfaction for the full sample of youth. Like the descriptive statistics, Model 1 indicates that life satisfaction is lower among those with a disability. For example, compared to non-disabled youth, life satisfaction is 0.19 points lower, or 31 percent of a standard deviation, among those who are *often* limited. This is large compared to the other statistically significant predictors of life

⁹ Recall that, although we focus on disability as defined by activity limitations, we also consider participation restrictions (i.e. difficulty with strangers, making or maintaining friends, personal care and moving around the house). Not all youth with activity limitations have participation restrictions.

Table 4
Predictors by disability status.

	Never Limited	Sometimes Limited	Often Limited
	Percent (Std. Error)	Percent (Std. Error)	Percent (Std. Error)
Girl	46.5 (0.7)	48.9 (1.8)	45.5 (2.8)
Age 12 to 13	36.3 (0.7)	32.4 (1.7)	29.7 (2.6)
Age 14 to 15	34.6 (0.7)	37.1 (1.7)	37.1 (2.8)
Age 16 to 17	29.1 (0.7)	30.5 (1.7)	33.2 (2.7)
Non-White	16.9 (0.6)	12.7 (1.3)	17.8 (2.5)
Lone Parent Family	17.1 (0.6)	23.3 (1.5)	19.9 (1.9)
Log of Real Equivalent Income – Mean	10.38 (0.01)	10.32 (0.03)	10.27 (0.06)
Parent with < High School	4.3 (0.3)	5.1 (0.8)	5.3 (1.2)
Parent with High School	18.2 (0.6)	19.5 (1.4)	21.8 (2.5)
Parent with Post-Secondary	77.5 (0.6)	75.5 (1.5)	72.9 (2.6)
Chronic Condition	45.3 (0.7)	74.6 (1.5)	77.4 (2.6)
Cycle 2.1 (2003)	46.6 (0.7)	49.3 (1.8)	45.9 (2.8)
Cycle 3.1 (2005)	53.4 (0.7)	50.7 (1.8)	54.1 (2.8)
Number of Observations	9804	1561	632

Table 5
Ordinary least squares estimates of life satisfaction for all youth.

Coefficient (Robust Std. Error) Unless Indicated	Boys and Girls				Boys	Girls
	Model 1	Model 2	Model 3	Model 4	Model 4	Model 4
Mean (Standard Deviation) of Life Satisfaction from 1 to 5	4.39 (0.62)	4.39 (0.62)	4.39 (0.62)	4.39 (0.62)	4.41 (0.60)	4.36 (0.63)
Disability Status						
Base = Never Limited						
Sometimes Limited	-0.139*** (0.025)	-0.118*** (0.025)	-0.108*** (0.025)	-0.119*** (0.025)	-0.099*** (0.033)	-0.138*** (0.035)
Often Limited	-0.190*** (0.039)	-0.142*** (0.039)	-0.133*** (0.039)	-0.143*** (0.039)	-0.072 (0.049)	-0.231*** (0.062)
Disability-Related Discrimination						
Base = Never or None at All in the Past 12 Months; Non-Disabled Youth						
A Little in the Past 12 Months	–	-0.235** (0.094)	-0.211** (0.091)	–	–	–
Some or A Lot in the Past 12 Months	–	-0.365*** (0.115)	-0.346*** (0.109)	–	–	–
Sense of Belonging						
Base = Somewhat Weak or Very Weak						
Very Strong or Somewhat Strong	–	–	0.220*** (0.020)	–	–	–
Discrimination/Belonging Categories						
Base = Low Discrimination and High Belonging						
Low Discrimination and Low Belonging	–	–	–	-0.213*** (0.020)	-0.197*** (0.027)	-0.231*** (0.031)
High Discrimination and High Belonging	–	–	–	-0.101 (0.076)	-0.127 (0.101)	-0.098 (0.108)
High Discrimination and Low Belonging	–	–	–	-0.977*** (0.238)	-0.997*** (0.353)	-0.944*** (0.285)
Girl	-0.044*** (0.016)	-0.045*** (0.016)	-0.052*** (0.016)	-0.051*** (0.016)	–	–
Base = Boy						
Age 12 to 13	0.063*** (0.018)	0.064*** (0.018)	0.043** (0.018)	0.042** (0.018)	0.028 (0.024)	0.055** (0.026)
Base = Age 14 to 15						
Age 16 to 17	-0.048** (0.021)	-0.048** (0.021)	-0.028 (0.020)	-0.028 (0.020)	-0.042 (0.028)	-0.015 (0.030)
Base = Age 14 to 15						
Non-White	-0.061** (0.044)	-0.063*** (0.024)	-0.056** (0.023)	-0.056** (0.018)	-0.022 (0.031)	-0.097*** (0.036)
Base = White						
Lone Parent Family	-0.064*** (0.021)	-0.066*** (0.011)	-0.055*** (0.021)	-0.055*** (0.020)	-0.009 (0.027)	-0.102*** (0.030)
Base = Two Parents						
Log of Real Equivalent Income	0.028*** (0.011)	0.027** (0.011)	0.027*** (0.010)	0.027** (0.010)	0.037** (0.027)	0.015 (0.014)
Parent with < High School	-0.058 (0.042)	-0.057 (0.042)	-0.051 (0.042)	-0.052 (0.042)	-0.012 (0.061)	-0.098 (0.055)
Base = Parent with High School						
Parent with Post-Secondary	0.012 (0.019)	0.011 (0.019)	0.008 (0.019)	0.009 (0.019)	-0.008 (0.026)	0.029 (0.029)
Base = Parent with High School						
Chronic Condition	-0.055*** (0.016)	-0.051*** (0.016)	-0.049*** (0.016)	-0.050*** (0.016)	-0.043** (0.022)	-0.054** (0.0228)
Base = None						
Cycle 3.1 (2005)	0.038** (0.016)	0.038*** (0.016)	0.036*** (0.016)	0.033** (0.015)	0.056*** (0.021)	0.005 (0.023)
Base = Cycle 2.1 (2003)						
R-Squared	0.0288	0.0328	0.0541	0.0550	0.0452	0.0711
F	14.06***	12.87***	18.72***	18.88***	8.34***	13.09***
Number of Observations	11997	11997	11997	1199	6292	5705

** p < 0.05; *** p < 0.01

satisfaction (e.g. it is three times as large as being non-white or in a lone parent family).

Model 2 indicates that adolescents who experience discrimination

have lower life satisfaction, controlling for the extent of their disability. For example, experiencing *some* or *a lot* of discrimination is associated with a reduction in life satisfaction by 0.37 points, or 59 percent of a standard deviation.

In Model 3, we find that adolescents who have a stronger sense of belonging to their community are more satisfied with life, controlling for the extent of their disability and discrimination. Specifically, having a *very strong* or *somewhat strong* sense of belonging is associated with an improvement in life satisfaction by 0.22 points, or 35 percent of a standard deviation (i.e. compared to *somewhat weak* or *very weak*).

In Model 4, we replace discrimination and belonging with the four categories: low discrimination and high belonging (base); low discrimination and low belonging; high discrimination and high belonging; high discrimination and low belonging. We do this to test whether adolescents with a stronger sense of belonging to their community are, at least partially, protected from the negative consequences of discrimination. Our results indicate that having high discrimination and low belonging is associated with a reduction in life satisfaction by almost one point, which is more than 1.5 times the standard deviation.

On the other hand, having high discrimination and high belonging does not have a statistically significant effect on life satisfaction. This suggests that a sense of belonging mitigates the negative effect of

Table 6
Ordinary least squares estimates of life satisfaction for youth with a disability.

Coefficient (Robust Std. Error) Unless Otherwise Indicated	Boys and Girls				Boys	Girls
	Model 1	Model 2	Model 3	Model 4	Model 4	Model 4
Mean (Standard Deviation) of Life Satisfaction from 1 to 5	4.24 (0.68)	4.24 (0.68)	4.24 (0.68)	4.24 (0.68)	4.30 (0.64)	4.18 (0.71)
Disability Status						
Base = Sometimes Limited						
Often Limited	-0.056 (0.044)	-0.026 (0.044)	-0.026 (0.043)	-0.025 (0.043)	0.019 (0.056)	-0.086 (0.068)
Disability-Related Discrimination						
Base = Never or None at All in the Past 12 Months						
A Little in the Past 12 Months	-	-0.235*** (0.096)	-0.214*** (0.093)	-	-	-
Some or A Lot in the Past 12 Months	-	-0.378*** (0.113)	-0.359*** (0.107)	-	-	-
Sense of Belonging						
Base = Somewhat Weak or Very Weak						
Very Strong or Somewhat Strong	-	-	0.214*** (0.048)	-	-	-
Discrimination/Belonging Categories						
Base = Low Discrimination and High Belonging						
Low Discrimination and Low Belonging	-	-	-	-0.180*** (0.048)	-0.162*** (0.063)	-0.199*** (0.073)
High Discrimination and High Belonging	-	-	-	-0.112 (0.076)	-0.116 (0.101)	-0.129 (0.111)
High Discrimination and Low Belonging	-	-	-	-0.966*** (0.234)	-0.998*** (0.339)	-0.942*** (0.290)
Girl	-0.106*** (0.040)	-0.111*** (0.039)	-0.114*** (0.047)	-0.112*** (0.039)	-	-
Base = Boy						
Age 12 to 13	0.090 (0.046)	0.097** (0.045)	0.066 (0.048)	0.064 (0.046)	0.016 (0.061)	0.113 (0.068)
Base = Age 14 to 15						
Age 16 to 17	-0.070 (0.050)	-0.068 (0.049)	-0.051 (0.049)	-0.050 (0.048)	-0.089 (0.064)	-0.019 (0.073)
Base = Age 14 to 15						
Non-White	-0.034 (0.063)	-0.050 (0.063)	-0.063 (0.061)	-0.046 (0.061)	0.105 (0.077)	-0.250 (0.092)
Base = White						
Lone Parent Family	-0.075 (0.050)	-0.079 (0.050)	-0.064 (0.050)	-0.051 (0.050)	0.017 (0.067)	-0.125 (0.075)
Base = Two Parents						
Log of Real Equivalent Income	0.061*** (0.019)	0.055*** (0.019)	0.051*** (0.020)	0.058*** (0.019)	0.073*** (0.025)	0.041 (0.030)
Parent with < High School	-0.010 (0.098)	-0.007 (0.099)	0.012 (0.097)	0.002 (0.096)	-0.022 (0.169)	-0.006 (0.106)
Base = Parent with High School						
Parent with Post-Secondary	0.038 (0.050)	0.032 (0.050)	0.032 (0.051)	0.037 (0.051)	-0.002 (0.054)	0.081 (0.086)
Base = Parent with High School						
Cycle 3.1 (2005)	0.076 (0.040)	0.079** (0.040)	0.073 (0.040)	0.061 (0.039)	0.090 (0.052)	0.028 (0.057)
Base = Cycle 2.1 (2003)						
R-Squared	0.0344	0.0534	0.0722	0.0785	0.0808	0.0880
F	4.86***	5.07***	5.87***	5.79***	2.45***	4.70***
Number of Observations	2193	2193	2193	2193	1114	1079

** p < 0.05; *** p < 0.01

discrimination.

We find comparable results for boys and girls, although the size and statistical significance of some predictors vary. For example, an increase in household income is associated with higher life satisfaction for boys but not girls. Moreover, being non-white or in a lone parent family is negatively associated with life satisfaction for girls but not boys. Finally, it is important to note that the R-squared increases as we add discrimination, belonging and combinations thereof (i.e. from Models 1 to 4), and the F values indicate that our predictors are jointly significant.

5.3. Regression analysis for youth with a disability

In Table 6, we restrict the sample to youth with a disability. It is interesting to note that life satisfaction is comparable among those who are *sometimes* and *often* limited. In Models 2 and 3, discrimination continues to have a negative effect on life satisfaction, while belonging has a positive effect. Moreover, when we replace discrimination and belonging with combinations thereof, we again see that having high discrimination and low belonging has a large, negative effect on life satisfaction, while having high discrimination and high belonging does not.

Like before, the R-squared increases as we add discrimination, belonging and combinations thereof (i.e. from Models 1 to 4), and the F values indicate that our predictors are jointly significant. It is also interesting to note that the association between household income and

life satisfaction is twice as large for boys with a disability compared to the full sample of boys (i.e. Table 5 versus Table 6).

In Table 7, we assess the relative importance of social versus physical aspects of disability for life satisfaction by focusing on participation restrictions (i.e. difficulty with strangers, making or maintaining friends, personal care and moving around the house). We find that social restrictions, not physical, have a negative effect on life satisfaction. For boys, dealing with strangers is most important. For girls, making or maintaining friends is most important.

6. Discussion

In this paper, we examine the social complexities of disability among Canadian youth. We find that a large proportion have a disability (i.e. 17.7 percent), and life satisfaction is lower among them. This is especially true for girls. We also find that 12.1 percent of youth experience discrimination related to their disability. Interestingly, discrimination has a larger, negative effect on life satisfaction than the disability itself, by up to three times the amount.¹⁰ However, a sense of belonging is positively associated with life satisfaction and mitigates

¹⁰ This is consistent with Sutin, Stephan, and Terracciano (2015), who find that stigma associated with being overweight has a larger, negative effect on life expectancy than the condition itself.

Table 7
Ordinary least squares estimates of life satisfaction for youth with a disability – participation restrictions.

Coefficient (Robust Std. Error) Unless Otherwise Indicated	Boys and Girls	Boys	Girls
Mean (Standard Deviation) of Life Satisfaction from 1 to 5	4.24 (0.68)	4.30 (0.64)	4.18 (0.71)
Dealing with Strangers	-0.217*** (0.084)	-0.277*** (0.099)	-0.117*** (0.133)
Making or Maintaining Friends	-0.293*** (0.113)	-0.171 (0.138)	-0.465*** (0.166)
Personal Care	-0.124 (0.249)	-0.079 (0.132)	-0.188 (0.512)
Moving around the House	0.110 (0.217)	0.335 (0.253)	-0.027 (0.371)
Girl	-0.097** (0.039)	–	–
Base = Boy			
Age 12 to 13	0.088 (0.046)	0.033 (0.058)	0.150** (0.069)
Base = Age 14 to 15			
Age 16 to 17	-0.078 (0.049)	-0.108 (0.069)	-0.057 (0.071)
Base = Age 14 to 15			
Non-White	-0.046 (0.063)	0.099 (0.080)	-0.237** (0.096)
Base = White			
Lone Parent Family	-0.072 (0.049)	0.008 (0.066)	-0.158** (0.073)
Base = Two Parents			
Log of Real Equivalent Income	0.057*** (0.019)	0.075*** (0.025)	0.042 (0.028)
Parent with < High School	-0.012 (0.097)	-0.040 (0.176)	-0.024 (0.101)
Base = Parent with High School			
Parent with Post-Secondary	0.024 (0.049)	-0.014 (0.056)	0.052 (0.081)
Base = Parent with High School			
Cycle 3.1 (2005)	0.074 (0.040)	0.106 (0.055)	0.039 (0.057)
Base = Cycle 2.1 (2003)			
R-Squared	0.0560	0.0461	0.0768
F	5.48***	3.07***	3.90***
Number of Observations	2193	1114	1079

** p < 0.05; *** p < 0.01

the negative effect of discrimination for both boys and girls. Specifically, the combination of high discrimination and low belonging has a large, negative effect on life satisfaction. But, when high discrimination is coupled with high belonging, the effect is small and statistically insignificant. Thus, a sense of belonging is an antidote to discrimination among youth with a disability. This is consistent with findings for other stigmatized groups, such as adults with a disability (Schmitt, Branscombe, Postmes, & Garcia, 2014; Nario-Redmond, Noel, & Fern, 2013). Presumably, discrimination reduces an individual's sense of control, which undermines mental health (McNamara, Stevenson, & Muldoon, 2013). Yet, group identification is associated with feeling in control of one's life and satisfaction therein (Greenaway et al., 2015).

Our results also indicate that social, not physical, aspects of disability are important for life satisfaction. The most notable gender difference in our work is that boys are particularly vulnerable to dealing with strangers while, for girls, making or maintaining friends is most important. This is consistent with evidence that peer relationships are more important for life satisfaction among girls (Ma & Huebner, 2008). In terms of predictors, we find that being non-white or in a lone parent family is negatively associated with life satisfaction for girls, while income is positively associated with life satisfaction for boys, especially those with a disability. This is consistent with evidence on the economic costs of disability among Canadian children, regardless of gender (Burton & Phipps, 2009).

Although our estimates are not causal, they suggest that a sense of belonging is positively associated with well-being for all youth and may alleviate the negative consequences of discrimination for those with a disability. This has important implications for well-being (and inequality thereof) as the negative effect of discrimination outweighs that of the disability itself. Thus, there is a role for policy in potentially improving the life satisfaction of youth with a disability. Our findings suggest that organizations that cultivate a sense of belonging may be especially beneficial for youth with a disability (e.g. 4-H, interest groups related to arts, athletics and/or intellectual pursuits). These efforts do not necessarily have to be disability-related; recall that, in our work, it is left to the adolescent to define his/her community.

In support of such policy, future research should consider what contributes to a sense of belonging and how it can best be cultivated; more work is needed to better understand the sources and forms of belonging. Relationships with parents are important to the well-being of adolescents (Nickerson & Nagle, 2004; Nickerson & Nagle, 2005), and this may be especially true for those with a disability who spend more time with adults (Solish, Perry, & Minnes, 2010). Relationships with peers are also important, but they can be difficult. Simply attending a group activity does not necessarily mean that youth with a disability feel as if they belong. Indeed, those who are in mainstream educational settings report greater stigma and negative social consequences than those who are segregated. Thus, youth with a disability may prefer social groups comprised of peers who are more like themselves (Cooney et al., 2006; Diez, 2010). In other words, *sticking together* may help youth with a disability cope with discrimination as it does for other stigmatized groups (Branscombe et al., 1999; Garstka et al., 2004; Nario-Redmond et al., 2013; Schmitt et al., 2002).

A number of limitations should be noted in interpreting our results. First, estimates may be subject to social desirability bias whereby youth underreport negative experiences (i.e. disability, discrimination) and overreport positive ones (i.e. life satisfaction, sense of belonging). Moreover, our data are from the 2000s, despite the fact they are unique and appropriate for our research questions. It is possible that the well-being of Canadian youth with a disability has evolved over time due to changes in relevant policies and programs.¹¹ Also related to our data, the CCHS is cross-sectional, so we can only examine correlations. Moreover, it excludes vulnerable youth such as those with the most severe disabilities and First Nations peoples living on reserve. Finally,

¹¹ The most notable change is that Canada ratified the United Nations Convention on the Rights of People with Disabilities in 2010. Yet, as described above, people with a disability continue to experience widespread discrimination (Canadian Human Rights Foundation 2015; Canadian Human Rights Foundation 2017). Perhaps not surprisingly, they remain less likely to graduate from college, be employed and are three times more likely to live below the poverty line compared to their non-disabled peers (Erickson, Lee, & von Schrader, 2014).

our cycles of the CCHS contain information about the frequency of disability, but not its nature or severity. For example, two adolescents who are often limited with different conditions may have different experiences of discrimination. However, looking across prognoses, youth with a disability are a vulnerable group with shared challenges that could be addressed by efforts that encourage a sense of belonging.

7. Conclusion

There is a complex relationship between social experiences and well-being among youth with a disability. On average, they have lower life satisfaction than their non-disabled peers. They also experience discrimination, which negatively affects life satisfaction. However, those who feel a strong sense of belonging to their community do not have lower life satisfaction, even if they experience a lot of discrimination. Thus, belonging is protective of well-being for youth with a disability. This has important implications for policy whereby organizations that cultivate a sense of belonging can offset the negative consequences of discrimination for this vulnerable group.

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Conflict of interest

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Ethics approval

Ethics approval is not required. We use de-identified microdata from a Statistics Canada Research Data Centre. All output adheres to the disclosure requirements of the Centre.

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