# Understanding Mental Health Differences Between Cisgender and Gender Minority Youth: Evidence from Within-Family Comparisons*

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April 21, 2026

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**Abstract**

Prior research has indicated that cisgender individuals experience significant mental health advantages compared to transgender and nonbinary individuals, including among youth. Using data from the 2021 Canadian Census, we document substantial differences—ranging from 30 to 40 percentage points—in the prevalence of mental health conditions between cisgender youths and their gender minority counterparts. These disparities remain significant even after accounting for demographic factors and parental background. Sibling comparisons further reveal that these mental health differences are substantial, indicating that unobserved family background differences cannot fully explain them. In contrast, household factors do eliminate sibling gaps in physical and learning difficulties.

Keywords: Nonbinary, transgender, census, mental health, youth
JEL Codes: I1, J1

*This research uses confidential data at a secure Canada Research Data Centre. This analysis was conducted at the Atlantic Research Data Centre and Victoria Research Data Centre, which are part of the Canadian Research Data Centre Network. The services and activities provided by the Atlantic Research Data center are made possible by the financial or in-kind support of the Social Sciences and Humanities Research Council, Canadian Institutes of Health Research, Canada Foundation for Innovation, Statistics Canada and Dalhousie University. We thank seminar participants at the University of Victoria, Vanderbilt University, the 2025 Canadian Economic Association Conference, and the 2025 CINCH Economics of Mental Health Conference for helpful comments. All errors and omissions are our own.

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# 1 Introduction

A growing body of research shows that transgender, nonbinary, and other gender minority individuals — those whose gender identity does not match their sex at birth — experience significantly worse economic outcomes compared to individuals whose gender identity aligns with their sex at birth (i.e., cisgender people) (see, for example, Carpenter et al. (2020), Carpenter et al. (2022), Carpenter et al. (2024), Carpenter et al. (2025), and Carpenter et al. (2026)). A separate but related literature documents that gender minority people also experience worse health than cisgender people, particularly with respect to their mental health (Feir and Mann, 2024; Carpenter et al., 2026; Bai et al., 2025). Similar mental health gaps have also been documented for youth and young adults in the US, Canada, and elsewhere using a variety of representative and non-representative datasets (Liu et al., 2023; Suarez, 2024; Campbell and Rodgers, 2022; Meyer et al., 2017). While there is some evidence that differences in mental health may be connected to economic outcomes (Carpenter et al., 2026), particularly given the literature on the impact of poor mental health in adolescence (see Currie (2024) for a recent review), research has yet to make progress on understanding the reasons for differences in mental health conditions among gender minority youth and other youth, let alone their extent in large, nationally representative samples. In this paper, we seek to contribute to this understanding.

Why might gender minority youth have worse mental health? There are several possibilities. For example, there is widespread evidence that transgender and nonbinary people face increased risks of discrimination, harassment, and violence compared to cisgender people. These forces could directly increase the risk of experiencing mental health difficulties. Other forms of minority stress, such as unintentional misgendering and institutional navigation and barriers, may also result in elevated risk of experiencing anxiety and depression, as well as having one's life and experiences subject to political debate.

It is also possible that gender minority youth may be observed to have greater mental

health difficulties due to selection: parents who acknowledge their child's gender minority status may be more likely to connect them with mental healthcare providers who can diagnose them with depression, anxiety, gender dysphoria, or a related condition and report both in surveys. In addition, youth who are more aware of mental health conditions and non-cisgender identities may also be better able to identify both in themselves and communicate them because of the family-level environment. The empirical analysis we conduct here allows us to assess the potential importance of family-level selection in reporting at least one child as non-cisgender and recognizing mental health conditions among the youth in their households.

In this paper, we provide new evidence on differences in mental health across gender minority and cisgender youth using the 2021 Canadian Census data, focusing on youths aged 12-18. The Canadian Census asked separate questions about sex at birth and current gender for every individual in the household, which allows us to identify every individual's gender minority status. These data also include detailed questions about demographic and economic characteristics, as well as information on a range of physical and mental health conditions. And, since we know the relationships among everyone in the same household, we can leverage variation across siblings in gender minority status to isolate the relationship between gender minority status and mental health among youths net of shared household factors such as political ideology.

Our work makes several important contributions to the literature. First, we use samples from a mandatory national census, which produces meaningful sample sizes of transgender and nonbinary youths aged 12-18. We identify over 8,000 gender minority youth in our data. This is substantially larger than prior studies on gender minority youths that use representative samples, most of which have no more than a few hundred gender minority respondents. Second, we are the first to document how the age profile of mental health problems differs by gender minority status. Our large samples enable this, which is important for understanding the most appropriate timing for interventions to improve mental

health. Third, we are the first to introduce a family fixed effects approach to compare mental health outcomes across cisgender and gender minority siblings. Other papers examining earnings have also used a siblings design (see, for example, in an LGBTQI+ context and wealth in Sweden, Dujeancourt et al. (2024)), but to our knowledge, we are the first to do so to examine mental health differences between gender minority youths and their cisgender siblings.

Focusing on youth mental health is important for several reasons: poor mental health as a young person has been strongly linked to human capital accumulation, school performance, other non-cognitive skills, and labor market outcomes (Currie et al., 2010; Fletcher, 2010; Smith and Smith, 2010; Goodman et al., 2011). Prior work on adults that documents very large earnings disparities for otherwise similar gender minorities and cisgender people — on the order of 15 to 25 percent of annual earnings — also shows that accounting for mental health differences can explain a substantial amount of the observed gap. Understanding when mental health differences emerge - including whether they exist during key pre-market periods of human capital accumulation - is therefore important for interpreting the sensitivity of earnings estimates to controlling for adult mental health and adult population outcomes, particularly since poor mental health in adolescence is treatable, such as through pharmacological and school-based interventions (Ludwig et al., 2009; Golberstein et al., 2024; Bhalotra et al., 2025).

In population representative surveys, the share of people identifying as something other than cisgender has been increasing over time (Jones, 2024) and the rate of increase has been the largest among youth. Somewhat paradoxically, as the ability for youth to openly identify themselves as non-cisgender early in life due to greater awareness and relative acceptance of non-heterosexual or cisgender identities, the susceptibility of youth to discrimination may also increase at a particularly vulnerable time in life, increasing the possibility of experiencing poor mental health. Russell and Fish (2019) propose this "developmental collision hypothesis" — where earlier coming out in adolescence, a sensitive developmental

period, intersects with persistent stigma and inequality — potentially exacerbating mental health vulnerabilities. Bishop et al. (2024) offers further evidence for this hypothesis.

There are also several active policy debates in North America and worldwide that could directly or indirectly impact gender minority youth mental health, including: access to gender affirming care, the legality of 'conversion therapy' practices that attempt to change a person's gender identity, access to bathrooms consistent with one's gender identity, sports participation, workplace discrimination policies, and others. Thus, it is important to understand the causes and consequences of poor mental health for this population for evidence-based policy dialogue.

We report several key findings. First, we identify the prevalence of gender minority youths in a large population census: about 4 percent of the Canadian population aged 12-18 are gender minorities (i.e., transgender or nonbinary). This share is significantly higher than the associated share for adults aged 25-64 from the same dataset (approximately 0.3 percent), as reported in Carpenter et al. (2026). Second, we describe the demographics of gender minority youths compared to cisgender youths. Relative to cisgender youths, we find that gender minority youths are more likely to be Indigenous, less likely to be visible minorities, less likely to be immigrants, more likely to live in cities, and more likely to live in single-parent households. Interestingly, we do not see systematic patterns of parental education across groups of cisgender and gender minority children, which is different from patterns observed for adults (Carpenter et al., 2026). Third, we document very large differences in mental health conditions for gender minority youths compared to cisgender youths. While 4.3 percent of cisgender boys and 6.2 percent of cisgender girls age 12-18 have a mental health difficulty, the associated share for nonbinary youths assigned female at birth is 43.1 percent, which is seven to ten times the rate for cisgender youths. Rates of mental health difficulty for nonbinary youths assigned male at birth (30.9 percent), transgender boys (25.6 percent), and transgender girls (18.3 percent) are lower than the rate for nonbinary youths assigned female at birth, but in every case they are significantly higher than the rates

of mental health difficulty for cisgender youths. We also document large differences between gender minority and cisgender youths in rates of physical difficulties, learning difficulties, and other health difficulties related to seeing, hearing, and walking, but these differences are noticeably smaller in magnitude than the associated gaps in mental health. Our data also allow us to document sharp age gradients in the presence of mental health difficulties: while a quarter of 12-year-old nonbinary youths assigned female at birth have a mental health difficulty, this rises to well over 50 percent for 16, 17, and 18-year-olds with the same gender identity. Age gradients are present for all other groups except cisgender boys.

Finally, we explore comparisons across siblings within households to account for family background directly. When we do so, we find that differences in rates of mental health difficulty between cisgender and gender minority siblings are still meaningfully large when we account for family fixed effects. This suggests that family background cannot account for the very highly elevated rates of mental health conditions for gender minority youths, and this is especially true for nonbinary youths assigned female at birth.[1] The relatively small role for family background is perhaps not surprising given that parental education and other measures of socioeconomic status are not systematically different for gender minority youths compared to cisgender youths. The stability of the large gap in mental health difficulties between gender minority youths and cisgender youths is, however, unique to mental health: we find that the associated gaps in physical health and learning difficulties are completely eliminated when we compare gender minority and cisgender siblings. This suggests that there is a uniquely important production of mental health disadvantage for gender minority children. Surprisingly, heterogeneity analyses reveal very few systematic differences across Indigenous status, visible minority status, or parental education. However, the point estimates suggest two important differences in context that matter for nonbinary-cisgender youth mental health: gaps in mental health difficulties are smaller in households

[1]The sample of nonbinary youth assigned male at birth is much smaller than for the other population groups, with standard errors at least three times that of other populations, so while the point estimates suggest large differences, the standard errors become large with family fixed effects.

with at least one gender minority parent and in large cities relative to more rural areas. These patterns suggest a role for attitudes, acceptance, and discrimination/bullying in shaping mental health differences related to gender minority status among youths.

## 2 Literature Review

Most prior work on the mental health of gender minorities using population-representative data has focused on adults.[2] For example, Feir and Mann (2024) uses data from states that administered the sexual orientation and gender identity (SOGI) module of the 2014-2020 CDC BRFSS to document large mental health disparities experienced by self-identified transgender people compared to cisgender people. Although the BRFSS asks about whether transgender people identify as gender nonconforming, it does not allow separate identification of nonbinary people who do not also identify as transgender. The US Census Bureau's Household Pulse survey does ask separately about sex at birth and current gender, and it also allows separate identification of nonbinary status. Although Household Pulse has included questions about children's mental health, it does not allow identification of the nonbinary status of children.

A few representative surveys that include questions about transgender status have included children or have focused on youths. For example, the Canadian Community Health Survey began asking respondents separate questions about sex at birth and current gender in its 2019 survey, and it allows an 'or please specify' option to the question about current gender. Liu et al. (2023) use these representative data to study 15-44 year olds and find that gender minorities experience significantly greater psychological distress and suicidality than cisgender people, and these patterns survive regression adjustment for demographic characteristics. Since 2019, the Youth Risk Behavior Survey (YRBS), a national sample of high

[2]Multiple non-representative samples have studied the mental health of transgender and nonbinary youth in Canada. For example, the Canadian Trans Youth Health Survey includes detailed questions about mental health for a non-representative sample of under 1,000 youths. Using those data, Veale et al. (2017) documents that transgender youth have significantly higher rates of suicidality and mental distress than cisgender youths.

school youths coordinated by the Center for Disease Control and Prevention in the United States, included a question about transgender status in an optional module, but it does not allow identification of nonbinary status.[3] Suarez (2024) use data from 18 states in the 2021 YRBS that included the question about transgender status and document that transgender youths report much higher rates of poor mental health and suicidality than cisgender youths. Suarez (2024) find a similar result using the 2023 YRBS when the transgender question was added to the YRBS core questionnaire. [4]

Finally, some research has directly examined risk factors for serious psychological distress among gender minority youths. For example, Campbell and Rodgers (2023) uses the 2015 United States Transgender Survey (USTS) to study how exposure to conversion therapy in youth is related to the risks of suicidality and running away. Although the USTS is not representative, the approach in this paper relies on the reported timing of various life events to disentangle plausibly causal relationships among the key variables of interest. They find that conversion therapy is associated with significant increases in risks of suicidality and running away for gender minorities in the USTS data, and these associations were larger if the exposure to conversion therapy happened at early ages (e.g., 11-14).

We contribute to this emerging literature by using a large mandatory population representative national census to identify a very large sample of gender minority youth. We also study youth as young as age 12, and we show that gaps related to gender minority status are observed even for those youths. Finally, we are the first to compare outcomes across siblings to understand health differences relating to gender minority status.

[3]Specifically, the YRBS asks: "Some people describe themselves as transgender when their sex at birth does not match the way they think or feel about their gender. Are you transgender?" Response options include: A. No, I am not transgender; B. Yes, I am transgender; C. I am not sure if I am transgender; and D. I do not know what this question is asking.

[4]Notably, the YRBS is not expected to include the question about transgender status on its 2025 survey as it is inconsistent with federal government administrative priorities and an Executive Order (The White House, 2025).

# 3 Data and Descriptive Statistics

Our primary data comes from restricted-use versions of the 2021 Canadian Census. The 2021 Census, which is mandatory, was the first in the country (and one of the first in the world, along with the United Kingdom and New Zealand) to allow for the identification of transgender and nonbinary individuals. For our purposes of identifying gender minority people, two pieces of demographic information are ascertained for each individual: assigned sex at birth and current gender. The information in these two questions allows us to identify non-cisgender people[5] The Census questionnaire also allowed for a write-in option for those who identified with a gender that was not male or female.[6]

Our focus in this analysis is on children aged 12 through 18. For these individuals, it is likely that a parent is reporting their sex at birth and current gender. The 2021 Census questions on sex at birth and current gender were asked for every individual in the household, regardless of age; however, Statistics Canada recommends caution in using the information on sex at birth and current gender for youths below age 15. Because our household fixed effects approach requires the presence of a similar-in-age sibling, we also consider 12-14 year olds in our main analysis sample, but we also show robustness to restricting attention to 15-18 year olds.

The household fixed effects approach we use requires gender minority children to have a cisgender sibling who is reasonably close in age. Importantly, we must assume that having a gender minority sibling does not itself cause a cisgender sibling to be observed (or not) in the dataset. If cisgender siblings are more likely to move away from households with gender minority children, for example, this would bias our estimates of the relationship between gender minority status and poor mental health.

We identify poor mental health based on a question in the Canadian Census that asks about activities of daily living. Specifically, the question reads: "The following question

[5]Non-cisgender people are individuals whose sex at birth does not match their current gender.
[6]The language of "male" and "female" was used in both the sex and gender question.

is about difficulties a person may have doing certain activities. Only difficulties or long-term conditions that have lasted or are expected to last for six months or more should be considered. Does this person have any:...". Respondents are then asked to respond to a list of different types of conditions, including: difficulty seeing; difficulty hearing; difficulty walking using stairs, using their hands or fingers or doing other physical activities; difficulty learning, remembering, or concentrating; emotional, psychological, or mental health conditions; and other health problem or long-term condition. Response options for each type of condition include: "No", "Sometimes", "Often", and "Always". For mental health difficulty, the survey listed specific examples of conditions, including: "anxiety, depression, bipolar disorder, substance abuse, anorexia, etc.)?" We code an indicator variable for mental health difficulty equal to one if the individual is reported to have the condition 'often' or 'always' and zero otherwise. We define the other health variables similarly.

# 4 Empirical Strategy

We aim to evaluate the role of shared family background in explaining the differences in mental health experienced by gender minority people as compared to cisgender people. Although our aim is not to estimate the causal effect of gender minority status per se on poor mental health, sibling comparisons with and without family fixed effects are informative about the role of unobserved family-specific factors such as political ideology in contributing to mental health disparities between cisgender and gender minority youth.

Specifically, we estimate linear regression models of the following form:

$$\begin{aligned} y_{ij} =& \alpha + \gamma_1 \text{nonbinary youth assigned female at birth}_{ij} \\ &+ \gamma_2 \text{nonbinary youth assigned male at birth}_{ij} + \gamma_3 \text{transgender boy}_{ij} \\ &+ \gamma_4 \text{transgender girl}_{ij} + \gamma_5 \text{cisgender girl}_{ij} + X_i j \beta + \varphi_j + u_{ij}, \end{aligned} \tag{1}$$

where $Y$ is an indicator of experiencing a mental health difficulty often or most of the time for individual $i$ in family $j$. Each equation contains a vector of transgender and nonbi-

nary status dummies, given by the column headings of Table 1, with cisgender boys as the omitted category. The set of controls is denoted by $X_{ij}$. Demographic controls, present in all regressions, are dummies for single years of age; an indicator that the household maintainer is from a Christian, Muslim, or Jewish worldview; visible minority and Indigenous indicators; and immigration generation status interacted with visible minority status. Some regressions include a vector of census subdivision fixed effects that capture spatial variation. We estimate models with and without a set of family fixed effects, denoted by $\varphi_j$.

For all coefficients, we present weighted least squares estimates using Canadian Census survey weights to make the results representative of the Canadian population and present standard errors clustered at the level of the census family.

The family-level fixed effect will absorb any unobserved family-level factors that would affect all children in the household. For example, if parents are aware of and do not stigmatize either non-cisgender identities or having mental health conditions, this may result in children in these households being more likely to be identified as non-cisgender and having a mental health condition, relative to households that do not have his awareness or lack of stigma. This creates a potentially spurious correlation between youth gender minority status and mental health. A model with family fixed effects should account for this form of selection. However, any *within-family* differences across children that may correlate with being reported as a gender minority and having a mental health condition will not be accounted for. For example, if one child has a better relationship with their parents and tells them of all their experiences, while another does not, this may also result in another form of spurious correlation between gender identity and poor mental health that will not be captured by a family fixed effect. Thus, while our specification can account for some potentially important dimensions of selection, it does not account for others.

# 5 Results

We show the proportion of the population that is reported as a gender minority youth for each age group in Figure A1 which shows that about 4 percent of youths age 12-18 are identified as gender minorities. This share is much higher than the 0.3 percent share from these same data for 25-64 year olds as reported in Carpenter et al. (2026). FigureA1 also shows that there are higher rates of gender minority identification for youths assigned female at birth compared to youths assigned male at birth, and that it is very uncommon for youths to be identified as nonbinary assigned male at birth. Finally, FigureA1 shows that gender minority identification generally increases from age 12 to age 18, which is consistent with the age-specific pattern reported in Carpenter et al. (2026) which documented the highest rates of gender minorities for 25-29 year olds (0.78 percent of the total Canadian population) that sharply drop off to less than 0.2 percent by age 50.

Table 1 presents means of key variables for youths aged 12 through 18 with at least one sibling from the 2021 Canadian Census. As we show in Appendix Table A1, which presents the same summary statistics for all youth, the requirement of having a sibling present in the household does not change the main patterns across gender minority and cisgender youths. We present means for nonbinary youths assigned female at birth in column 1, nonbinary youths assigned male at birth in column 2, transgender girls in column 3, transgender boys in column 4, cisgender girls in column 5, and cisgender boys in column 6. As was documented previously for adults age 25-64 from these same data, we find that gender minority youths in columns 1-4 are much more likely to be indigenous than cisgender youths. Nonbinary youths are also less likely to be visible minorities and first-generation immigrants than cisgender youths, though the differences between transgender youths and cisgender youths are smaller. We also see in Table 1 that gender minority youths are more likely to live in large cities and urban areas compared to cisgender youths. This pattern may reflect the role of more progressive attitudes regarding LGBTQ+ issues and populations. It may also

reflect differential accessibility of gender-affirming care, since clinics that provide such care are generally located in larger cities.

Regarding mental health, which is the key focus of our paper, we see in Table 1 that gender minority youth are reported to have much higher rates of mental health difficulties than cisgender youth, and this is especially true for nonbinary youth assigned female at birth. Specifically, we find that 43.1 percent of all 12 through 18-year-old nonbinary youth assigned female at birth have a mental health difficulty, compared to just 6.2 and 4.3 percent of cisgender girls and boys, respectively. This exactly matches the patterns for adults documented in Carpenter et al. (2026), confirming that these mental health differences are observed in early adolescence. The magnitude of these mental health differences is enormous: nonbinary youth assigned female at birth are seven (ten) times more likely than cisgender girls (boys) to have a mental health difficulty. The size of these gaps (about 37 percentage points) is 18 times larger than the associated gaps in this age group between girls and boys (2 percentage points). Rates of mental health difficulty for the other gender minority groups are also much higher than for cisgender youths: 30.9 percent of nonbinary youths assigned male at birth, 25.6 percent of transgender boys, and 18.3 percent of transgender girls aged 12 through 18 have a mental health difficulty. Table 1 also shows that gender minority youth are more likely than cisgender youth to have physical health difficulties, learning difficulties, and other difficulties (e.g., walking, seeing, and hearing). In all cases, these differences are larger for nonbinary youths than for transgender youths. The magnitude of these differences, however, is notably smaller than those observed for mental difficulties.

Table 1 also reports characteristics of parents and households, separately by the gender minority group of the youths. Prior evidence on gender minority adults has documented striking positive selection compared to cisgender adults, especially for nonbinary adults assigned female at birth (Carpenter et al., 2026). Interestingly, while we see some evidence of positive selection of parents with respect to the likelihood that at least one parent has a bachelor's degree for nonbinary youths, we do not see the same pattern for parents of

transgender youths. Moreover, we do not see differences in the probability that at least one parent is employed across gender minority groups, and patterns of household income are also mixed – though there is evidence that transgender youths come from lower-income households than cisgender youths. Notably, the likelihood that the child lives in a single-parent household is notably higher for all gender minority youths than for cisgender youths. Finally, the bottom row of Table 1 documents that, similar to the patterns of child mental health, we also find that gender minority youths are more likely than cisgender youths to live in a household where at least one parent has a mental health difficulty. This could reflect intergenerational transmission of mental health, or could reflect the adverse mental health consequences to parents of having their child experience poor mental health. It could also reflect unobserved factors that contribute both to parent and child mental health difficulties that are correlated with gender minority status.

We show the age profile of mental health difficulties for gender minority and cisgender individuals aged 12 through 18 in Figure 1. Our samples of gender minority youths allow us to do this by single year of age, though there are small samples of nonbinary youths assigned male at birth, which makes those differences noisier than the patterns for the other groups. Several patterns are worth noting in Figure 1. First, the age profile of mental health difficulties for cisgender boys and cisgender girls, which constitute the vast majority of the sample, matches previously published research from other data sources, suggesting the validity of the 2021 Canadian Census data for capturing a meaningful measure of mental health. As has been extensively documented, girls are reported to have more mental health difficulties than boys, and this is true throughout adolescence and young adulthood. Moreover, there is a much more noticeably pronounced age gradient of mental health difficulty for cisgender girls than for cisgender boys: while similar rates of mental health difficulty are observed for 12 year old cisgender girls and boys, by age 18 cisgender girls have nearly double the rate of mental health difficulty compared to cisgender boys. Second, we see that the level of mental health difficulties is higher for gender minority

youths than for cisgender youths - as suggested by Table 1 and Appendix Table A1 - and that there are broadly increasing rates for gender minority youths, with the exception that the age profile of mental health difficulties for transgender boys appears to peak at age 16 before coming back down at ages 17 and 18 (though still much more elevated than the associated rates for 17 and 18 year old cisgender youths). The steepness of age profiles of mental health difficulty appears greater for transgender girls than for cisgender boys, both of whom were assigned male at birth. Finally, the absolute rates of mental health difficulty are striking: the majority of 18-year-old nonbinary youths have a mental health difficulty, regardless of sex at birth. Another striking pattern is that the majority of 16, 17, and 18-year-old nonbinary youths assigned female at birth have a mental health difficulty.

In Table 2 we present results from models predicting the likelihood that the child has a mental health difficulty, where we sequentially introduce controls for child demographics, household characteristics, and parental characteristics. The purpose of Table 2 is to ask whether and to what extent the large mental health differences observed in Table 1 can be explained by the fact that, for example, gender minority youths are much more likely to have parents who also report mental health difficulties. We report coefficients from an OLS regression of equation (1) where the excluded category is cisgender boys.

The results in Table 2 suggest that gender minority gaps in mental health difficulties cannot be explained by observable characteristics of the youths, their households, or their parents. Column 1 of Table 2 reports results from a model that simply includes the gender minority group indicators and shows that each gender minority group is significantly more likely than cisgender boys to have a mental health difficulty. The p-values for tests of equality of coefficients reported at the bottom of Table 2 also confirm that each gender minority group is significantly more likely than cisgender girls to have a mental health difficulty. Column 2 shows that adding controls for the child's Indigenous status, visible minority status, immigrant status, and geographic location (through controls for Census subdivision fixed effects) leaves the main findings unchanged. Column 3 adds indicators for whether the

child lives in a single-parent household and whether the child has at least one gender minority parent; these controls have very little effect on the estimates from Column 2. Column 4 adds controls for parental education, household income, and parental health status. Here, too we continue to find sizable and statistically significant differences for all gender minority groups compared to both cisgender boys and cisgender girls. Specifically, in Column 4 with the most controls, we estimate that nonbinary youths assigned female at birth are 33 percentage points more likely than similarly situated cisgender boys to have a mental health difficulty. This estimate is 88 percent of the Column 1 estimate and the unadjusted difference in Table 1. We find relatively smaller magnitudes for nonbinary youths assigned male at birth (19.3 percentage point adjusted difference compared to cisgender boys), transgender girls (10.7 percentage point difference), and transgender boys (27.2 percentage point difference). Appendix Table A2 shows the same results when we do not impose the restriction that the child has a sibling. The results from the full sample are very similar to those for the siblings sample, again suggesting that the sample restriction is not driving our core findings.

Finally, in Column 5 of Table 2, we directly account for household fixed effects. Interestingly, this has only a modest effect in reducing the estimated associations between gender minority groups and mental health difficulties. For example, we estimate in Column 5 of Table 2 that the coefficient on nonbinary youths assigned female at birth falls from a 32.9 percentage point adjusted gap to a 26.7 percentage point adjusted gap when we account for household fixed effects. This suggests that unobserved family background accounts for only about 19 percent of the observed association with mental health difficulty for youth identified as nonbinary who are assigned female at birth. Parallel changes to the estimated gap comparing Columns 4 and 5 for other groups are: 40 percent decline in the coefficient for nonbinary youth assigned male at birth, 28 percent for transgender girls, and 22 percent for transgender boys. On the other hand, household fixed effects only account for 5 percent of the higher rates of mental health between cisgender girls and their cisgender boy siblings, which is well within the bounds of normal statistical variation. Overall, the patterns in

Table 2 confirm the presence of very large mental health gaps experienced by gender minority youth in Canada compared to otherwise similar cisgender boys and girls even when we compare siblings, and these differences are especially large for nonbinary youths assigned female at birth.

Our findings suggest that even though family-level selection plays a role in the relationship between poor mental health and a youth being identified as nonbinary and transgender, this cannot explain the differences between cisgender and gender minority youth in mental health. The estimate indicates that nonbinary individuals assigned female at birth aged 12-18 are 26.7 percentage points more likely *than their own cisgender brothers* in the same age group to have mental health difficulties. Cisgender girls are also 1.8 percentage points significantly more likely than their cisgender brothers to have mental health difficulties, and the p-values at the bottom of Table 3 indicate that nonbinary youths assigned female at birth are also significantly more likely than their cisgender sisters to have mental health difficulties. The other rows of Column 5 of Table 2 also confirm that the mental health difficulty gaps observed for the other gender minority groups are also robust to siblings comparisons.

Table 3 reports the coefficients from the specification in Columns 4 and 5 of Table 2 but for the other health outcomes. We begin by reprinting the estimates from Columns 4 and 5 of Table 2 in Columns 1 and 2 of Table 3 for mental health difficulty. Columns 3 and 4 Table 3 present results for learning difficulties with and without household fixed effects, and Columns 5 and 6 present results for physical health difficulties (including walking, seeing, and hearing) with and without household fixed effects. The patterns in Table 3 indicate that the production of mental health difficulty gaps related to gender minority status is unique to mental health. Although each of the other health difficulties exhibits significant associations with the gender minority indicators in the odd-numbered columns of Table **??**, when we include household fixed effects and explicitly compare sibling differences the gaps in the other types of learning and health difficulties are eliminated. This pattern stands

in contrast to the one observed for mental health difficulties and suggests that there is something unique about the production of within-household mental health disadvantages as opposed to physical health or learning conditions for gender minority children.

In Figure 2, we explore robustness and heterogeneity in the relationship between gender minority status and mental health difficulties using the household fixed effects model. The red dashed line in each figure depicts the baseline estimates from the full sample of youths with siblings from Table 2 that include household fixed effects. Each panel reports the coefficient for a given gender group for each of the sample splits, using the same model with household fixed effects as in Table 2. Panel (a) presents the results for nonbinary youth assigned female at birth, panel (b) nonbinary youth assigned male at birth, panel (c) transgender girls, panel (d) transgender boys, and panel (e) cisgender girls. On the vertical axis, we indicate the sample split, while the horizontal axis is the estimated coefficient and associated 95% confidence interval. Note that the horizontal axis scale differs across the panels to visualize the differences in samples more clearly. The first coefficient reported is where we restrict attention to youths aged 15-18 to see whether excluding the 12-14 year olds changes our main findings (since Statistics Canada suggests caution in the gender identity responses for individuals under age 15). The pattern indicates that across groups, the gaps in mental health difficulties experienced by all groups are virtually the same when focusing on a broader age range. The next coefficient, which focuses on two-parent families (married or common-law), also shows that the broad pattern is the same as when focusing on all families. We then present the following sample splits: indigenous and non-indigenous youths, visible minority and non-visible minority youths, youths with at least one parent holding a bachelor's degree and other youths, and youths residing in large urban areas and those residing in other areas. The final coefficient at the top of the figure reports results that restrict the sample to families with at least one parent who is transgender or non-binary.

The heterogeneity results presented in Figure 2 suggest, perhaps surprisingly, that mental health differences between most groups and cisgender boys are relatively constant across

population groups, particularly for nonbinary youths assigned female at birth. The one exception in Figure 2 is when we examine heterogeneity by whether at least one parent identifies as a gender minority: in that case, we see very large differences in the estimates on the gender minority indicators. Specifically, we estimate that the mental health gap between nonbinary youths assigned female at birth and their cisgender siblings is much smaller in households with at least one parent with a gender minority identity. This could indicate acceptance and understanding of the child's gender identity, which may contribute to reduced rates of mental health difficulties. However, this pattern is not true for all groups, except transgender boys.

# 6 Discussion and Conclusion

We provide the first evidence from a mandatory national census that youth mental health gaps in childhood between gender minority youths and cisgender youths are significant and increase between the ages of 12 and 18. We also provide the first evidence using sibling pairs that these differences cannot be explained by unobserved family background differences: even when we compare gender minority youths to their own cisgender siblings, we find large differences in the likelihood of mental health difficulties. These differences are especially large for the biggest group of gender minority youths: nonbinary individuals assigned female at birth. Compared to their own cisgender siblings, these youths are about 25 percentage points more likely to have a mental health difficulty.

Our results are subject to some limitations. First, mental health in our data is reported by one adult member of the household. This includes both gender minority status and the presence of mental health difficulties. Our approach of comparing differences across siblings within families is designed to reduce some of these concerns, with the intuition being that the family fixed effects absorb family-specific differences in willingness to identify a youth as a gender minority and as having a mental health difficulty. Of course, if these differences are not just family-specific but are instead family-by-gender minority specific, our fixed-effects

approach will not be able to purge this bias. Other research has confirmed that self-reported mental health difficulties are strongly correlated with other objective measures of poor mental health, such as mental healthcare utilization and having a prescription for drugs to treat mental health-related conditions. Second, our approach will not be valid for gender minority youths who do not live with their families. A body of research documents heightened risks of family rejection and the likelihood of running away for gender minority youths and young adults. Because our approach relies on observing gender minority youths in households with their own siblings, our approach misses these types of selection by construction. Notably, of all children age 12-18 who are identified as non-cisgender in the 2021 Canadian Census, the overwhelming majority of them live in Census economic families that resemble 'traditional' households, which suggests that our approach is unlikely to exclude large numbers of gender minority youths systematically. This, of course, can be fully consistent with transgender and nonbinary youths facing increased risks of household disruption and housing instability, which is less likely to be captured in the Census sampling frame we use, which excludes institutional dwellings such as homeless shelters (Campbell and Rodgers, 2023).

We plan several revisions to this current draft including: (1) exploring the age gradient in more detail and testing whether the steeper gradient observed for gender minority youth is plausibly explained by selection; (2) add further controls for differences between children within families, including the birth order and the age gap; and (3) further heterogeneity tests, including whether the youth are within a same sex couple household, whether the first person listed on the census form is the mother, and by the political vote split in the most recent federal election before the census.

Despite these limitations and future work, our findings suggest that the challenges faced by young people are exacerbated among gender minority youth. This calls for a greater understanding of the causes and consequences of mental health difficulties experienced by gender minority youths and the factors that support youth well-being.

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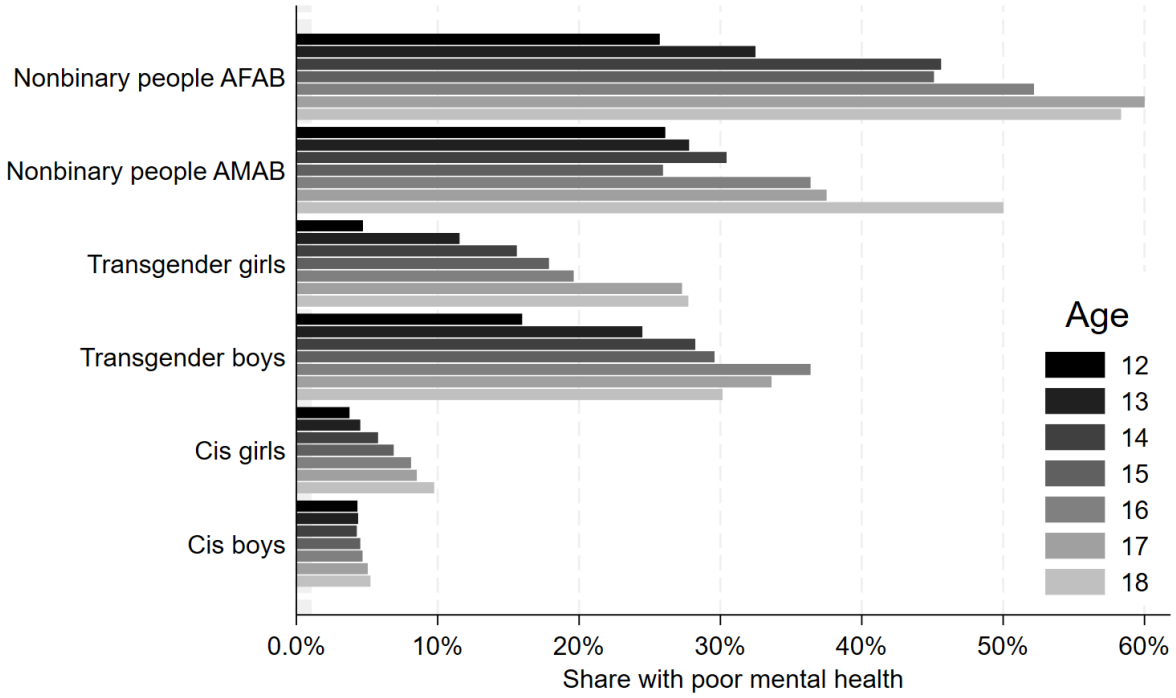
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# Tables and Figures

Figure 1: Average Difficulty with Mental Health by Gender Identity Group, by Single Year of Age




Notes: Difficulty with mental health is equal to one if the response was "often" or "always" and zero otherwise to the following question: "Does this person have any emotional, psychological or mental health conditions (e.g., anxiety, depression, bipolar disorder, substance abuse, anorexia, etc.) [that have lasted or are expected to last six months or more]?"

Table 1: Summary Statistics by Gender Identity and Sex at Birth: Sample is Youths Age 12-18 with At Least Two Children in the Household

| | Nonbinary youth, assigned female at birth | Nonbinary youth, assigned male at birth | Transgender girl | Transgender boy | Cisgender girl | Cisgender boy |
|---|---|---|---|---|---|---|
| | | | Panel A: Youth Characteristics | | | |
| Mental health condition | 43.1 | 30.9 | 18.3 | 25.6 | 6.2 | 4.3 |
| Age | 15.0 | 15.2 | 14.9 | 15.2 | 14.9 | 14.9 |
| Has cis sibling | 91.5 | 79.8 | 87.4 | 87.1 | 99.5 | 99.6 |
| Indigenous | 10.1 | 12.8 | 12.0 | 12.3 | 6.6 | 6.6 |
| Visible minority | 10.1 | 6.4 | 22.9 | 17.4 | 28.1 | 27.2 |
| First generation | 4.3 | 5.3 | 12.0 | 9.3 | 12.9 | 12.6 |
| Large city | 63.1 | 61.7 | 62.3 | 59.5 | 59.1 | 58.8 |
| Physical difficulty | 6.2 | 11.7 | 5.4 | 5.9 | 3.1 | 2.6 |
| Learning difficulty | 19.3 | 20.2 | 11.7 | 14.6 | 4.3 | 6.8 |
| | | | Panel B: Family Characteristics | | | |
| After tax HH income | 58,600 | 64,000 | 57,600 | 56,600 | 60,600 | 60,300 |
| $\geq 1$ parent, BA | 47.1 | 54.3 | 42.0 | 39.1 | 44.0 | 44.0 |
| $\geq 1$ parent, Abrahamic | 43.4 | 42.6 | 59.1 | 48.1 | 69.0 | 68.8 |
| $\geq 1$ parent, trans/nonbinary | 6.3 | 22.3 | 8.9 | 3.3 | 0.2 | 0.2 |
| $\geq 1$ parent, employed | 90.0 | 88.3 | 88.9 | 88.7 | 89.5 | 89.4 |
| Single parent | 29.0 | 24.5 | 27.4 | 32.8 | 20.6 | 20.5 |
| # other kids 12 to 18 | 1.535 | 1.52 | 1.48 | 1.5 | 1.71 | 1.70 |
| # of adults 19+ | 2.0 | 2.0 | 2.1 | 2.0 | 2.1 | 2.1 |
| $\geq 1$ parent, mental health | 27.3 | 30.9 | 19.1 | 19.4 | 8.6 | 8.5 |
| $\geq 1$ parent, physical | 15.1 | 22.3 | 15.4 | 16.5 | 9.1 | 8.9 |
| $\geq 1$ parent, learning | 8.0 | 9.6 | 8.0 | 6.4 | 2.9 | 3.0 |
| Weighted N | 3005 | 470 | 1750 | 3220 | 660405 | 703745 |

Notes: HH denotes "household." HH Abrahamic religion is an indicator for whether the person who filled out the survey for the household was Christian, Jewish or Muslim. "Large" city is a large Canadian urban population center of 100,000 or more. Health difficulty indicators equal one when the health difficulty is experienced "often" or "always" and zero otherwise. Physical difficulties include difficulties seeing, walking, or hearing. Learning difficulties include difficulties learning, concentrating or remembering. Earnings are rounded as per Statistics Canada requirements.

Table 2: Gender Minority Status and Mental Health Difficulty: Sample is Youths Age 12-18 with At Least Two Children in the Household

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| Nonbinary youth | 0.372 | 0.369 | 0.366 | 0.329 | 0.267 |
| assigned female at birth | (0.019) | (0.019) | (0.019) | (0.019) | (0.028) |
| Nonbinary youth | 0.248 | 0.245 | 0.240 | 0.193 | 0.110 |
| assigned male at birth | (0.046) | (0.046) | (0.046) | (0.043) | (0.076) |
| Transgender girl | 0.133 | 0.132 | 0.129 | 0.107 | 0.077 |
| | (0.019) | (0.019) | (0.019) | (0.018) | (0.026) |
| Transgender boy | 0.199 | 0.196 | 0.193 | 0.172 | 0.134 |
| | (0.016) | (0.016) | (0.016) | (0.015) | (0.024) |
| Cisgender girl | 0.019 | 0.019 | 0.019 | 0.019 | 0.018 |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Age dummies | X | X | X | X | X |
| 1st generation | | X | X | X | X |
| 2nd generation | | X | X | X | X |
| Abrahamic HH | | X | X | X | |
| Census Subdivison FE | | X | X | X | |
| Single parent household | | | X | X | |
| At least one parent trans+ | | | X | X | |
| >= 1 parent with a condition | | | | X | |
| >= 1 parent with BA or more | | | | X | |
| HH per person income after tax | | | | X | |
| Household Fixed Effects | | | | | X |
| *P-Values for Test of Differences* | | | | | |
| $\beta_{nbafab} == \beta_{nbamab}$ | 0.013 | 0.013 | 0.011 | 0.003 | 0.048 |
| $\beta_{nbafab} == \beta_{transgirl}$ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| $\beta_{nbafab} == \beta_{transboy}$ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| $\beta_{nbafab} == \beta_{cisgirl}$ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| $\beta_{nbamab} == \beta_{transgirl}$ | 0.021 | 0.024 | 0.025 | 0.061 | 0.686 |
| $\beta_{nbamab} == \beta_{transboy}$ | 0.316 | 0.323 | 0.338 | 0.644 | 0.756 |
| $\beta_{nbamab} == \beta_{cisgirl}$ | 0.000 | 0.000 | 0.000 | 0.000 | 0.228 |
| $\beta_{transgirl} == \beta_{transboy}$ | 0.007 | 0.008 | 0.008 | 0.005 | 0.098 |
| $\beta_{transgirl} == \beta_{cisgirl}$ | 0.000 | 0.000 | 0.000 | 0.000 | 0.022 |
| $\beta_{transboy} == \beta_{cisgirl}$ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| R-Squared | 0.044 | 0.046 | 0.049 | 0.116 | 0.622 |
| Weighted N | 1,372,595 | 1,372,595 | 1,372,595 | 1,372,595 | 1,372,595 |

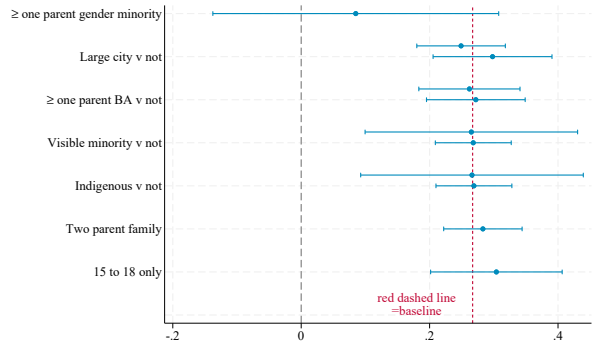
Notes: The outcome is a youth having a difficulty with mental health which is equal to one if the response was "often" or "always" and zero otherwise to the following question: "Does this person have any emotional, psychological or mental health conditions (e.g., anxiety, depression, bipolar disorder, substance abuse, anorexia, etc.) [that have lasted or are expected to last six months or more]?" HH denotes "household." In the bottom panel of the table, nbafab nonbinary person assigned female at birth; nbamab nonbinary person assigned male at birth. First and second generation refers to the immigration status of the child. Census subdivisions are the political administrative units equivalent to a municipality, town, or reserve. Standard errors are clustered at the census family level.

Table 3: Gender Minority Status and Other Health Difficulties, with and without Household Fixed Effects: Sample is Youths Age 12-18 with At Least Two Children in the Household

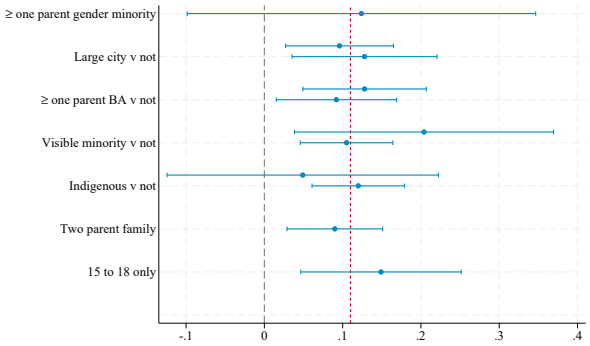
| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | Mental Health Difficulty | | Learning Difficulty | | Physical Difficulty | |
| Nonbinary youth | 0.329 | 0.267 | 0.082 | 0.015 | 0.023 | 0.012 |
| assigned female at birth | (0.019) | (0.028) | (0.015) | (0.025) | (0.009) | (0.015) |
| Nonbinary youth | 0.193 | 0.110 | 0.076 | -0.061 | 0.064 | 0.047 |
| assigned male at birth | (0.043) | (0.076) | (0.036) | (0.072) | (0.028) | (0.038) |
| Transgender girl | 0.107 | 0.077 | 0.020 | -0.011 | 0.016 | 0.017 |
| | (0.018) | (0.026) | (0.016) | (0.028) | (0.011) | (0.017) |
| Transgender boy | 0.172 | 0.134 | 0.047 | 0.006 | 0.018 | 0.008 |
| | (0.015) | (0.024) | (0.013) | (0.022) | (0.008) | (0.014) |
| Cisgender girl | 0.019 | 0.018 | -0.025 | -0.029 | 0.005 | 0.004 |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Observed youth controls | X | X | X | X | X | X |
| Observed family controls | X | | X | | X | |
| Household Fixed Effects | | X | | X | | X |
| | *P-Values for Test of Differences* | | | | | |
| $\beta_{nbafab} == \beta_{nbamab}$ | 0.003 | 0.048 | 0.873 | 0.315 | 0.155 | 0.377 |
| $\beta_{nbafab} == \beta_{transgirl}$ | 0.000 | 0.000 | 0.005 | 0.490 | 0.648 | 0.814 |
| $\beta_{nbafab} == \beta_{transboy}$ | 0.000 | 0.000 | 0.078 | 0.792 | 0.684 | 0.856 |
| $\beta_{nbafab} == \beta_{cisgirl}$ | 0.000 | 0.000 | 0.000 | 0.083 | 0.044 | 0.597 |
| $\beta_{nbamab} == \beta_{transgirl}$ | 0.061 | 0.686 | 0.162 | 0.520 | 0.110 | 0.469 |
| $\beta_{nbamab} == \beta_{transboy}$ | 0.644 | 0.756 | 0.453 | 0.372 | 0.109 | 0.338 |
| $\beta_{nbamab} == \beta_{cisgirl}$ | 0.000 | 0.228 | 0.006 | 0.658 | 0.034 | 0.256 |
| $\beta_{transgirl} == \beta_{transboy}$ | 0.005 | 0.098 | 0.190 | 0.623 | 0.905 | 0.690 |
| $\beta_{transgirl} == \beta_{cisgirl}$ | 0.000 | 0.022 | 0.004 | 0.517 | 0.312 | 0.440 |
| $\beta_{transboy} == \beta_{cisgirl}$ | 0.000 | 0.000 | 0.000 | 0.109 | 0.110 | 0.765 |
| R-Squared | 0.116 | 0.622 | 0.091 | 0.610 | 0.069 | 0.605 |
| Weighted N | 1,372,595 | 1,372,595 | 1,372,595 | 1,372,595 | 1,372,595 | 1,372,595 |

Notes: Models (1), (3), and (5) include controls from Column (4) of Table 2, while remaining columns include controls from Column (5) of Table 2. All outcomes equal one if the youth had a condition 'often' or 'always' expected to or has lasted for six months or more, and zero otherwise. 'Any physical' is any physical disability, including walking, hearing or seeing. In the bottom panel of the table, nbafab nonbinary person assigned female at birth; nbamab nonbinary person assigned male at birth. Standard errors are clustered at the census family level.

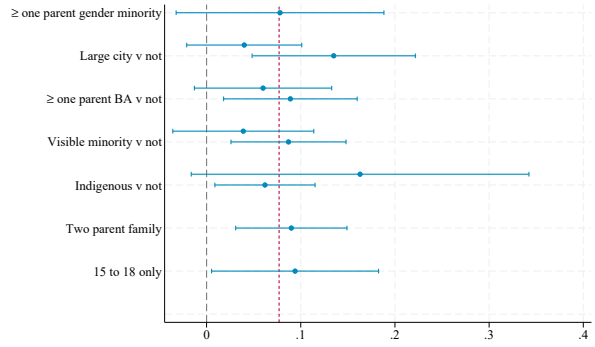
Figure 2: Gender Minority Status and Mental Health Difficulty Conditional on Household Fixed Effects, Heterogeneity: Sample is Youths Age 12-18 with At Least Two Children in the Household



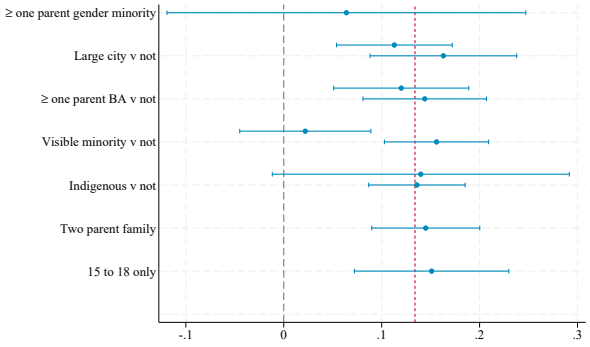

(a) Nonbinary youth, afab



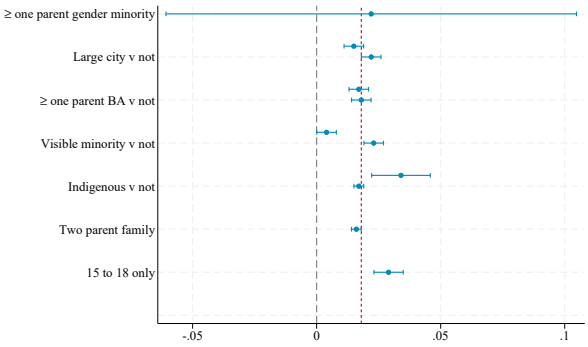

(b) Nonbinary youth, amab




(c) Transgender girl




(d) Transgender boy



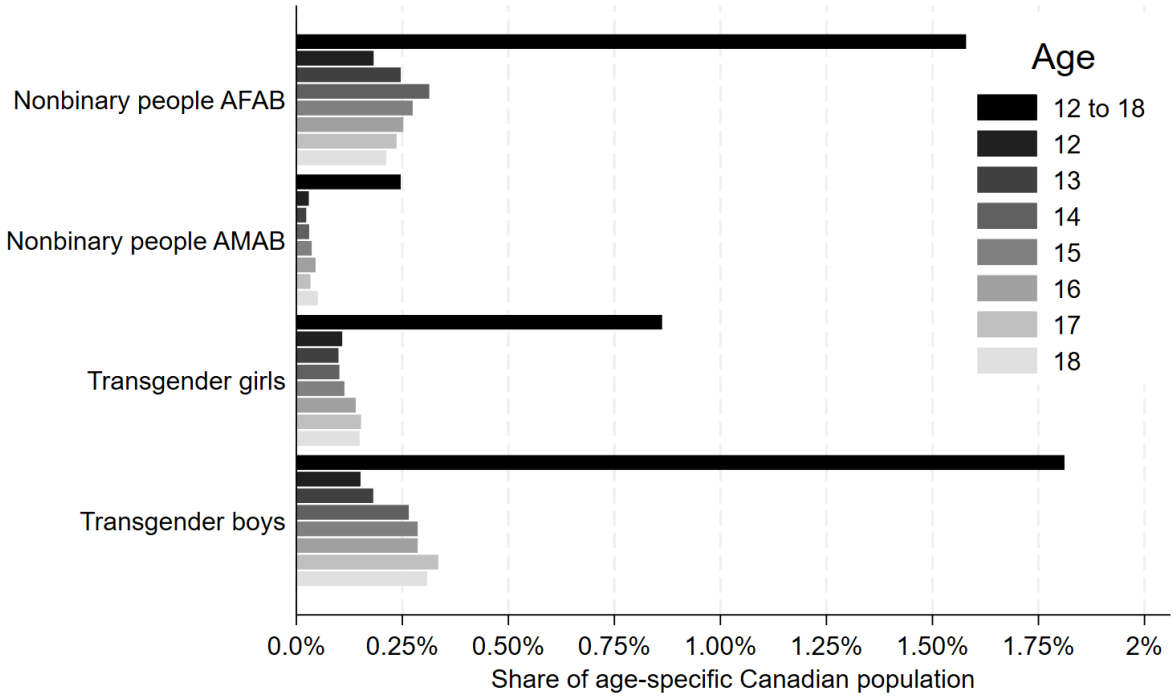

(e) Cisgender girl

Notes: All results reported for models with family fixed effects among families with two youth between the ages of 12 and 18. Coefficients for each group reported from the models with sample splits specified on the vertical axis along with their 95% confidence interval. Standard errors are clustered at the household level.

# A Appendix

## Figures

Figure A1: Share each gender minority group (e.g., the columns of Table 1), by single year of age




Notes: This is the share of the age-specific population, estimated using weights provided by the census.

# Tables

Table A1: Summary Statistics for All Youth (12-18 years old) by Gender Identity and Sex at Birth

| | Nonbinary youth assigned female at birth | Nonbinary youth assigned male at birth | Transgender girl | Transgender boy | Cisgender girl | Cisgender boy |
|---|---|---|---|---|---|---|
| | | | Panel A: Youth Characteristics | | | |
| Mental health condition | 45.5 | 35.4 | 18.5 | 29.6 | 6.6 | 4.6 |
| Age | 14.9 | 15.4 | 15.2 | 15.4 | 14.9 | 14.9 |
| Has cis sibling | 43.0 | 41.4 | 48.0 | 42.0 | 52.4 | 52.4 |
| Indigenous | 12.0 | 10.5 | 11.4 | 11.5 | 6.6 | 6.5 |
| Visible minority | 11.5 | 8.8 | 24.5 | 17.1 | 30.0 | 29.6 |
| First generation | 5.0 | 5.5 | 11.1 | 9.0 | 14.1 | 14.0 |
| Large city | 63.2 | 64.6 | 62.1 | 60.7 | 60.9 | 60.7 |
| Physical difficulty | 7.7 | 9.9 | 4.1 | 6.1 | 3.2 | 2.8 |
| Learning difficulty | 21.1 | 22.1 | 11.8 | 15.0 | 4.6 | 7.1 |
| | | | Panel B: Family Characteristics | | | |
| After tax HH income | | 56700.0 | 62000.0 | 58400.0 | 55900.0 | 60500.0 |
| 60000.0 | | | | | | |
| $\geq$ 1 parent, BA | 43.8 | 48.6 | 39.3 | 37.6 | 42.9 | 42.6 |
| $\geq$ 1 parent, Abrahamic | 41.9 | 43.1 | 54.9 | 50.3 | 66.7 | 66.2 |
| $\geq$ 1 parent, trans/nonbinary | 5.5 | 20.4 | 8.2 | 3.7 | 0.2 | 0.2 |
| $\geq$ 1 parent, employed | 87.9 | 84.0 | 86.2 | 86.4 | 88.9 | 88.7 |
| Single parent | 36.5 | 30.9 | 30.3 | 36.0 | 23.7 | 23.8 |
| # other kids 12 to 18 | 1.0 | 1.0 | 1.0 | 0.9 | 1.2 | 1.2 |
| # of adults 19+ | 2.0 | 2.0 | 2.2 | 2.1 | 2.2 | 2.2 |
| $\geq$ 1 parent, mental health | 29.9 | 33.7 | 19.4 | 20.2 | 8.8 | 8.8 |
| $\geq$ 1 parent, physical | 19.1 | 21.5 | 16.3 | 16.6 | 9.5 | 9.4 |
| $\geq$ 1 parent, learning | 9.9 | 14.4 | 8.9 | 6.8 | 3.0 | 3.1 |
| Weighted N | 6395 | 905 | 3190 | 6680 | 1253780 | 1338285 |

Notes: HH denotes "household." HH Abrahamic religion is an indicator for whether the person who filled out the survey for the household was Christian, Jewish or Muslim. "Large" city is a large Canadian urban population center of 100,000 or more. Health difficulty indicators equal one when the health difficulty is experienced "often" or "always" and zero otherwise. Physical difficulties include difficulties seeing, walking, or hearing. Learning difficulties include difficulties learning, concentrating or remembering. Earnings are rounded as per Statistics Canada requirements.

Table A2: Gender Minority Status and Adolescent Mental Health: Everyone Age 12-18

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Nonbinary youth assigned female at birth | 0.399 | 0.388 | 0.384 | 0.340 |
| | (0.013) | (0.013) | (0.013) | (0.012) |
| Nonbinary youth assigned male at birth | 0.294 | 0.282 | 0.276 | 0.222 |
| | (0.033) | (0.034) | (0.034) | (0.032) |
| Transgender girl | 0.134 | 0.130 | 0.127 | 0.103 |
| | (0.014) | (0.014) | (0.014) | (0.013) |
| Transgender boy | 0.240 | 0.231 | 0.228 | 0.205 |
| | (0.012) | (0.012) | (0.012) | (0.011) |
| Cisgender Girl | 0.021 | 0.021 | 0.021 | 0.020 |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| Age dummies | X | X | X | X |
| 1st generation | | X | X | X |
| 2nd generation | | X | X | X |
| Abrahamic HH | | X | X | X |
| Census Subdivison FE | | X | X | X |
| Single parent household | | | X | X |
| At least one parent trans+ | | | X | X |
| >= 1 parent with a condition | | | | X |
| >= 1 parent with BA or more | | | | X |
| HH per person income after tax | | | | X |
| *P-Values for Test of Differences* | | | | |
| $\beta_{nbafab} == \beta_{nbamab}$ | 0.003 | 0.003 | 0.003 | 0.000 |
| $\beta_{nbafab} == \beta_{transgirl}$ | 0.000 | 0.000 | 0.000 | 0.000 |
| $\beta_{nbafab} == \beta_{transboy}$ | 0.000 | 0.000 | 0.000 | 0.000 |
| $\beta_{nbafab} == \beta_{cisgirl}$ | 0.000 | 0.000 | 0.000 | 0.000 |
| $\beta_{nbamab} == \beta_{transgirl}$ | 0.000 | 0.000 | 0.000 | 0.001 |
| $\beta_{nbamab} == \beta_{transboy}$ | 0.117 | 0.150 | 0.169 | 0.621 |
| $\beta_{nbamab} == \beta_{cisgirl}$ | 0.000 | 0.000 | 0.000 | 0.000 |
| $\beta_{transgirl} == \beta_{transboy}$ | 0.000 | 0.000 | 0.000 | 0.000 |
| $\beta_{transgirl} == \beta_{cisgirl}$ | 0.000 | 0.000 | 0.000 | 0.000 |
| $\beta_{transboy} == \beta_{cisgirl}$ | 0.000 | 0.000 | 0.000 | 0.000 |
| R-Squared | 0.025 | 0.042 | 0.045 | 0.115 |
| Weighted N | 2,609,235 | 2,609,235 | 2,609,235 | 2,609,235 |

Notes: The outcome is a youth having a difficulty with mental health which is equal to one if the response was "often" or "always" and zero otherwise to the following question: "Does this person have any emotional, psychological or mental health conditions (e.g., anxiety, depression, bipolar disorder, substance abuse, anorexia, etc.) [that have lasted or are expected to last six months or more]?" HH denotes "household." In the bottom panel of the table, nbafab nonbinary person assigned female at birth; nbamab nonbinary person assigned male at birth. First and second generation refers to the immigration status of the child. Census subdivisions are the political administrative units equivalent to a municipality, town, or reserve. Standard errors are clustered at the census family level.