

The mental health of Canadian transgender youth compared with the Canadian population

Jaimie F. Veale¹, Ryan J. Watson², Tracey Peter³, and Elizabeth M. Saewyc²

¹School of Psychology, University of Waikato, Hamilton, New Zealand ²Stigma and Resilience Among Vulnerable Youth Centre, University of British Columbia, Vancouver BC, Canada

³Department of Sociology, University of Manitoba, Winnipeg MB, Canada

Abstract

Objectives—This study documents the prevalence of mental health concerns among Canadian transgender youth and makes comparisons with cisgender or mostly-cisgender population-based studies. This study also compares gender identity subgroups (transgender girls/women, boys/men, and non-binary) and age subgroups (14–18 year olds and 19–25 year olds) on mental health outcomes.

Methods—A nonprobability sample of 923 transgender youth from across Canada completed a bilingual online survey. Participants were recruited through community organizations, healthcare settings, social media, and the researchers' networks. Mental health measures were drawn from the British Columbia Adolescent Health Survey and the Canadian Community Health Survey.

Results—Transgender youth had a higher risk of reporting psychological distress, self-harm, major depressive episode, suicidal ideation, and suicide attempts. Risk ratios ranged from 3.8 to 16.1. Transgender boys/men and non-binary youth were most likely to report self-harm and non-binary youth also reported lower overall mental health. Rates of self-harm and suicide were lower in the 19–25 age group than the 14–18 age group, but reported overall mental health was the same across these age groups.

Conclusions—Although a notable minority of transgender youth reported good mental health, this study shows the mental health disparities faced by transgender youth in Canada are considerable.

Policy Implications—These findings underscore the need for policies and laws protecting transgender people from discrimination, training for transgender competency for mental healthcare providers, providers, and further development of transgender-specific interventions to promote positive mental health and reduce mental health problems among transgender youth.

Keywords

transgender; mental health; self-harm; suicide; depression; youth

Introduction

Transgender and gender diverse youth are those whose gender identity does not align with society's expectations for the gender that they were assigned at birth. Many transgender youth report discrimination, bullying, and violence as a result of their gender identity, and those who experience these are more likely to report mental health difficulties.^{1,2} Increasingly, attention is being paid to the prevalence of these mental health difficulties in comparison to the general population.

A few studies have documented high rates of depression and anxiety symptoms, self-harm, and suicide among transgender youth.¹⁻³ An online Australian study of 14–25 year olds found that 44% reported they had an anxiety disorder, 40% reported depression, and 38% reported suicidal thoughts.⁴ A study of US college students found that transgender students were more likely to report depression, suicidal ideation, and suicide attempts than cisgender students (those whose gender identity aligned with their gender assigned at birth).⁵

The only population-based adolescent health study to ask participants if they are transgender and report on this group was conducted with New Zealand high school students.⁶ This study found 1.2% of students identified as transgender and 2.5% reported not being sure. Around 41% of transgender students reported significant depressive symptoms, 20% had attempted suicide in the past year, and 46% had self-injured in the past year. These rates were much higher than the cisgender youth in the sample.

Studies using clinical samples have also reported a high prevalence of mental health difficulties among transgender youth.^{7,8} A recent study of 12–29 year old transgender patients at a community health center found that they had more than 3 times the risk of depression or anxiety diagnosis, suicide ideation or attempt, and more than 4 times the risk of self-harm than cisgender patients.⁸

Presently, in population-based adolescent health studies that have asked youth if they are transgender, around 1% of their samples report that they are.^{6,9} Given this prevalence, population-based studies would require a very large sample for there to be sufficient numbers of participants to make accurate comparisons between transgender and cisgender youth and comparisons across demographic groups within the sample of transgender youth. Also, with a small prevalence, it is unclear what the effect of false positive responses to a question about being transgender might have on the data. Only a small proportion of cisgender respondents would need to endorse this question, due to misunderstanding the question or any other reasons, for this to have a marked effect on the findings. For these reasons, larger nonprobability samples of transgender youth are useful in providing a picture of the mental health status of transgender youth. This study documents the prevalence of mental health concerns among transgender youth in Canada and makes comparisons with population-based estimates. Differences in the prevalence of mental health problems across gender identity subgroups are also explored.

Methods

The Canadian Trans Youth Health Survey (TYHS) collected data from a nonprobability sample of 923 transgender and gender diverse 14–25 year olds living in Canada. The survey was available online in English and French and participants were recruited through transgender and queer community organizations, distributing a call for participants through social media, and the study's research team and network which included pediatric endocrinology clinics across Canada. Approval for this study was obtained from the University of British Columbia Behavioural Review Ethics Board. A detailed description of the study methodology is available elsewhere.¹⁰ Participants were sampled across the breadth of Canadian province/territories in similar proportions to the general population. Most participants identified their ethnicity as white only (74%), and the most common ethnic minority groups were Indigenous (10%) and Asian (9%). The majority of participants also reported living in Canada their entire life (87%) and speaking English only at home (76%, with 14% speaking French at home). The sample included 139 youth who identified as transgender girls/women (16.6%), 356 transgender boys/men (42.4%), and 344 (41.0%) non-binary youth. Most of the non-binary youth reported they had been assigned female at birth ($n = 283$).

There were two versions of the survey, one for 14–18 year old participants ($n = 323$) which had health questions taken from the British Columbia Adolescent Health Survey (BCAHS)⁹ and other adolescent health surveys. The 2013 BCAHS cohort was used for population comparisons to youth in grades 7–12 in British Columbia schools. The 2013 BCAHS surveyed 29,832 youth in randomly-selected classrooms across the province and grade range and data were weighted to ensure population estimates were based on a representative sample.¹¹ Participants who identified as transgender (fewer than 1% of the sample) were removed from the comparisons. The other version of the survey, completed by 19–25 year olds ($n = 600$), had health questions primarily taken from the Canadian Community Health Survey (CCHS) 2012 Mental Health component.¹² The 2012 survey had a sample of 25,113, with a response rate of 69%. Sample weighting was used for estimates of the general population in Canada and these estimates were used for the comparisons in this study.

Measures

To measure emotional distress, 14–18 year old participants were asked about levels of stress and hopelessness in the past month using a 5-point response scale (see Table 1). The 10-item Kessler Psychological Distress Scale (K10)¹³ was given to 19–25 year olds. Depressive symptomatology was measured among 19–25 year olds by asking if in the past year they “felt sad, blue, or depressed for 2 weeks or more in a row.” Those who answered yes were given additional questions asking whether during those two weeks they had experienced the eight further depression symptoms based on criteria in the Diagnostic and Statistical Manual (DSM)¹⁴ (psychomotor agitation/retardation was not assessed). To meet the criteria for major depressive episode, participants had to have reported at least five of these symptoms, with at least one of these symptoms being a depressed mood or anhedonia.

Suicidal ideation and suicide attempts were also asked using different questions for the two age groups (see Tables 1 and 2). Self-harm in the past year was assessed among all

participants by asking how many times they had hurt or injured themselves on purpose without wanting to die. All participants were also given a question asking, “in general, how would you describe your mental health?” with 1 (poor), 2 (fair), 3 (good), and 4 (excellent) as the response options. This question matched the BCAHS but it was slightly different from the CCHS which asked “in general, would you say your mental health is” with an additional “very good” response options. We combined “very good” with “excellent” on the CCHS to be able to make comparisons between the two surveys.

Analysis

All statistical tests were conducted using SPSS version 23. Mean scores on scales or items were compared with population mean scores (taken from BCAHS and CCHS) using one sample t-tests with Cohen’s *d* used to approximate effect size using standard deviation units of the general population. Frequencies for dichotomous items were compared to population frequencies as the expected proportion using chi-square goodness of fit tests. Differences for mean scores between gender identity subgroups were assessed using ANOVAs with post hoc Tukey comparisons.

Results

Overall prevalence of mental health concerns are given for 14–18 year olds in Table 1 and for 19–25 year olds in Table 2. Invariably these mental health concerns were significantly higher than population-based estimates.

For 14–18 year olds, these disparities held across TYHS participants who were in BC schools (the equivalent sample to participants in the BCAHS) and the sample as a whole. Effect sizes for continuous variables were generally around 1 standard deviation difference between transgender 14–18 year olds and British Columbia high school students the same ages; transgender 14–18 year olds had around fivefold increased risk for dichotomous mental health outcomes.

TYHS 19–25 year old participants scored an average of more than two standard deviations differently from estimates of 19–25 year olds in the general population from the CCHS on the general mental health item and the K10 Kessler Psychological Distress measure. Risk ratios for dichotomous mental health outcomes varied from less than four times increased risk of feeling sad for two or more weeks in the past year to more than 16 times increased risk of attempting suicide in the past year.

Comparisons between transgender boys/men, transgender girls/women, and non-binary youth are given in Table 3. For most mental health outcomes there were no significant differences between these three groups except for non-binary youth tending to report lower levels of overall mental health and higher incidence of self-harm in the past year, with 14–18 year old boys/men also reporting higher incidence of self-harm than girls/women. Non-binary 14–18 year olds also tended to report higher levels of stress and sadness in the past month than girls/women.

Discussion

Population-based comparisons

Our findings reveal substantial mental health disparities for Canadian transgender youth when data are compared to age-equivalent large-scale population surveys. Compared to the BCAHS, we found same-aged transgender youth faced significant health disparities across all measures, with exceptionally high effect sizes. Transgender 14–18 year olds had 5 times the risk of suicidal thoughts, with almost two-thirds having seriously considered suicide in the past year. Three-quarters of 14–18 year olds reported self-harming in the past year, compared to fewer than one in five students in the BCAHS. Results were similarly concerning when comparing data for 19 to 25 year old TYHS participants to the general population in the CCHS. In terms of risk ratios, transgender 19–25 year olds had almost 8 times the risk of serious suicidal thoughts in the past year than the equivalent aged Canadian population, and over 16 times the risk of a suicide attempt in the past year.

These results show that the mental health disparities are considerable; more extreme than the disparities faced by lesbian, gay, and bisexual youth in Canada.¹⁵ These disparities were also higher than those reported in recent studies of transgender youth, suggesting that transgender youth captured in community-based samples may be more at risk of mental health problems than those in school-based surveys⁶ and recruited from community health centers.⁸

These findings extend our knowledge of the extent of mental health disparities faced by transgender youth by using large-scale representative population comparisons, and a large sample allowed comparisons across a different gender identities. While most of these findings are concerning, and suggest significant risks for mental health problems among transgender youth, it is important to note that not every transgender youth is similarly distressed. Around a quarter of the transgender youth in our study reported that their overall mental health was good or excellent.

Gender identity comparisons – key differences and similarities

While the overall percentages across all of the disaggregated subgroups were generally similar across mental health outcomes and higher than the age-equivalent general Canadian data, we observed some notable patterns and differences between gender identity subgroups.

The mental health outcome variable with the most difference between subgroups was self-harm, with almost three-quarters of 14–18 year old transgender boys/men and non-binary youth reporting that they had self-harmed at least once in the past year, compared to half of the transgender girls/women. Self-harm rates for the 19–25 year old youth were also highest for the non-binary subgroup, with just over 60% reporting at least one instance in the past year, compared to fewer than half of the transgender boys/men and girls/women. These findings are in accordance with a recent clinic-based studies of transgender youth which found higher rates of self-harm amongst boys/men than girls/women.^{8,16,17} A recent online study also found genderqueer and other non-binary transgender adults had among the highest rates of self-harm.¹⁸ A possible reason for the similar rates of self-harm between the non-binary group and transgender boys/men may be because most of the non-binary youth reported they were assigned female at birth. These two subgroups might have reported

higher rates of self-harm than the transgender girls/women because they considered chest binding and using needles for hormones as self-harming;¹⁸ this seems unlikely, though, because the prevalence of self-harming for these groups drops considerably for the 19–25 age group, despite there being no reason to expect that this group would be less likely to use needles or chest binding. Interestingly, recent research on cisgender 18–24 year old men and women has found that adherence to masculine norms was associated with self-harm.¹⁹ Future qualitative research could uncover the reasons for the higher rates of self-harming among these subgroups.

The other main difference observed between gender identity subgroups was that non-binary youth consistently reported worse mental health on average. This could be due to added stigma experienced by this group for not conforming to Canadian society's binary gender expectations. This group is likely to be less understood and acknowledged than transgender youth whose gender identity fits into the man/woman binary, and this may mean non-binary youth are less likely to have social support.

Age comparisons

Our findings revealed some noteworthy age group differences. First, the prevalence self-harm decreased from the 14–18 to 19–25 age groups; this is consistent with observations among the wider population.²⁰ Similarly, there was a decreasing trend for suicidal ideation and attempts across the age groups, but this improvement was seen mostly in the transgender boys/men. On the other mental health outcome that was measured among both age groups, general mental health, there was little difference between the two age groups. This finding suggests that life does not “get better” after high school for far too many transgender youth.

Limitations

While cross-sectional observational studies like the TYHS provide sound evidence for detailing health inequalities, they are inadequate in their explanatory capabilities, and cannot explain why such health discrepancies occur.²¹ This study also used a nonprobability sample, with comparisons made to population estimates from robust probability sampling methodologies. Nevertheless, because questions about gender identity are yet to become standard on these large-scale surveys, and if the proportion of youth who identify as transgender is around 1%,⁶ then these population-based studies would need to be very large or specifically target the transgender population to be able to obtain a sample as large as we were able to achieve in the TYHS to allow comparisons between subgroups. If anything, transgender youth that we were not able to reach in this study are likely to be the groups that are more vulnerable to mental health problems, meaning these results may well be underestimates of the mental health disparities faced by transgender youth.

Policy Implications

These results point to a clear need to reduce the stigma, prejudice, and discrimination related to being transgender in these youth's environments and to improve the supports for families, community groups who work with transgender youth, schools and universities, and healthcare providers. This could include human rights protections based on gender identity, and training for mental healthcare providers to go beyond providing care that is “transgender

friendly” to providing care that is “transgender competent” and recognizes the unique issues faced by this group. National mental health policies should include a focus on transgender youth as a population at extreme risk, and develop strategies to promote positive mental health and reduce the mental health disparities for transgender youth.

Acknowledgments

This research was supported by grant #MOP 119472 from the Canadian Institutes of Health Research, Institute of Gender and Health (Saewyc, Principal Investigator), and by postdoctoral fellowship awards from the Canadian Institutes of Health Research (Veale) and the Michael Smith Foundation for Health Research, British Columbia, Canada (Veale). We acknowledge the McCreary Centre Society for permission to access the BC Adolescent Health Survey 2013 data.

References

1. Grossman AH, D’Augelli AR. Transgender youth and life-threatening behaviors. *Suicide Life Threat Behav.* 2007; 37:527–537. DOI: 10.1521/suli.2007.37.5.527 [PubMed: 17967119]
2. Jones T, Hillier L. Comparing trans-spectrum and same-sex-attracted youth in Australia: Increased risks, increased activism. *J LGBT Youth.* 2013; 10:287–307. DOI: 10.1080/19361653.2013.825197
3. Garofalo R, Deleon J, Osmer E, Doll M, Harper GW. Overlooked, misunderstood and at-risk: Exploring the lives and HIV risk of ethnic minority male-to-female transgender youth. *J Adolesc Health.* 2006; 38:230–236. DOI: 10.1016/j.jadohealth.2005.03.023 [PubMed: 16488820]
4. Smith, E., Jones, T., Ward, R., Dixon, J., Mitchell, A., Hillier, L. From Blues to Rainbows: Mental Health and Wellbeing of Gender Diverse and Transgender Young People in Australia. Melbourne, Australia: The Australian Research Centre in Sex, Health, and Society; 2014. <https://www.beyondblue.org.au/docs/default-source/research-project-files/bw0268-from-blues-to-rainbows-report-final-report.pdf>
5. Lytle MC, Blosnich JR, Kamen C. The association of multiple identities with self-directed violence and depression among transgender individuals. *Suicide Life Threat Behav.* Feb.2016 doi: 10.1111/sltb.12234
6. Clark TC, Lucassen MFG, Bullen P, et al. The health and well-being of transgender high school students: Results from the New Zealand Adolescent Health Survey (Youth’12). *J Adolesc Health.* 2014; 55:93–99. DOI: 10.1016/j.jadohealth.2013.11.008 [PubMed: 24438852]
7. de Vries ALC, Doreleijers TAH, Steensma TD, Cohen-Kettenis PT. Psychiatric comorbidity in gender dysphoric adolescents. *J Child Psychol Psychiatry.* 2011; 52:1195–1202. DOI: 10.1111/j.1469-7610.2011.02426.x [PubMed: 21671938]
8. Reisner SL, Veters R, Leclerc M, et al. Mental health of transgender youth in care at an adolescent urban community health center: A matched retrospective cohort study. *J Adolesc Health.* 2015; 56:274–279. DOI: 10.1016/j.jadohealth.2014.10.264 [PubMed: 25577670]
9. Smith, A., Stewart, D., Poon, C., Peled, M., Saewyc, EM. McCreary Centre Society. From Hastings Street to Haida Gwaii: Provincial Results of the 2013 BC Adolescent Health Survey. Vancouver, BC: McCreary Centre Society; 2014. http://www.mcs.bc.ca/pdf/From_Hastings_Street_To_Haida_Gwaii.pdf
10. Veale, JF., Saewyc, EM., Frohard-Dourlent, H., Dobson, S., Clark, B. the Canadian Trans Youth Health Survey Research Group. Being Safe, Being Me: Results of the Canadian Trans Youth Health Survey. Vancouver, BC: Stigma and Resilience Among Vulnerable Youth Centre; 2015. https://saravyc.sites.olt.ubc.ca/files/2015/05/SARAVYC_Trans-Youth-Health-Report_EN_Final_Web2.pdf
11. Saewyc, EM., Stewart, D., Green, R. Methodology for the 2013 BC Adolescent Health Survey [Fact Sheet]. Vancouver, BC: McCreary Centre Society; 2014. http://www.mcs.bc.ca/pdf/AHSV_methodology.pdf
12. Statistics Canada. [Accessed October 20, 2015] Canadian Community Health Survey - Mental Health (CCHS). <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=5015>. Published 2012

13. Kessler RC, Andrews G, Colpe LJ, et al. Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychol Med.* 2002; 32:959–976. DOI: 10.1017/S0033291702006074 [PubMed: 12214795]
14. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders.* 5. Washington, DC: Author; 2013.
15. Saewyc, EM., Poon, CS., Wang, N., Homma, Y., Smith, A. the McCreary Centre Society. *Not yet Equal: The Health of Lesbian, Gay, and Bisexual Youth in BC.* Vancouver, BC: McCreary Centre Society; 2007. http://www.mcs.bc.ca/pdf/not_yet_equal_web.pdf
16. Claes L, Bouman WP, Witcomb G, Thurston M, Fernandez-Aranda F, Arcelus J. Non-suicidal self-injury in trans people: Associations with psychological symptoms, victimization, interpersonal functioning, and perceived social support. *J Sex Med.* 2015; 12:168–179. DOI: 10.1111/jsm.12711 [PubMed: 25283073]
17. Holt V, Skagerberg E, Dunsford M. Young people with features of gender dysphoria: Demographics and associated difficulties. *Clin Child Psychol Psychiatry.* 2016; 21:108–118. DOI: 10.1177/1359104514558431 [PubMed: 25431051]
18. dickey, Im, Reisner, SL., Juntunen, CL. Non-suicidal self-injury in a large online sample of transgender adults. *Prof Psychol Res Pract.* 2015; 46:3–11. DOI: 10.1037/a0038803
19. Green JD, Kearns JC, Ledoux AM, Addis ME, Marx BP. The association between masculinity and nonsuicidal self-injury. *Am J Mens Health.* 2015; Online first:1557988315624508. doi: 10.1177/1557988315624508
20. Moran P, Coffey C, Romaniuk H, et al. The natural history of self-harm from adolescence to young adulthood: a population-based cohort study. *The Lancet.* 2012; 379(9812):236–243. DOI: 10.1016/S0140-6736(11)61141-0
21. Saewyc EM. Contested conclusions: Claims that can (and cannot) be made from the current research on gay, lesbian, and bisexual teen suicide attempts. *J LGBT Health Res.* 2007; 3:79–87. DOI: 10.1300/J463v03n01_09 [PubMed: 18029318]

Comparisons of Mental Health Outcomes for Younger Youth in School (Ages 14–18) in BCAHS and TYHS (BC only; Canada-wide)

Table 1

	BCAHS (2014) In school			Trans Youth Health Survey In BC schools			Trans Youth Health Survey Entire Sample		
	M (SD)/%	n	M (SD)/%	Statistical test	Effect size	n	M (SD)/%	Statistical test	Effect size
Felt under stress/strain/pressure (past month)	2.87 (1.21)	51	3.90 (1.10)	$\chi^2(1) = 6.68^{**}$	$d = 0.85$	209	4.04 (1.07)	$t(208) = 15.81^{**}$	$d = 0.97$
Felt discouraged or hopeless (past month)	2.16 (1.32)	51	3.20 (1.39) [†]	$\chi^2(1) = 5.34^{**}$	$d = 0.79$	208	3.41 (1.32) [†]	$t(207) = 13.68^{**}$	$d = 0.95$
General mental health	3.15 (0.84)	51	2.00 (0.85)	$\chi^2(1) = 9.66^{**}$	$d = -1.37$	237	1.79 (0.79)	$t(236) = 26.50^{**}$	$d = -1.62$
Suicide									
Considered (past year)	13.0%	51	64.7%	$\chi^2(1) = 120.56^{**}$	RR = 4.98	199	65.2%	$\chi^2(1) = 472.56^{**}$	RR = 5.02
Times attempted (past year)	0.11 (0.47)	50	0.46 (0.76)	$\chi^2(1) = 3.25^{**}$	$d = 0.74$	199	0.65 (1.00)	$t(198) = 7.62^{**}$	$d = 1.15$
At least one attempt (past year)	6.5%	50	32.0%	$\chi^2(1) = 48.89^{**}$	RR = 4.92	199	36.1%	$\chi^2(1) = 290.64^{**}$	RR = 5.55
Self-harm									
Number of times (past year)	0.41 (1.03)	51	1.84 (1.35)	$\chi^2(1) = 7.56^{**}$	$d = 1.39$	231	1.87 (1.27)	$t(230) = 17.47^{**}$	$d = 1.42$
At least once in the past year	16.5%	51	71.2%	$\chi^2(1) = 104.41^{**}$	RR = 4.31	231	74.9%	$\chi^2(1) = 540.93^{**}$	RR = 4.54

Notes.

* $p < .05$;

** $p < .01$;

[†]This question was slightly differently worded in the BCAHS, with the word “sad,” added before the word “discouraged.”

Abbreviations: BCAHS = British Columbia Adolescent Health Survey, M = mean, SD = standard deviation; RR = risk ratio

Table 2

Comparisons of mental health outcomes for 19–25 year olds in CCHS and TYHS Surveys

	CCHS (2012)		TYHS (2014)		
	M (SD)/%	<i>n</i>	M (SD)/%	Statistical tests	Effect size
General mental health [†]	3.57 (0.68)	432	2.06 (0.78)	$t(431) = 40.23^{**}$	$d = -2.22$
K10 Kessler Psychological Distress	6.43 (5.58)	382	20.64 (9.44)	$t(381) = 29.42^{**}$	$d = 2.55$
Sad for 2 or more weeks in past year	18.7%	387	70.8%	$\chi^2(1) = 687.56^{**}$	RR = 3.79
Major depressive episode (past year)	7.8%	356	71.1%	$\chi^2(1) = 1972.67^{**}$	RR = 9.11
Considered suicide (ever)	15.4%	336	74.4%	$\chi^2(1) = 893.37^{**}$	RR = 4.83
Considered suicide (past year)	5.1%	340	40.0%	$\chi^2(1) = 848.45^{**}$	RR = 7.84
Attempted suicide (ever)	3.4%	156	37.8%	$\chi^2(1) = 552.30^{**}$	RR = 11.12
Attempted suicide (past year)	0.7%	160	11.3%	$\chi^2(1) = 241.25^{**}$	RR = 16.14

Notes:*
 $p < .05$;**
 $p < .01$;[†]Slightly different response options between studies for this question - see methods section for details.

Table 3

Prevalence of Mental Health, Disaggregated by Gender Identity for 14–18 and 19–25 Year old Transgender Youth

Mental health variables	14–18 year olds						Significance tests
	Boys/men		Girls/women		Non-binary		
	<i>n</i>	M (SD)/%	<i>n</i>	M (SD)/%	<i>n</i>	M (SD)/%	
General mental health	110	1.79 (0.76)	25	1.92 (0.86)	100	1.74 (0.80)	$F(2, 234) = 0.54$
Felt under stress/strain/pressure (past month)	92	2.97 ^{ab} (1.02)	21	2.57 ^a (1.43)	94	3.24 ^b (0.98)	$F(2, 204) = 4.07^*$
Felt discouraged or hopeless (past month)	91	2.35 ^{ab} (1.29)	21	1.81 ^a (1.47)	94	2.60 ^b (1.28)	$F(2, 203) = 3.26^*$
Seriously considered suicide (past year)	90	68.9%	20	55.0%	93	64.5%	$\chi^2(2) = 1.47$
Attempted suicide (past year)	90	44.2%	20	21.1%	94	34.4%	$\chi^2(2) = 4.22$
Self-harm at least once in the past year	106	79.2% ^b	24	50.0% ^a	100	77.0% ^b	$\chi^2(2) = 9.28^*$
Mental health variables	19–25 year olds						Significance tests
	Boys/men		Girls/women		Non-binary		
	<i>n</i>	M (SD)/%	<i>n</i>	M (SD)/%	<i>n</i>	M (SD)/%	
General mental health	167	2.16 ^b (0.80)	81	2.09 ^{ab} (0.78)	162	1.91 ^a (0.71)	$F(2, 407) = 4.71^{**}$
K10 Kessler Psychological Distress	158	20.21 (10.34)	76	19.78 (8.94)	153	21.17 (8.42)	$F(2, 386) = 0.70$
Felt sad for 2 or more weeks in past year	155	66.5%	76	71.1%	151	75.5%	$\chi^2(2) = 3.04$
Major depressive episode (past year)	140	68.6%	70	68.3%	141	75.2%	$\chi^2(2) = 3.04$
Seriously considered suicide (ever)	138	76.8%	65	66.2%	129	76.7%	$\chi^2(2) = 3.12$
Seriously considered suicide (past year)	141	36.9%	68	46.2%	97	41.7%	$\chi^2(2) = 0.93$
Attempted suicide (ever)	51	43.1%	33	21.2%	69	42.0%	$\chi^2(2) = 5.00$
Attempted suicide (past year)	53	11.3%	34	8.8%	70	11.4%	$\chi^2(2) = 0.49$
Self-harm at least once in the past year	150	48.0% ^{ab}	77	40.3% ^a	150	60.7% ^b	$\chi^2(2) = 9.78^{**}$

Notes:* $p < .05$;** $p < .01$