

# Teenagers' experiences of discrimination

## Supplementary materials

March 2021

## MEASURES

### Discrimination

Discrimination items were developed for LSAC.

**At ages 12–13 (Wave 5; 2012), 14–15 (Wave 6; 2014) and 16–17 (Wave 7; 2016), the LSAC K cohort study children were asked to respond 'Yes' or 'No' to:**

In the last 6 months have you been treated unfairly or badly because of your ...

- language or accent
- skin colour
- disability
- religious beliefs
- cultural background.

**At ages 14–15 (Wave 6; 2014) and 16–17 (Wave 7; 2016), the LSAC K cohort study children were additionally asked to respond 'Yes' or 'No' to:**

In the last 6 months have you been treated unfairly or badly because of your ...

- mental health problems
- sexual identity or same sex attraction
- body size, shape or physical appearance.

**At age 16–17 (Wave 7; 2016), the LSAC K cohort study children were additionally asked to respond 'Yes' or 'No' to:**

In the last 6 months have you been treated unfairly or badly because of your ...  
sex (male/female).

**A binary racial discrimination variable was derived from questions on:**

- a. language or accent
- b. skin colour
- c. cultural background

coded 0 ('No' to a and b and c) or 1 ('Yes' to one or more).<sup>1</sup>

<sup>1</sup> Priest, N., King, T., Becares, L., & Kavanagh, A. M. (2016). Bullying victimization and racial discrimination among Australian children. *American Journal of Public Health, 106*(10), 1882–1884.

**For each discrimination type, an indicator of any experience of discrimination in secondary school was derived** and coded 0 (no experience of discrimination in secondary school), or 1 (experience of discrimination at least once in secondary school at age 12–13, 14–15 and/or 16–17 for race, disability and religious beliefs; at age 14–15 and/or 16–17 for body size/shape/physical appearance, mental health and sexual identity; and at age 16–17 for sex discrimination).

## Language other than English at home

When the LSAC K cohort study children were aged 12–13, 14–15 and 16–17, a parent or guardian indicated whether or not the study child spoke a language other than English at home.

Language other than English at home was coded 0 (English only) or 1 (language other than English spoken at one or more ages). The percentage of teenagers who spoke a language other than English at home was 12.5%.

## Parent born overseas

In the first wave of LSAC, both parents reported on their country of birth. Parent born overseas was coded 0 (both parents were born in Australia) or 1 (at least one parent was born overseas). The percentage of teenagers who had a parent born overseas was 33.7%.

## Indigenous status

In the first wave of LSAC, a parent or guardian indicated if the study child was of Aboriginal or Torres Strait Islander origin. The percentage of teenagers who were Indigenous was 2.9%.

## Ongoing medical condition or disability

When the LSAC K cohort study children were aged 12–13, 14–15 and 16–17, a parent or guardian indicated if the study child had medical conditions or disabilities that had lasted or were likely to last for six months or more.

Ongoing medical condition or disability was coded 0 (no medical conditions or disabilities at all ages) or 1 (medical conditions or disabilities at one or more age). The percentage of teenagers with an ongoing medical condition or disability was 12.0%.

## Obese/overweight

BMI was calculated at each wave based on weight and height measurements taken by interviewers. Weight categories were assigned using child cut-offs.<sup>2</sup> Obese/overweight was coded 0 (underweight III, underweight II, underweight I or normal weight categories) or 1 (overweight or obese categories). The percentage of teenagers who were obese/overweight was 25.0%.

## Same-sex attraction

When LSAC K cohort study children were aged 14–15, they were asked, ‘Which of these statements best describes your sexual feelings at this time in your life?’

1. I’m attracted only to girls
2. I’m attracted only to boys
3. I’m attracted to girls and boys
4. I’m not sure who I am attracted to
5. I don’t feel any attraction to others.

Boys who responded (2) or (3) and girls who responded (1) or (3) were coded as same-sex attracted (1). All others were coded not same-sex attracted (0). The percentage of teenagers who were same-sex attracted was 4.6%.

2 Cole, T. J., Bellizzi, M. C., Flegal, K. M., & Dietz, W. H. (2000). Establishing a standard definition for child overweight and obesity worldwide: International survey. *BMJ*, 320(7244), 1240–1243.

## Depressive symptoms

Depressive symptoms were measured in LSAC K cohort study children at ages 12-13 and 16-17 using the 13-item Short Mood and Feelings Questionnaire.<sup>3</sup> Sum scores ranged from 0 to 26 with higher scores reflecting a greater level of depression. Depressive symptoms at each age were coded 0 (no significant depressive symptoms; sum score less than 8) or 1 (significant depressive symptoms; sum score 8 or higher). The percentage of teenagers who showed depressive symptoms at age 12-13 was 17.4%.

## Anxiety

Anxiety was measured in LSAC K cohort study children at ages 12-13 and 16-17 using the 8-item Spence Anxiety Scale, short form.<sup>4</sup> Sum scores ranged from 0 to 24, with higher scores reflecting higher levels of anxiety symptoms. Anxiety at each age was coded 0 (no significant anxiety symptoms; sum score less than 9 for boys or 11 for girls) or 1 (significant anxiety symptoms; sum score equal or higher than 9 for boys and 11 for girls). The percentage of teenagers who had anxiety at age 12-13 was 15.3%.

## Happiness

Happiness was assessed in LSAC K cohort study children at ages 12-13 and 16-17 from agreement to a single statement, 'In general, I am happy with how things are for me in my life right now.' Happiness at each age was coded 0 ('Strongly disagree', 'Disagree', 'Neither agree nor disagree') or 1 ('Agree' or 'Strongly agree'). The percentage of teenagers who were happy at age 12-13 was 76.5%.

## Non-suicidal self-injury or suicide attempt

At age 16-17, LSAC K cohort study children responded to the following questions:

1. During the past 12 months have you hurt yourself on purpose in any way? (yes/no)
2. During the past 12 months, how many times did you actually attempt suicide? (0 times/1 time/2 or 3 times/4 or 5 times/6 or more times)

Non-suicidal self-injury or suicide attempt was coded 0 ('No' to both items) or 1 ('Yes' to item one and/or non-zero response to item 2). The percentage of 16-17 year olds who had engaged in non-suicidal self-injury and/or attempted suicide was 13.2%.

## FULL RESULTS

**Table S1:** Number of types of discrimination reported by 16-17 year olds

	Female %	Male %	Total %
None	61.8	71.9*	67.0
One	20.3	16.9	18.6
Two	9.4	6.0	7.6
Three to seven	8.5*	5.2	6.8
<i>n</i>	1,446	1,488	2,934
Total percentage	100.0	100.0	100.0

**Notes:** Discrimination types were: race, disability, religious beliefs, body size/shape/physical appearance, mental health, sexual identity and sex. \* indicates statistically significant differences in proportions between males and females, from non-overlapping 95% CIs.

**Source:** LSAC K cohort, Wave 7, weighted

3 Angold, A., Costello, E. J., Messer, S. C., Pickles, A., Winder, F., & Silver, D. (1995). Development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. *International Journal of Methods in Psychiatric Research*, 5, 237-249.

4 Reardon, T., Spence, S. H., Hesse, J., Shakir, A., & Creswell, C. (2018). Identifying children with anxiety disorders using brief versions of the Spence Children's Anxiety Scale for children, parents, and teachers. *Psychological Assessment*, 30(10), 1342-1355; Spence, S. H. (1998). A measure of anxiety symptoms among children. *Behaviour Research and Therapy*, 36(5), 545-566; Spence, S. H., Barrett, P. M., & Turner, C. M. (2003). Psychometric properties of the Spence Children's Anxiety Scale with young adolescents. *Journal of Anxiety Disorders*, 17(6), 605-625.

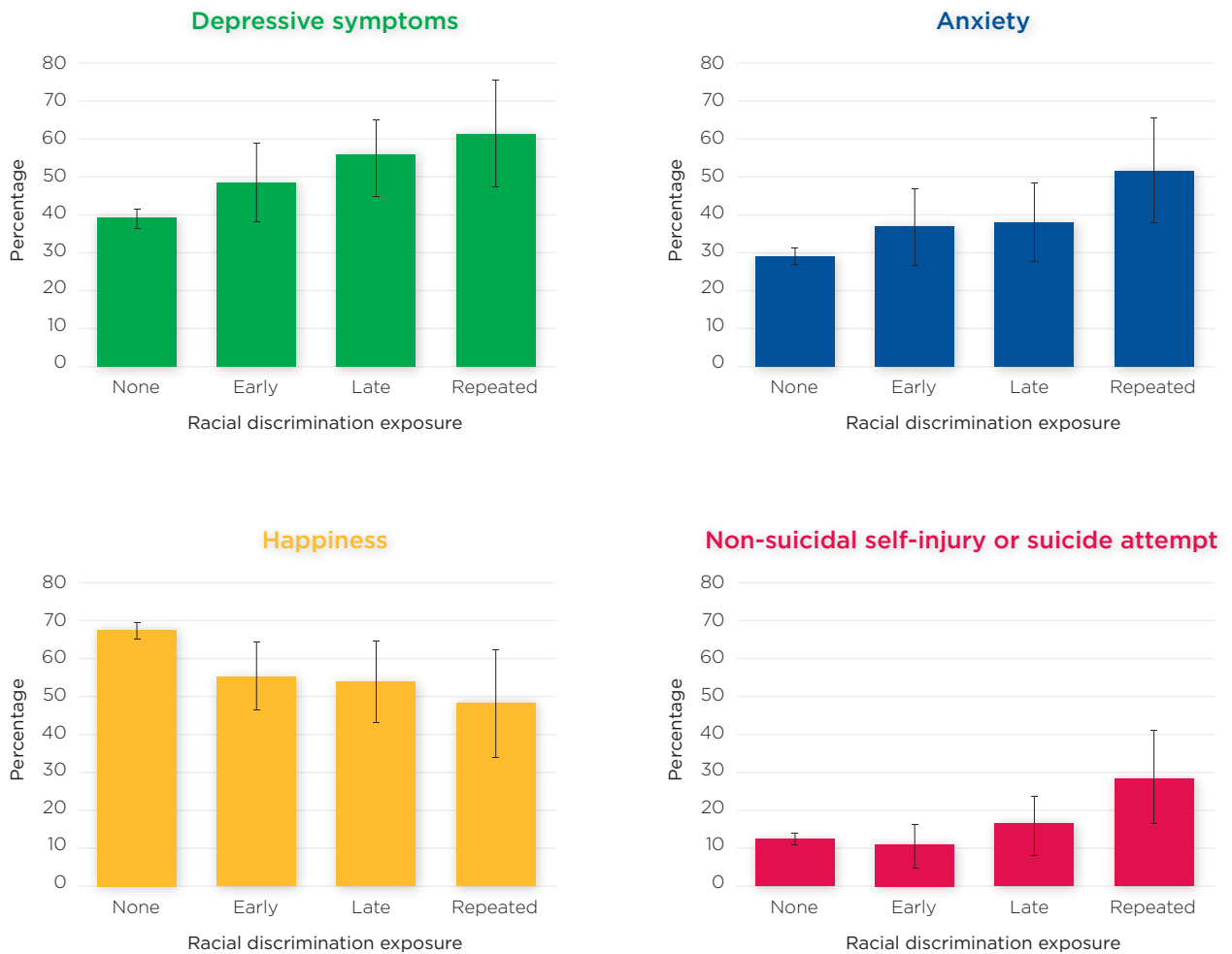
**Table S2:** Percentage of teenagers reporting discrimination according to demographic and physical characteristics

Characteristic	Racial	Disability	Religious beliefs	Body	Mental health	Sexual identity	Sex
<b>Experience of discrimination at least once in secondary school <sup>c</sup></b>							
All	19.4	7.6	11.7	31.8	7.6	5.4	8.6
<i>n</i> <sup>b</sup>	2,675-2,777	2,675-2,777	2,675-2,777	2,675-2,763	2,675-2,763	2,765-2,763	2,580-2,666
<b>Sex</b>							
Female	17.9	6.1	12.5	36.4***	8.3	6.7**	12.8***
Male	20.9	9.0*	11.0	27.5	7.0	4.1	4.5
<b>Language other than English at home</b>							
No	17.7	8.3*	11.8	32.6	7.3	5.7	8.6
Yes	31.2***	2.8	10.9	26.1	9.7	3.2 <sup>a</sup>	8.3
<b>Parent born overseas</b>							
None	16.8	8.6*	11.3	33.7*	7.0	5.8	8.7
One or both	24.5***	5.7	12.6	28.3	8.8	4.5	8.4
<b>Indigenous</b>							
No	19.0	7.5	11.6	31.6	7.5	5.3	8.7
Yes	33.8 <sup>a</sup>	10.9 <sup>a</sup>	14.8 <sup>a</sup>	40.4	10.5 <sup>a</sup>	7.6 <sup>a</sup>	6.3 <sup>a</sup>
<b>Disability or medical condition</b>							
No	18.8	5.6	11.9	30.9	7.6	4.9	8.4
Yes	23.7	23.3***	10.4	39.0*	7.7	9.2*	9.8
<b>Obese/overweight</b>							
No	18.2	7.0	11.0	27.5	7.0	5.3	8.7
Yes	23.4*	9.7	13.7	43.4***	9.3	5.4	8.0
<b>Same-sex attraction</b>							
No	19.0	7.2	10.9	30.6	7.0	3.9	8.1
Yes	24.1	10.5 <sup>a</sup>	21.9*	55.8***	13.1 <sup>a</sup>	38.9***	20.6***

**Notes:** <sup>a</sup> Estimate not reliable (Cell count < 20). <sup>b</sup> The exact *n* in each cross-tabulation varied according to missing data on demographic variables. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ . <sup>c</sup> any discrimination in secondary school years (age 12-13, 14-15 and/or 16-17 for race, disability and religious beliefs; age 14-15 and/or 16-17 for body size/shape/physical appearance, mental health and sexual identity; and age 16-17 for sex discrimination).

**Source:** LSAC K cohort, Waves 5 to 7, weighted

**Figure S1:** Relationship between exposure to **racial discrimination** and aspects of mental wellbeing at age 16-17



**Notes:** Percentages are predicted from logistic regression models including sex and corresponding mental health characteristic at age 12-13 as covariates. Non-suicidal self-injury and suicide attempt were not assessed at age 12-13 so this analysis controlled for depressive symptoms at age 12-13. Body discrimination categories are: Early - exposure at age 14-15; Late - exposure at age 16-17; Repeated - exposure at ages 14-15 and 16-17. 95% confidence intervals are shown by the 'I' bars at the top of each column. Where confidence intervals for the groups being compared do not overlap, this indicates that the differences in values are statistically significant.

**Source:** LSAC K cohort, Waves 5-7, weighted.  $n = 2,588$  for depressive symptoms,  $n = 2,565$  for happiness,  $n = 2,555$  for anxiety,  $n = 2,549$  for non-suicidal self-injury or suicide attempt

**Credit:** The Longitudinal Study of Australian Children 2021 ([creativecommons.org/licenses/by/4.0/](https://creativecommons.org/licenses/by/4.0/))

## KEY REFERENCES

---

- Brown, C. S. (2017). *Discrimination in childhood and adolescence: A developmental intergroup approach*. New York, NY: Routledge, Taylor & Francis Group.
- Conference of Education Systems Chief Executive Officers. (2000). *Racism. No way! A guide for Australian schools*: Conference of Education Systems Chief Executive Officers. Retrieved from [www.racismnoway.com.au](http://www.racismnoway.com.au)
- Ghavami, N., Katsiaficas, D., & Rogers, L. O. (2016). Toward an intersectional approach in developmental science: The role of race, gender, sexual orientation, and immigrant status. *Advances in Child Development and Behavior*, 50, 31–73.
- Juvonen, J., Lessard, L. M., Schacter, H. L., & Suchilt, L. (2017). Emotional implications of weight stigma across middle school: The role of weight-based peer discrimination. *Journal of Clinical Child and Adolescent Psychology*, Division 53, 46(1), 150–158.
- Pascoe, E. A., & Richman, L. S. (2009). Perceived discrimination and health: A meta-analytic review. *Psychological Bulletin*, 135(4), 531–554.
- Pont, S. J., Puhl, R., Cook, S. R., & Slusser, W. (2017). Stigma experienced by children and adolescents with obesity. *Pediatrics*, 140(6), e20173034.
- Priest, N., King, T., Becares, L., & Kavanagh, A. M. (2016). Bullying victimization and racial discrimination among Australian children. *American Journal of Public Health*, 106(10), 1882–1884.
- Priest, N., Paradies, Y., Trenerry, B., Truong, M., Karlsen, S., & Kelly, Y. (2013). A systematic review of studies examining the relationship between reported racism and health and wellbeing for children and young people. *Social Science and Medicine*, 95, 115–127.
- Seng, J. S., Lopez, W. D., Sperlich, M., Hamama, L., & Reed Meldrum, C. D. (2012). Marginalized identities, discrimination burden, and mental health: Empirical exploration of an interpersonal-level approach to modeling intersectionality. *Social Science and Medicine*, 75(12), 2437–2445.
- Sutin, A. R., Robinson, E., Daly, M., & Terracciano, A. (2018). Perceived body discrimination and intentional self-harm and suicidal behavior in adolescence. *Childhood Obesity*, 14(8), 528–536.
- Victorian Department of Education and Training. (2018). *Safe schools: Guide to making your school safe and inclusive for LGBTI students*. Melbourne: Department of Education and Training. Retrieved from [www.education.vic.gov.au/about/programs/Pages/safeschools.aspx](http://www.education.vic.gov.au/about/programs/Pages/safeschools.aspx)