Methods summary for the 2017 Speak Out Against Racism (SOAR) student and staff surveys

Student survey

Sample selection

The SOAR project is a collaborative study on racism and racial bullying in Australian schools. The study required the random selection of government schools in NSW and Victoria, with an oversampling of schools with higher proportions of Aboriginal and Torres Strait Islander students. The respective jurisdictions provided a list of government schools (n = 1956 in NSW, n = 1520 in Victoria) to choose from, along with a range of demographic and school profile data summarising school characteristics, including the following:

- school type (e.g. kindergarten to year 6, year 7 to year 12, primary, secondary)
- school region and remoteness
- total number of students
- estimated numbers of students with an Aboriginal and Torres Strait Islander background or language background other than English (LBOTE) students
- student family Occupation and Education Index category.

Schools were classified into tertiles (low, medium or high) based on their number of Aboriginal and Torres Strait Islander and LBOTE students, and then assigned to one of nine selection strata:

- low Aboriginal and Torres Strait Islander, low LBOTE
- low Aboriginal and Torres Strait Islander, medium LBOTE
- low Aboriginal and Torres Strait Islander, high LBOTE
- medium Aboriginal and Torres Strait Islander, low LBOTE
- medium Aboriginal and Torres Strait Islander, medium LBOTE
- medium Aboriginal and Torres Strait Islander, high LBOTE
- high Aboriginal and Torres Strait Islander, low LBOTE
- high Aboriginal and Torres Strait Islander, medium LBOTE
- high Aboriginal and Torres Strait Islander, high LBOTE.

Published counts of students by year level (CESE 2015, DET 2016) were then used to estimate the number of in-scope students at each school. A selection probability was assigned to each school based on the assumption that 10% of selected schools in each state would consent to take part in the study and that 50% of in-scope students at participating schools would complete a survey. The selection probabilities of high-Aboriginal and Torres Strait Islander schools were then boosted by a factor of 4, given the particular focus of the study.

The method for sampling was 'balanced stratification' (Tillé 2016, Tillé & Matei 2016), based on the derived strata and balanced on the available school characteristics. Incorporating 'balance' variables in the selection process ensures that the final selected sample is representative of the overall school population without having to stratify explicitly by a large number of variables.

A lower than anticipated consent rate among schools meant that the selection process was repeated twice for each state. The final sample consisted of 234 NSW schools and 232 Victorian schools to be approached for the study. The sample selection was carried out using the statistical computing program R (R Core Team 2016).

Weighting

Ideally, a selected sample should be a representative subset of the population it came from. However, this is not the case in many surveys. One of the problems is oversampling and undersampling of certain groups at a higher rate

than others. This may be due to the study design or self-selection problems (e.g. some people may be more or less likely to participate in surveys). For this reason, weights are commonly used to ensure that estimates from survey data are as representative as possible of the population of interest.

To ensure that estimates made from the SOAR data are as representative as possible of NSW and Victorian school students in years 5–9, we used a weighting approach to overcome the oversampling and undersampling of some groups in our sample. Those in an undersampled group were assigned a weight larger than 1, and those in an oversampled group were assigned a weight smaller than 1. Weights were calculated for each responding student using the raking weighting method (Lumley 2017) implemented in statistical program R (R Core Team 2016).

The approach to deriving weights consisted of the following steps:

1. A design weight was assigned for each respondent as the inverse of their chance of being selected to take part in the survey. The inclusion probabilities from each round of selections were accumulated so that a final selection probability could be assigned to each responding student, and the inverse served as their design weight.
2. The base weights were adjusted so that the relative frequencies of selected key characteristics among respondents matched the population frequencies. The characteristics for which the adjustments were carried out were those involved in the selection process – Aboriginal and Torres Strait Islander tercile, LBOTE tercile, Occupation and Education Index category, and part of state (metropolitan, versus rest of state). The population relative frequencies are shown in Table 1.

For more details on weighting of sample surveys, refer to Valliant et al. (2013).

Data collection

Data were collected in May–August 2017 among school students in years 5–9 and their school staff in NSW and Victoria. In total, 4664 primary and secondary school students completed the SOAR survey: 2081 in NSW and 2583 in Victoria.

Student surveys asked participants about:

- personal characteristics (e.g. age, gender, school year, ethnicity)
- direct experiences of racism at school and in the community
- vicarious experiences of racism at school (witnessing experiences of racism among other students)
- experiences of religious and gender discrimination

Table 1 Population benchmarks used for weighting, by state

Weighting variable	Characteristic	NSW population, 2015 (%)	Victorian population, 2016 (%)
Aboriginal and Torres Strait Islander	No	93.3	98.0
	Yes	6.7	2.0
Language background other than English	No	66.9	72.1
	Yes	33.1	27.9
Metropolitan	No	23.4	25.5
	Yes	76.6	74.5
Occupation and Education Index category	1	33.7	31.2
	2	24.0	25.5
	3	23.7	22.1
	4	18.5	21.2
	Total students	738 038	563 027

- racial/ethnic attitudes
- bystander responses to racism
- self-efficacy to intervene in racial bullying situations
- school connectedness and school climate
- teacher empathy
- peer prosocial norms
- interracial climate
- social and emotional wellbeing
- sleep.

School-level reports on student survey data results were sent to participating Victorian schools in December 2017 and to NSW schools in 2019.

Staff survey

Sample selection

Following collection of the SOAR student survey data, staff (both teaching and nonteaching) from the schools involved (except from one school from Victoria that declined) were invited to participate in the SOAR staff survey.

Data collection

Staff from participating schools were sent an online survey link and asked to complete the SOAR staff survey by 24 October 2017. The survey took approximately 20 minutes. In total, 202 staff participants (n = 88 in NSW, n = 114 in Victoria) across 10 NSW and 6 Victorian schools completed the survey. Of the 202 staff participants who completed the survey, 138 (68%) were from secondary schools and 64 (32%) were from primary schools.

The SOAR survey documented staff observations in relation to bullying and discrimination, as well as their school climate. The survey asked school staff about:

- their role in the school, and their teaching background, qualifications and experience (where relevant)
- personal characteristics (e.g. age, gender, ethnicity)
- awareness of multicultural education policies
- school climate in general
- school climate with regard to bullying and harassment
- experiences of discrimination
- personal self-efficacy in behavioural management
- diversity beliefs
- unconscious bias with terms relating to ethnicity (Implicit Association Test).

This summary is based on the main report of the 2017 SOAR survey findings: *Findings from the 2017 Speak Out Against Racism (SOAR) student and staff surveys by* N Priest, S Chong, M Truong, M Sharif, K Dunn, Y Paradies, J Nelson, O Alam, A Ward and A Kavanagh.