

# Collecting biomarkers in Australian primary schools: Insights from the field

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There are increasing efforts to incorporate biology into studies on the social determinants of health. While there is increasing utilisation of biosocial methods in health disparities research, protocols for collecting biomeasures in community contexts involving children are underdeveloped. This paper is based on the Speak Out Against Racism (SOAR) project which collected anthropometric, blood pressure and biosamples (buccal swabs and saliva) from a diverse sample of 124 children (aged 10-12) at 3 primary schools in Australia. This paper describes the methods employed, as well as the practical and ethical considerations necessary for biomarker data collection within schools. A discussion of the feasibility of collecting biological data in school settings, including the considerable preparation and resources required for recruitment, planning and data collection is included. Lessons learned and suggestions to inform future research and practice in this area are discussed.

*Keywords:* biomarker; biosample collection; school

## 1 Introduction

Adopting a social-biological approach to child health and health disparities research has the potential to help us understand the myriad of social, cultural, economic and biological factors that determine health and wellbeing for individuals, families and communities. A greater understanding of the influence of both social and biological factors on health can help identify risk factors and potential points of intervention to guide development and implementation of programs and policies to ameliorate health disparities (Harris & McDade, 2018).

Racial discrimination is a critical determinant of health and health disparities for both children and adults (Paradies et al., 2015; N. Priest et al., 2013). Among adults, experiences of racial discrimination have been found to be associated with a range of health outcomes such as hypertension, chronic inflammation and mental disorders (Lewis,

Cogburn, & Williams, 2015). There is emerging evidence that racial discrimination, as a form of childhood adversity, may impact biological pathways at an early age, for example cardiometabolic risk markers (Brody, Yu, Miller, & Chen, 2015; Goosby, Malone, Richardson, Cheadle, & Williams, 2015; Priest et al., 2020). Childhood adversity can directly affect biological processes by disrupting physiological regulatory processes, predisposing children and adolescents to early cardiometabolic risk (Suglia et al., 2018). As such, sensitive measures such as immune and inflammatory biomarkers that capture stress and physiological changes not yet noticeable are important to identify among those at most risk from racism's harms (Shonkoff, Boyce, & McEwen, 2009).

Innovative biomeasures are increasingly being included in biosocial research designs and data collection efforts to advance our understanding of the mechanisms through which different factors shape development and health within the context of everyday life and across the life course (Shonkoff, Richter, van der Gaag, & Bhutta, 2012). Although in-home data collection efforts date back to initiatives such as the Health Survey for England that started in 1991 (Mindell et al., 2012), the past fifteen years have shown an increase in methodological options for collecting biological data in ad-

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ditional community contexts such as schools (Goosby et al., 2015; Weinstein, Vaupel, & Wachter, 2007; Yang, McClintock, Kozloski, & Li, 2013) and by trained non-clinical interviewers (McFall, Conolly, & Burton, 2014). These methodological advances have much potential to address outstanding questions related to the dynamic interplay between social relationships and contexts and biological processes, and their contribution to, and derivation from, social stratification throughout the life (Harris & McDade, 2018; Weinstein et al., 2007; Yang et al., 2016).

Whilst the collection of biological samples such as saliva has occurred in schools previously (Fuller & Hawkins, 2013), the collection of biological data continues to present some challenges and there remains a need to consider how best to collect such data to ensure ethical and respectful research practices and to maximise data quality and integrity (Peterson, 2018; Rodriguez et al., 2016). One important priority is ensuring biosocial studies include participants at younger ages, from a range of socioeconomic backgrounds and from a diverse set of racial and ethnic minorities, all of whom are under-represented in studies collecting biosamples (Bhopal, 2012; Harris & Schorpp, 2018; Ranganathan & Bhopal, 2006; Tutton, 2009). The capacity of biosocial research to address key questions related to social and biological processes and their interconnectedness with social stratification throughout the lifecourse remains severely limited if this is unaddressed. There is also an underlying ethical and moral imperative of ensuring that research processes and methods are sensitive and appropriate to all, not only those with the most resources and opportunities to participate.

There is growing interest in expanding the collection of biosamples to community settings to make it easier to include marginalised groups that are harder to reach (Casteleyn, Dumez, Van Damme, & Anwar, 2013; Sly et al., 2009). The collection of biosamples for research purposes most commonly occurs via home or neighbourhood visits (Chyu, McDade et al. 2011) and clinics or assessment centres (Clifford, Davies, & Wake, 2019; Zipf et al., 2013). This can impact a study's sample in terms of participation and characteristics of sample selection and limit the scope of such research. For example, not all participants are able to travel to clinics, assessment centres and laboratories (Harris & Schorpp, 2018; Marmot & Steptoe, 2008) and home or neighbourhood visits are less likely to be taken up by those from lower socioeconomic, Indigenous and some ethnic minority backgrounds. This can be related to stigma, mistrust of government and research, economic and time constraints, poorer health literacy and fear of exploitation (George, Duran, & Norris, 2014). Participation of Indigenous peoples and ethnic minority groups is also hindered by a sense of scepticism and distrust prevalent in some communities as a result of past and contemporary institutionalisation, disrespect and mistreatment within the healthcare and medical

systems (Bainbridge et al., 2015; Scharff et al., 2010).

Lower participation rates of socially disadvantaged groups in research has implications for the generalisability of study findings, potentially leading to biased results and mis-specification of social stratification processes and their relationships with biological phenomena due to their absence or under-representation. This is of particular importance when conducting biosocial research with children, who are also under-represented within biosocial research despite such work being identified as a priority given growing interest in lifecourse approaches towards health (Dowd, Zajacova, & Aiello, 2009; Harris & Schorpp, 2018). In addition, methodological protocols for collecting biomarker data in naturalistic settings for children are still being developed with more guidance for researchers conducting such research required.

Working with schools can be an effective method of conducting research with children and young people and enables the recruitment of a sample that is more representative of a youth population (Madge et al., 2012; Testa & Coleman, 2006). Yet, few studies to date utilise biosample collection methods in schools (Casteleyn et al., 2013; Gatny, Couper, & Axinn, 2013; Sly et al., 2009). As such, there is need for practical documentation of procedures and practices to provide researchers with insights to collect these data in the most reliable and scientifically rigorous manner while taking into consideration the critical role various community and cultural factors play that can either facilitate and/or hinder the success of the study.

The goal of this paper is to fill a gap in the literature on the methods and key considerations for using biosocial research methods with children in a school setting. In our study we used data from a population survey and intervention study among an ethnically diverse sample of students in Australia to describe the practical experiences of recruiting schools and engaging with staff and students to collect biomarkers.

## 2 Study context

The Speak Out Against Racism (SOAR) Child Health Check study was a cross-sectional sub-study nested within the SOAR study described in more detail elsewhere (N. Priest et al., 2019). Broadly speaking, SOAR is the first study, to date, to collect students' reports of their experiences, attitudes, and bystander responses to racism, and impacts on health and education at a population level in Australia. The SOAR study consists of three components. Component one is a population representative survey of public school students ( $n = 4,664$ ) in grades 5-9 in the states of New South Wales (NSW) and Victoria, in Australia. Component two consists of the development, implementation and evaluation of a school-based program to address racial discrimination and promote proactive bystander responses to racial discrimination. The third component, the SOAR Child Health Check study, collected anthropometric, blood pressure and

biosample data from a sub-sample of 10-12 year old children ( $n = 124$ ) attending three primary schools in Victoria.

### 3 Methods

#### 3.1 Recruitment of schools to the SOAR Child Health Check study

Survey data collection for component one of SOAR occurred from May-August 2017. Baseline and follow up student surveys were conducted with schools involved in component two of SOAR in February-March 2018 and August-September 2018, respectively. Qualitative interviews and focus groups with staff and students to evaluate the SOAR program were conducted in August-September 2018 after the follow up survey. One school was involved in both SOAR component two and the SOAR child health check, and the interviews and focus groups for this school included prompts about the child health check visits.

As the SOAR study's main focus was on racial discrimination, schools with high proportions of Indigenous and ethnic minority students were recruited to the study. For the SOAR Child Health Check study, two primary schools took part in 2017 and one primary school took part in 2018 (all located in the state of Victoria). Prior to the health checks, the children had completed the SOAR student survey as part of the broader SOAR study.

While the wider SOAR study spanned NSW and Victoria, the SOAR Child Health Check was limited to Victoria for funding and logistical reasons including access to laboratory facilities. Primary schools from Victoria that participated in the SOAR representative survey with medium or high proportions of Aboriginal and Torres Strait Islander and/or language background other than English students (five of nine schools) were invited to take part in the SOAR Child Health Check study. Two of the five schools agreed to participate. Additionally, two different schools recruited for SOAR component two were also recruited to the sub-study, however one dropped out after completion of the student survey and prior to child health check visits.

Recruitment of students was dependent on the distribution and collection of project information sheets and consent forms by classroom teachers, which was overseen by the school representative.

#### 3.2 Biosample collection from children

To ensure valid and appropriate research methods were used to address the research aim of the SOAR Child Health Check study, acceptable and appropriate biosample collection procedures for school data collection were selected. The original study design included the collection of dried blood spot (DBS) samples from participants. Despite ethics approval being granted by the university ethics committee, the Department of Education (in Victoria) did not approve the

collection of blood in schools. As a result, the research design was changed to include saliva samples and buccal swabs instead. This was approved by both Ethics committees.

#### 3.3 Researcher training

Researchers from the Murdoch Children's Research Institute (MCRI), Royal Children's Hospital in Victoria with experience in biosampling methods trained and assisted the SOAR research team and study coordinator (MT) in developing collection protocols, obtaining sample collection materials, laboratory space and time and storage space for samples in addition to providing training in sample collection and processing. Practical advice and assistance provided by researchers from MCRI was invaluable to the study. For example, researchers from MCRI provided access to wet and dry ice supplies that needed to be collected from the laboratory on the morning of each data collection school visit and returned afterwards.

Researchers conducting fieldwork also participated in a two-hour training workshop with assessment/validation on anthropometric measurement facilitated by a senior researcher with extensive experience in anthropometric measurement and training. Particular attention was given to how to work with children and considerations for children from different cultural backgrounds. For example, how to measure height in the presence of head coverings such as turbans and hijabs. Two researchers underwent additional training in saliva and buccal collection and post-visit sample processing with researchers at MCRI and an occupational health and safety orientation as required by the hospital for any staff working in research laboratories. See Table 1 for further information regarding field researchers' training, preparation and data collection time.

#### 3.4 Ethics and consent

Ethics approval for the SOAR Child Health Check study was obtained from The Australian National University Human Research Ethics Committee (Protocol # 2016/168) and the Department of Education's Ethics Committee (#2016\_003244) (in Victoria). Approval was also obtained from each individual school's executive/leadership. All researchers involved in school visits obtained a Working With Children Check (a mandatory requirement by law).

In this study, informed consent was obtained from student participants and their parent or guardian. Prior to the school data collection visits, information sheets and parent consent forms were distributed to families by classroom teachers, who subsequently collected signed consent forms 1-2 weeks later. Researchers provided a brief project summary in simple and plain language, in addition to the university ethics committee approved plain language statement and consent form, as advised by schools. Consent forms included separate sections for anthropometric measures (i.e. height,

Table 1  
*Field researchers' training, preparation and data collection time*

	Number of staff required	Approximate time
Training of researchers in:		
1) Anthropometric measurements	1) 1 trainer, 8 researchers	1) 2 hours
2) Buccal and saliva samples	2) 1 trainer, 2 researchers	2) 1 hours
3) Laboratory orientation and buccal and saliva processing	3) 1 trainer, 2 researchers	3) 2 hours
		Total: 5 hours for 2 researchers, 2 hours for 6 researchers
Preparation time prior to data collection e.g. contacting schools, forms, equipment and supplies	1-2 researcher(s)	2-3 hours each
Data collection school visit	5-6 researchers	3.5 hours each
Post-visit processing at laboratory	2 researchers	2-3 hours each
Post-visit data entry and administration	1 researcher	2 hours

weight and waist circumference), blood pressure and saliva and buccal collection. Parents had the option of providing consent for some or all aspects of the child health check. Written information for families was also translated to languages other than English upon request. Verbal consent was obtained from each student participant and recorded on a registration sheet, by ticking the relevant boxes, at the start of the child health check. In addition, at each measurement station, the researcher explained the measure and ensured each participant understood and was comfortable with having the measure taken. If the child was reluctant to participate in any measures or refused to participate, then the researcher did not proceed or continue.

Furthermore, there is a duty of care involved when collecting health information from study participants. In light of this, child health check reports were sent to families if the child's BMI or blood pressure measurement were outside of normal ranges according to clinical guidelines (The Royal Children's Hospital Melbourne, 2017; U.S. Department of Health and Human Services, 2007). That is, if body mass index was >95<sup>th</sup> percentile or <3<sup>rd</sup> percentile and/or blood pressure was >90<sup>th</sup> percentile (See Appendix for child health report template).

### 3.5 Data and biosample collection

Detailed preparation for the school field visits ensured the smooth running of data collection procedures. To maximise the number of participants measured during the visit, the research team planned in advance how many students would attend each measurement station and at what time in accordance with the school's lesson times.

On the day of each visit, wet and dry ice for storage of samples were collected from the laboratory on the morning of each data collection school visit. At the school, five stations/sections were set up each with one or two researchers for the following: i) presentation and waiting, ii) registration, iii) anthropometrics, iv) blood pressure, and v) saliva and buccal sample collections. For the anthropometric station, a curtain or sheet was used to create a private area for participants to adjust or remove clothing.

Collection of biosamples such as saliva add further considerations such as the timing of sample collection. Collection times needed to be organised around school schedules and researcher availability, and also necessitated collection before 12pm due to the distinctive diurnal patterns of salivary inflammatory markers (Izawa, Miki, Liu, & Ogawa, 2013).

Once biosamples were collected during school visits, they were handled, stored and transported in accordance with safety guidelines. Following transportation of samples to the laboratory, there was a multi-step process involving preparation, sample processing, storage and analysis. Arrangements were made with laboratory researchers related to the use of equipment and materials and booking laboratory time for sample processing, in addition to accessing storage facilities such as freezers.

### 3.6 Data management

At data collection visits, each student participant was given a unique ID at the beginning of the session when demographic information was confirmed and recorded on the registration form (i.e. name, date of birth). These data, and the biomeasures, (i.e. anthropometrics and blood pressure), were

entered directly into an Excel spreadsheet, using a tablet or laptop, or manually recorded on paper (and later entered into the spreadsheet). Biosamples (i.e. saliva and buccal swabs) were labelled with participant ID, date of birth and date of collection. Biosample laboratory forms included participant ID, date of birth, school name and date of collection. All paper records were stored in a secure location following the school visit and all electronic files were password-protected.

## 4 Results

### 4.1 Participation

Three schools participated in the SOAR Child Health Check study. Overall, across the three schools, 21% of eligible students (from Year 5 and 6) agreed to participate (individual school participation rates were: School A = 5.6%, School B = 16.9% and School C = 51.2%). Anthropometric, blood pressure and biosample data were collected from 124 children. The study sample was highly diverse, with 63.7% ( $n = 79$ ) self-identifying as being from an Indigenous or ethnic minority background compared with 55.8% in the eligible sample. We used a chi square test to test the significance of this difference. The number of students from Indigenous or ethnic minority backgrounds relative to the number of non-minority students in the study sample did not differ significantly from the proportion of those two groups in the eligible sample ( $\chi^2 = 0.723$ ,  $p = 0.395$ ). This suggests the study was successful in recruiting students from diverse backgrounds reflective of the eligible student population.

At each school data collection visit, the researchers were at the site for approximately three and a half hours, including set up and pack up time. School start times were generally 9am which meant the researchers who had to collect dry and wet ice from the laboratory at MCRI on the way to the school had to leave home early in the morning as travel time by car from laboratory to school was up to 1.5 hours. At each school visit, there were 5-6 researchers and a range of 10-23 students were measured.

### 4.2 Interactions between researchers and student participants

During the school visits, the researchers engaged with students in a friendly and respectful manner and tried to ensure participants were comfortable at all times. At some schools, a school staff member was present during data collection observing the researchers and students.

On the day of the data collection visit, the child health check session began with a ten minute interactive science tutorial (specifically developed for the study) to introduce students to the study, the collection procedures and the researchers and to build awareness among students about science and research methods. This presentation included dis-

cussion of how scientists study how physical health might be connected to stress and to negative experiences including racism and discrimination and how such experiences can impact one's health by getting 'under the skin.' Terms such as 'anthropometric' and 'biomarker' were explained and all of the different data collection methods demonstrated. Information was provided about what will happen to the measurements and samples that were being collected and discussion that all information was kept confidential and private. At the request of one school, the research team wore white lab coats for the students to enhance the students' experience as well as promoting their involvement in, and the importance of, 'science'. Whilst white coat syndrome can induce stress in some patients and result in temporary increases in blood pressure (Jurko, Minarik, Jurko, & Tonhajzerova, 2016), teachers at one school specifically requested the inclusion of white lab coats to enhance the experience for students, and subsequent feedback from schools suggested that this was positively received.

Feedback about the SOAR child health check study was obtained from communication between researchers and schools during the study and from qualitative interviews with teachers and focus groups with students (part of the broader SOAR study). Overall, the child health check school visits were positively received by staff and student participants. A teacher at one school commented on how their students "were excited to be going to the lab for testing". Both teachers and students appeared to value the opportunity to engage with researchers in person and learn about science in action. A teacher commented how "when anything is different and out of the norm is good for the kids 'cause then they start to think in that they wonder (sic)". Students also found it to be a novel and interesting experience, although some did momentarily feel "a bit weird" or uncomfortable spitting in a cup or having a blood pressure cuff on their arm, for example. The measurement stations were in an open space (except for the anthropometric station) and students could see each other go through the stations. The researchers observed that other students' positive experiences during data collection reassured more hesitant students.

## 5 Discussion

Biomarkers are considered critical to understanding the health impacts of stress and adversity. There is growing interest in expanding the scope of biological data collection in social science and health disparities research to include school settings as a strategy for increasing the representation of harder to reach populations including children from racial and ethnic minority groups. These data can enhance our understanding of how adverse experiences such as racial discrimination may be associated with physiological changes in children. While this is still a novel approach in some settings, more information is needed to understand how to con-

duct such research in the field in a manner that is respectful and appropriate for students and schools. This current paper is one of few, to the authors' knowledge, to document the logistics and challenges of collecting biomeasures in a school setting.

Overall, this study showed that it is acceptable and appropriate to collect biomarkers for research in school settings. However, considerable preparation and resources were required to recruit and engage schools, staff and students (and their families). The inclusion of an interactive science presentation facilitated the engagement (and enthusiasm) of students in the study. Thus, it is advisable that future studies consider strategies for interacting with students beyond the formal data collection process in order to foster relationship-building between researchers and participants as this is widely noted within research as an important aspect of research engagement and participation. It is also important to note that there were several examples of challenges experienced throughout the study, for example, the challenges to school recruitment. This included the experience of one school dropping out at the beginning of the study, which precluded recruitment of a replacement school, and thus affected the final sample number. A summary of the challenges experienced throughout the study and subsequent outcomes and learnings are provided in Table 2.

Furthermore, the study was successful in recruiting children from ethnically diverse backgrounds as participants. Specifically, the majority of student participants in our study (63.7%) identified as belonging to an Indigenous or belonging to an ethnic minority group. A common limitation in the field is low participation rates of Indigenous peoples and ethnic minority group. For example, the Longitudinal Study of Australian Children (LSAC) includes a small minority of participants from families that are Indigenous or from an ethnic minority background (Clifford et al., 2019). The LSAC Child CheckPoint biophysical module which included collection of biosamples and anthropometric data from a subsample of 11-12 year-old participants at mini-assessment centres and home visits comprised of even fewer participants from minority backgrounds and lower socio-economic quintiles than the larger LSAC cohort (Clifford et al., 2019). The extent to which the success of this study in recruiting Indigenous and ethnic minority participants is due to the sample design or to the engagement approach or a combination is an area for further exploration.

Ethical issues and informed consent need to be carefully considered due to concerns about the use of biomeasures outside clinical settings and research involving children (Spriggs, 2010). The ethical issues associated with the collection of biological data, particularly in the context of public concern about the undisclosed use of participants' biological information, adds further complexity to obtaining informed consent (Holland, Smith, Eskenazi, & Bastaki, 2003). How-

ever, we were able to address this issue by devising strategies in collaboration with school staff.

Biosamples such as saliva and cheek swabs can be obtained by different methods, with advantages and disadvantages for each approach. While collection of blood is sometimes necessary for particular analyses, less invasive methods should be considered as a substitute for blood collection where possible for several reasons. Firstly, it will minimise participant discomfort and risks of harm from the collection. Secondly, it can increase the sample size of the study population significantly as participants (and their parents/guardians) may be more willing to provide a saliva sample than give blood (Holland et al., 2003; Tworoger & Hankinson, 2006). Thirdly, it may pass ethics committee approval from university and government departments more readily, particularly when the study involves children. In addition, information from saliva may be comparable to that obtained from blood for some biomarkers (Desai & Mathews, 2014). Also, depending on the field site, blood collection may not be appropriate due to hygiene and storage issues.

Having clear protocols in relation to data recording and management was critical in ensuring confidentiality of participant data, accurate recording of data (e.g. consent for different aspects of the study) and integrity of data for analysis. This is particularly important for studies involving data sharing among researchers, multi-sites or multiple visits at one site. Ideally the data are recorded electronically as they are measured and then synched or combined into one database either in real-time or soon after. In some instances, manual recording may be required, therefore clear guidelines are needed for inputting such data into electronic files. In addition to staff training in research protocols, consistency in personnel, processing equipment and consumables and a secure data audit trail with privacy being paramount, should be included in the study (Brisson, Matsui, Rieder, & Fraser, 2012).

## 5.1 Conclusion

Researchers and clinicians should continue to explore ways to utilise and enhance methods for engaging children, families and schools, particularly those from diverse backgrounds, in biosocial research in order to expand the scope of health and social science research. Overall, the experiences from the SOAR Child Health Check study indicate that considerable preparation, planning and resources are necessary to collect biomarker data from children in school settings, and that support and engagement from school staff was vital.

## Acknowledgements

We wish to thank the students and staff from the schools that participated in the SOAR Child Health Check study.

**Conflicts of interest.** None

Table 2  
*Summary of challenges and learnings*

Challenge	Action/response	Outcome/learning
Recruitment of schools to the study	<p>Emails were sent to schools outlining the study and a face-to-face meeting was conducted with representatives from schools (e.g. assistant principals and health and wellbeing staff) that were interested in participating. It was emphasised in all communication that all research activities would be negotiated with each school. The meetings allowed researchers to explain the project thoroughly and its value to the students and broader community.</p> <p>This also helped equip the school to address any potential concerns from students and families such as explaining what happens to their measurements and samples</p>	<p>Higher levels of engagement may be required, e.g. having face-to-face meetings with schools, to gain support for the study, build trust and establish a clear understanding of the project and what is involved.</p> <p>Emphasise that all research activities would be negotiated with each school.</p>
One school dropped out of the study	<p>A staff member was interested in the study but a lack of support from the wider school staff meant their school did not ultimately participate.</p> <p>We were unable to recruit a replacement school due to time constraints.</p>	<p>It is difficult to know how many schools to recruit as the number of participants that will consent to take part is difficult to predict. Therefore, researchers should consider recruiting an additional school in case a lower than anticipated response rate occurs.</p>
Changes to study design – the education department did not approve the collection of dried blood spot samples therefore this was changed to saliva samples and buccal swabs instead.	<p>A variation to ethics was submitted to the university ethics committee to obtain approval for the updated research design and subsequently submitted to the Department of Education for approval, which was granted.</p>	<p>This has implications for the study in terms of biosample analysis as different analyses are available for blood and saliva which has implications for the results and interpretation.</p>
Training researchers	<p>All researchers involved in the study were conducting this type of research for the first time. Therefore, we obtained assistance from experienced researchers in this area (from the Murdoch Children's Research Institute (MCRI)) with data collection methods, study protocols, obtaining equipment and consumables, for example.</p> <p>Practical advice and assistance provided by researchers from MCRI was invaluable to the study.</p>	<p>It is essential that all researchers involved in collecting data are appropriately trained and that appropriate data collection protocols and methods are developed and implemented.</p>

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Challenge	Action/response	Outcome/learning
Logistics of conducting school data collection visits	Planning school data collection visits involved allocating adequate time for travel to the schools, including collecting supplies from the laboratory on the way to the school. In addition, some anthropometric measurements took extra time because participants needed to remove items of clothing such as shoes and jumpers. For the anthropometric station, a curtain or sheet was used to create a private area for participants to adjust or remove clothing, which took time to set up.	It is important to allow for extra time for logistics such as setting up of measurement stations. As a result, it is possible that relatively few participants can be measured at each visit and additional visits may need to be arranged.
Use of school facilities for data collection	The physical environment of the study site was different at each school, therefore the researchers had to work with the space provided to them e.g. where to place the measurement stations and equipment.	Contact schools (and visit the school if possible) before the visits to determine which space within the school would be available to the team and other relevant information such as class lesson times. Plan and prepare as much in advance as possible to ensure efficient and smooth data collection on the day of the visits.

**Funding.** This work was supported by an Australian Research Council Linkage Project Grant (LP140100413); an Australian National University Research School of Social Sciences Inter-college grant; and a grant from School of Social Sciences and Psychology at Western Sydney University. [Author name] is supported by an NHMRC Career Development Fellowship (APP1123677).

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