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Prevalence of Racial Discrimination in a Cohort of Aboriginal and Torres Strait Islander Children

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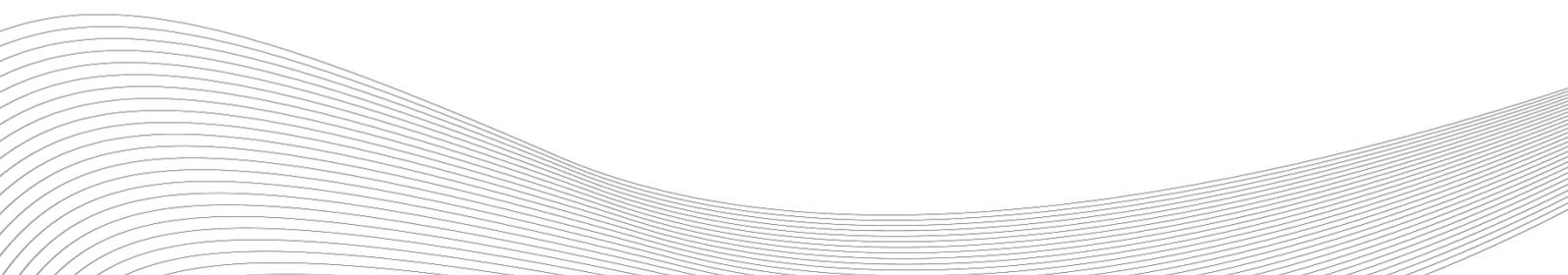
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NON-TECHNICAL SUMMARY

Racism has been shown to impact on the health of minority populations worldwide, acting through both direct experiences of interpersonal racism and unequal access to social resources. This is particularly the case for Indigenous populations internationally, including Aboriginal and Torres Strait Islander populations in Australia.

Currently, most research looking at the relationship between racism and health has been focused on adults, even though children have been found to be more vulnerable to the negative effects of racism. Very few studies have examined the impact of racism on children's health across time, limiting our understanding of how experiences of racism change health outcomes as children age.

This study looked at the frequency of racism experiences over time in a population of Aboriginal and Torres Strait Islander children and checked to see which factors might increase the risk of a child experiencing racism in Australia today. We found that direct and vicarious racism is commonly experienced by Aboriginal and Torres Strait Islander children and that these experiences often occur in the first years of life. Children were more at risk of experiencing racism by age 11 if they lived in remote or more disadvantaged areas and if they spoke an Aboriginal language.



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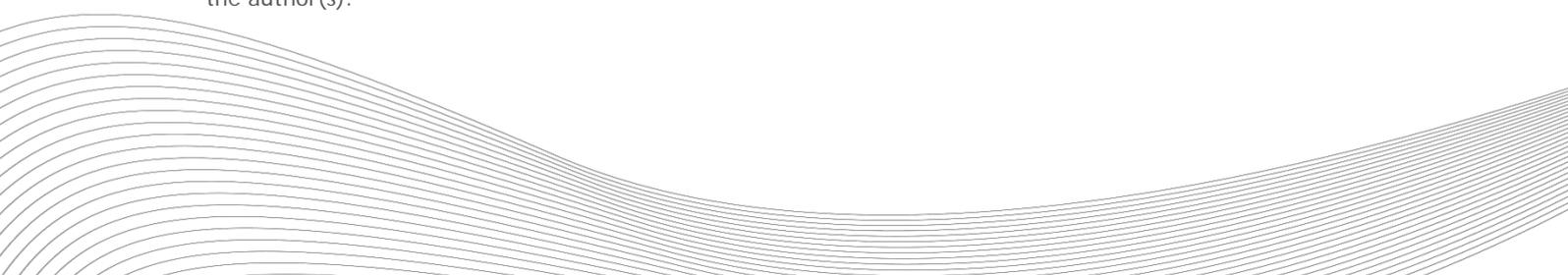
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Matthew Cooper has been a child health researcher at the Telethon Kids Institute for 10 years, completing his PhD in 2017, prior to establishing his position as Manager of the Institute's Biometrics team. Dr Cooper, and his team, are actively involved in research and research support, specialising in data management, manipulation, and analysis, across a broad range of the Institute's research projects. Dr Cooper has a background in both clinical research and epidemiology, and sits on the Scientific Advisory Committee for the Child and Adolescent Health Service's ethics committee. Email: Matt.Cooper@telethonkids.org.au

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ABSTRACT

Background. Racial discrimination is a central social determinant of health in Aboriginal and Torres Strait Islander (hereafter referred to as Aboriginal) populations, and is associated with health inequities between Aboriginal and non-Aboriginal Australians. This study sought to estimate the prevalence of racism in a longitudinal study of Aboriginal children.

Method. This study examined direct and vicarious racism within the Footprints in Time: The Longitudinal Study of Indigenous Children (LSIC) dataset, providing descriptive analysis of direct and vicarious forms of racism exposure, including overall prevalence, accumulation of exposure and age of first exposure, across key socio-demographic factors over time. Participants for this study include 1,759 children from the first 8 waves of LSIC, comprising those aged 6 months to 12 years.

Results. One in five (20.4%) study children had direct experience of racial discrimination by age 11 years, with the majority of these children (73.5%) experiencing first exposure to direct racism by age 7, while vicarious racism was more commonly experienced (44.5% through the primary carer and 50.5% via family members). Children living in areas of high remoteness, in the most disadvantaged regions and children who spoke an Aboriginal language were at increased risk of experiencing direct racism by age 11.

Conclusion. Direct and vicarious racism is commonly experienced by Aboriginal children and exposure often occurs within the first years of life. This study is one of the first studies internationally to characterise the prevalence of both direct and vicarious forms of racism among a cohort of children using longitudinal data.

Keywords: racism; Aboriginal; Indigenous; prevalence; Australia

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Introduction

Racism has been defined as the operation of social inequalities which act to limit or improve access to resources, opportunities, power and capacity according to racial or ethnic categorisations (1-3). Racism acts both directly and indirectly through a range of mechanisms which may occur in negative beliefs about an individual's own racial group, through internalised racism, between individuals, through interpersonal racism, or within the structure of society, through systemic racism (1). Interpersonal racism, and to a lesser extent, internalised and systemic racism, have now all been shown to have a significantly negative impact on an array of health outcomes, albeit with stronger and more consistent effects for mental than physical health (2, 4-10). Racism's significantly negative impact on health contributes to the health disparities typically observed between different ethnic and racial groups (9, 11-16), particularly in Indigenous populations worldwide, including Aboriginal and Torres Strait Islander (hereafter referred to as 'Aboriginal') populations in Australia (17).

Developing an understanding of the prevalence of racial discrimination and the socio-demographic risk factors associated with exposure to racism are important first steps in generating meaningful insights into racial disparities between Aboriginal and non-Aboriginal peoples across Australia. This is particularly the case for children and young people, where the strength of the relationship between racial discrimination and negative health effects is greater in children than adults (4, 18). It is also critical to examine vicarious racism exposure in children as significant associations have been observed between parental or caregiver reported racial discrimination and negative socioemotional and mental health outcomes in children and young people (19). Finally, the timing and duration of exposure both likely play a role in the relationship between racism and health, as persistent exposure to racism potentially leads to the ongoing 'weathering' of bodily systems and hence increased vulnerability to disease over time (20, 21). However, the majority of available studies examining the prevalence of racial discrimination in Aboriginal populations are focused on adults and based on cross-sectional datasets, and studies examining critical periods of racism exposure on child health are predominantly based in the United States. To the best of our knowledge, no studies have yet examined the prevalence of direct or vicarious racism in Aboriginal children over time as they grow and develop.

Life course epidemiology offers a range of theoretical models to facilitate an examination of the causal and/or temporal pathways through which exposures influence health and wellbeing across lifetimes and inter-generationally (22). These models can inform the development of exposure variables by providing a conceptual framework within which the role of factors including early exposure, age of first exposure and accumulated exposure may be examined. Research incorporating each of these exposure variables into a longitudinal examination of the duration and timing of exposure to racial discrimination during childhood is generally limited, particularly for Aboriginal children. A detailed examination of racism prevalence rates in Aboriginal children over time using exposure variables informed by life course epidemiology will enhance our understanding of Aboriginal children's experience of racial discrimination, laying the foundation for further examinations of how racism interacts longitudinally with the health and wellbeing of this at-risk population group.

Based on currently available prevalence estimates of direct and vicarious interpersonal racism in Aboriginal populations aged below 18 years (23-27), we anticipate that a substantial proportion of Aboriginal children will be exposed to direct racism, with slightly higher rates seen for vicarious racism. It is expected that reports of direct racism will increase with age based on previous research undertaken within the Footprints in Time: Longitudinal Study of Indigenous Children (LSIC) dataset used in this analysis (23) and due to children's ability to increasingly conceive of and recognise racially discriminatory behaviour as they age (28). We also expect a range of socio-demographic factors to influence risk for exposure to both direct and vicarious racism, including geographic, socio-economic and cultural factors.

Socio-economic status (SES) and geography have both been found to be consistently associated with racial discrimination in Aboriginal child populations (23, 24, 26, 27). Low SES has been found to be associated with direct and vicarious racism (23, 26, 27), while mixed findings have been reported for the association between racism exposure and remoteness (23, 24). A study based on the Western Australian Aboriginal Child Health Survey (WAACHS) found that direct racism was reported less frequently in areas of extreme remoteness compared to non-remote areas, while a study based on the LSIC dataset found that Aboriginal children in regional and remote areas were more likely to experience direct and

vicarious racism than those in non-remote areas (23, 24). Based on these findings, we anticipate that children in regional and remote areas and those living in low SES households will be at increased risk of racism exposure.

Strong cultural identity has been found to be associated with increased incidence of racism in studies focused on adult Aboriginal populations (29). As a strong sense of cultural identity has been associated with more perceptions of racial discrimination only in non-remote areas, it may be that this association is influenced by the heightened racial tensions and increased challenge of living 'between cultures' experienced in metropolitan areas (30). Currently only one study has examined the association between cultural identity and racism in those aged under 18 years, finding no association in a population of Aboriginal young people aged 12-26 years (26). However, this association has not yet been examined during early childhood. Based on findings from adult studies, we anticipate that children speaking an Aboriginal language will be at increased risk of direct exposure to racism.

A closer examination of the prevalence of direct and vicarious racism in Aboriginal children will provide valuable evidence which can begin to inform policy and practice responses to this critical health determinant. The longitudinal nature of the LSIC dataset offers a valuable opportunity to identify the risk factors associated with racism exposure in a national cohort of Aboriginal children and to understand how the prevalence of racism changes as these children age.

Methods

LSIC is a national longitudinal survey of Aboriginal and Torres Strait Islander children designed to follow the development of these children across a range of domains and to capture the socioeconomic and cultural background of their families. The survey has been described in great detail elsewhere (31), however in brief, LSIC used a multi-stage clustered sampling method across 11 sites to recruit a non-representative national sample of Aboriginal children into two cohorts defined by age. LSIC aimed to recruit 5-10% of the total Australian population of Aboriginal children aged 0.5-2 years for the younger cohort and 3.5-5 years for the older cohort at baseline (2008), recruiting a total of 1,671 children at that time point and an additional 88 children at wave 2. The survey conducts annual face-to-face

interviews with the study child and their primary caregiver. To date, data for 10 waves have been collected with data from 8 waves currently available for analysis.

Participants

Participants for this study include children from the first 8 waves of LSIC, comprising those aged 6 months to 12 years. The sample size over the first 8 waves included up to 1,759 respondents due to participant flow in and out of the full sample over the course of LSIC, with 1,255 (75% retention) remaining by wave 8. Of the full sample, 1,010 were represented in the younger cohort and 749 represented in the older cohort. At wave 1 the mean age was 2.4 years in the full sample (SD = 1.6; age range 0-6 years), 1.1 years in the younger cohort (SD = 0.5; age range 0-2 years) and 4.1 years in the older cohort (SD = 0.5; age range 3-6 years). By wave 8 the mean age was 9.3 years in the full sample (SD = 1.5; age range 7-12 years), 8.1 years in the younger cohort (SD = 0.5; age range 7-9 years) and 11.1 years in the older cohort (SD = 0.5; age range 10-12 years). There were 887 (50.4%) males and 872 (49.6%) females in the full sample. Overall, 1,534 (87.2%) study children were Aboriginal, 117 (6.7%) were Torres Strait Islander and 108 (6.1%) were both Aboriginal and Torres Strait Islander.

Measures

Demographic variables

Each study child's primary carer reported the study child's age and gender at each wave. Geographic characteristics in LSIC are captured via the Level of Relative Isolation (LORI) measure, an index for remoteness levels within Australia developed based on an extension of the Accessibility/Remoteness Index of Australia. The extended measure, ARIA++, has an 18-point remoteness scale based on the relative distance of localities from population centres of varying size. LORI uses five categories of isolation based on the ARIA++ scores: none (e.g. metropolitan areas), low, moderate, high and extreme (e.g. isolated remote communities). Within LSIC, respondents in the 'high' and 'extreme' category have been collapsed into one category for 'high/extreme isolation'.

Socioeconomic status

The measures of socioeconomic status used in this analysis include the Index of Relative Indigenous Socioeconomic Outcomes (IRISEO), the highest level of education completed by

the primary carer and financial difficulty reported by the primary carer. IRISEO is an area-based composite ranked scale that has been derived using a range of socio-economic outcomes from regions across Australia, based on the employment, education, income and housing characteristics of Aboriginal persons only (32). IRISEO data from wave 1 of LSIC has been categorised into quintiles for this analysis.

LSIC primary carers were asked to indicate the highest qualification they had completed. This measure was coded into a four-item variable in order to capture university-level education (bachelor, graduate and post-graduate degree), certificate or post-school qualifications (Certificate I-IV, diploma and advanced diploma), completion of Year 11 to Year 12 or equivalent, and lower levels of completion (Year 10, those who never attended school or were still at school).

Primary carers were also asked to provide a subjective rating of their family financial situation, using a 5-part question. This measure was coded into a binary variable for analysis, with families considered to be in financial difficulty if they answered, 'We run out of money before payday', 'We are spending more money than we get', 'We have just enough money to get us through to the next pay day' or 'There's some money left over each week but we just spend it'; a response of 'We can save a bit every now and then' or 'We can save a lot' were coded as not being in financial difficulty. Responses taken at wave 1 are included in this analysis.

Speaking an Aboriginal language

The LSIC dataset contains a range of variables tied to Aboriginal cultural identity and attachment. For simplicity, a variable asking primary carers whether the study child speaks an Aboriginal language ('yes', 'no') has been used as a proxy measure of cultural attachment in this analysis. However, it is important to acknowledge that culture is a complex construct which comprises many elements, particularly across heterogeneous Aboriginal populations, and analysis utilising any single construct in isolation is necessarily limited. Notwithstanding, language has been chosen here as it is considered one of four central elements of cultural attachment, alongside cultural identification, cultural participation and traditional activities, and has been shown to have strong positive effects on happiness and mental health in adult Aboriginal populations (30).

Racial discrimination

LSIC includes three measures of racial discrimination, herein referred to as direct racism, vicarious racism via the primary carer and vicarious racism via the family. Each of these measures were asked at different waves throughout LSIC and the timing of questions related to direct racism differed between study cohorts. Table 1 below describes the timing of collection of each racial discrimination measure over the first 8 waves.

Table 1: Racial discrimination measures in LSIC by wave and cohort¹

		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	Wave 8
Direct racism	Birth cohort								
	Child cohort								
Vicarious racism (primary carer)	Birth cohort								
	Child cohort								
Vicarious racism (family)	Birth cohort								
	Child cohort								

Direct racism

Throughout waves 2-7 of LSIC, direct racism was reported by the primary carer in response to a question on whether the study child had been bullied or treated unfairly at preschool or school because they were Aboriginal. Carers were able to indicate that the study child was bullied by other children, treated unfairly by adults or both. This measure was coded as a binary variable for analysis ('Yes, bullied [kids being mean to him/her]', 'Yes, treated unfairly [adult being mean to him/her]' or 'Yes, both bullied and treated unfairly' compared with 'No'). In wave 8 the structure of the question was changed slightly so that the primary carer was first asked whether the study child had been bullied or treated unfairly at school and if they responded positively to this question (study child was bullied, treated unfairly or both), they were then prompted to indicate whether this was because the study child is Aboriginal or Torres Strait Islander. Carers could indicate that the bullying or unfair treatment was 'always for this reason', 'sometimes for this reason' or not for this reason. This measure was

¹ Shaded boxes in Table 1 denote data collection points across waves separately for each cohort.

then coded as a binary variable for analysis ('Yes, always for this reason' or 'Sometimes for this reason' compared with 'No'). Although the structure of this question differs from that asked in previous waves, the content remains consistent. The wording of both questions used for this measure was not time limited and may be used to indicate that the study child was ever exposed to racism at school or preschool.

Accumulation of racism exposure

Using the binary variables created for the measures of direct racism, vicarious racism via the primary carer and vicarious racism via the family at each study wave, derived variables were generated to capture the number of exposures recorded for each type of racism for each study child. Both vicarious racism via the primary carer and family were asked in 3 waves within LSIC, while direct racism was asked in 4 waves (Table 1). The waves in which the direct racism measure was asked differed by cohort, requiring an accumulation variable to be derived in each cohort separately before creating a final derived variable from their combination.

The sample for this measure included only cases where a response to the direct racism measure was recorded in all waves in which it was asked. There were no respondents reporting exposure to direct racism in all 4 waves, likely due to the change in question structure during wave 8. As a result, the accumulation variable for direct racism excluded the wave 8 measure, limiting responses to a maximum of three exposures at three time points. Due to the small number of children with three exposures, children with two and three exposures were combined into the same category.

Age of first exposure

Mean age at each wave for the separate cohorts was used to assign an age for children during each wave in which each racism measure was asked. Exposure to racism was recorded for children whose primary carer provided a positive response to racism measures at any wave exclusive of those who had indicated a positive response in a previous wave. As not all children participated in all waves of LSIC, this allowed children who had either not been exposed to racism in the previous wave, did not respond to the measure in the previous wave or who did not participate in LSIC during the previous wave to still be included in analysis. Proportions of children with exposure at each successive age were then

totalled, allowing cumulative exposure by mean age 11 to be examined. Proportions represent the number of children with exposure out of the total number of primary carers asked the question at each wave.

This derived variable recorded only first exposures, excluding subsequent exposures for children with more than one exposure. This variable also provided the total number of children who did not report exposure during any recorded response to this question. Although children who were recorded as a missing response to this question in some waves may have reported direct racism had there been a response, this variable provides figures for those reporting no exposure who responded to the question on direct racism at least once.

Due to the accelerated cross-sequential design of LSIC and the patterning of each racism measure, there is little cross-over in age between cohorts for each measure. Where cross-over has occurred, proportions have been totalled across cohorts. For direct racism, exposure was recorded for mean ages 4, 5, 7, 8, 9 and 11 years. Vicarious racism via the primary carer was recorded for exposure at ages 1, 4, 7, 8 and 11 years. Vicarious racism via the family was recorded for exposure at ages 3, 5, 6, 8 and 11 years. This method only accounts for the age at which each racism measure was included in LSIC and cannot account for earlier exposure prior to LSIC.

Vicarious racism via the primary carer

Primary carers were asked to indicate whether they had been treated unfairly or discriminated against because they were Aboriginal or Torres Strait Islander at three time points during the first 8 waves of LSIC (Table 1). Primary carers were able to indicate whether they had been unfairly treated or discriminated against a 'little bit', 'fair bit', 'lots of times' or 'not really'. This measure was then coded as a binary variable (ever ['little bit', 'fair bit' or 'lots of times'] compared with 'not really'). This measure, like the direct racism measure, does not specify a time limited period for exposure to racial discrimination and each occasion must be treated as a record of ever experiencing racial discrimination at any time in the past.

Vicarious racism via the family

Primary carers were asked to indicate how often their family experienced racism, discrimination or prejudice at three time points over the 8 waves of LSIC (Table 1). Responses were rated on a five-point scale in terms of frequency, including; 'every day', 'every week', 'sometimes', 'only occasionally' and 'never or hardly ever'. This measure was coded as a binary variable comparing 'every day', 'every week', 'sometimes' or 'only occasionally' with 'never or hardly ever'.

Data analysis

Data from the first 8 waves of LSIC were used in this study, with a long dataset created merging data from 8 files (all variables included). Subset datasets were then created for each cohort, allowing separate computation of variables for the birth and child cohorts.

The prevalence of racial discrimination was examined across waves of the study by calculating the proportion of children with exposure over those without exposure in each age group. Bivariate associations were examined between racial discrimination variables and sociodemographic factors using the Pearson chi-squared test.

SAS version 9.4 software (SAS Institute Inc., Cary, NC, USA, 2002-12) was used in all analysis.

Missing data

Overall, small proportions of missing values were found for vicarious racism via the primary carer (0.7-3.5%) and vicarious racism via the family (0.8-2.5%) variables across cohorts and waves within LSIC (Tables 3 & 4). Prior to wave 8, the proportion of missing values for direct racism were also relatively small, ranging from 1.8-11.0% (Table 2). However, a higher proportion of missing values (72.6-75.3%) was seen for the direct racism variable in wave 8 as that measure was nested within a pre-requisite question on having experienced any school bullying for the first time during that wave.

Large proportions of missing values were also found when developing the derived variables for accumulation of exposure and age of first exposure. Missing values were high for the accumulation of exposure variables due to applying a conservative algorithm which required all data points to be completed by respondents (Tables 5 & 6). This variable only included children who had a response to each racism measure in every wave in which they were

asked. Of the 1,759 children within LSIC, direct racism had complete data points for 33.8% of children (Table 5), while 43.4% and 52.8% of children had complete data points for vicarious racism via the primary carer and vicarious racism via the family, respectively (Table 6). The derived racial discrimination variables for age of first exposure included all children who responded to each racism measure at any wave during LSIC while excluding those who did not respond to racism measures in any waves in which they were asked. In total, 228 (13.0%) of children were missing from the direct racism age of first exposure variable, 225 (14.5%) were missing from the variable for vicarious exposure via the primary carer and 166 (9.4%) were missing from the vicarious exposure via the family variable.

Comparisons between key sociodemographic variables across children with missing and non-missing data were undertaken for each of the racism measures using χ^2 tests (Appendix 1 and 2). A brief discussion of significant and negligible differences between these groups follows. Overall, given the small to moderate relationship seen between some key sociodemographic factors and missing values across the racism variables, data are likely to be missing at random.

Negligible missingness

No major differences in sociodemographic variables were found between children with missing and non-missing data for the accumulation variable for vicarious racism exposure via the primary carer, although the level of missingness was higher within the child cohort compared to the birth cohort (44.7% compared to 39.8%). No notable differences were seen in the majority of sociodemographic factors between children with missing and non-missing data for age of first exposure to vicarious racism via the family, although greater proportions of children with missing data for this variable were living in both moderately remote (30.6% compared to 13.6%) and the most disadvantaged areas (19.6% compared to 12.3%).

Minimal differences were seen for children with missing values for the age of first exposure to direct racism variable across gender, Indigenous status and socioeconomic variables (<7% difference), although children with missing values were more likely to be younger, as a larger proportion of these children were in the birth cohort (68.4% compared to 55.8%).

Negligible differences were also seen in the distributions of gender, cohort, Indigenous status and financial difficulty between those with and without data for the accumulation of vicarious racism via the family variable and while older children were slightly more likely to

have missing values for this variable, the mean age of children with missing and non-missing data differed minimally (missing: 9.5 years; non-missing: 9.3 years). No major differences between children with missing and non-missing values were found for gender, cohort and age in the variable for age of first exposure to vicarious racism via the primary carer. Finally, minimal differences between those with and without data were seen in gender and Indigenous status for the accumulation of direct racism variable.

Significant missingness

Some notable differences were found between children with missing and non-missing data for the accumulation of exposure variables for direct racism and vicarious racism via the family. Specifically, greater proportions of children with missing data in these variables were living in highly remote (direct: 10.5% compared to 7.3%; vicarious family: 12.7% compared to 6.5%) and the most disadvantaged (direct: 15.3% compared to 8.5%; vicarious family: 17.1% compared to 9.4%) areas. Additionally, children with missing data from the direct racism accumulation variable were overrepresented in the birth cohort (61.4% compared to 49.7%) and a greater proportion of their primary carers reported financial difficulty (68.2% compared to 57.6%). Children with missing data from the variable for age of first exposure to vicarious racism via the primary carer were overrepresented in non-remote (46.0% compared to 22.7%) and the most advantaged (25.2% compared to 12.4%) areas, and a greater proportion of these children were living with a primary carer who reported completing university (8.8% compared to 5.3%). Smaller proportions of children with missing data for the age of first exposure to direct racism variable were living in metropolitan areas (16.4% compared to 27.5%).

Ethics

Ethics approval for the LSIC was provided by the Australian Commonwealth Department of Health Departmental Ethics Committee and from state and territory Ethics Committees. The current analysis was approved by the Western Australian Aboriginal Health Ethics Committee and the University of Western Australia Human Research Ethics Committee.

Results

The prevalence rates of each form of racism exposure reported at each wave for both cohorts are presented in Tables 2-4. Data has been subset by cohort with mean age and gender presented for those reporting each racism exposure at each wave.

Table 2: Prevalence of direct racism across waves and cohorts

Birth cohort							
		Prevalence			Gender distribution of those who experienced racism		
Wave (age range)	Mean age (SD)	N	n	% (95% CI)	Female n (%)	Male n (%)	Missing ² n (%)
4 (3-5 years)	4.1 (0.3)	435	17	3.9 (2.3, 6.2)	8 (47.1)	9 (52.9)	41 (8.6)
5 (4-6 years)	5.2 (0.4)	622	37	6.0 (4.2, 8.1)	23 (62.2)	14 (37.8)	29 (4.5)
7 (6-8 years)	7.2 (0.4)	719	98	13.6 (11.2, 16.4)	53 (54.1)	45 (45.9)	13 (1.8)
8 (7-9 years)	8.1 (0.4)	207	31	15.0 (10.4, 20.6)	13 (41.9)	18 (58.1)	547 (72.6)
Child cohort							
		Prevalence			Gender distribution of those who experienced racism		
Wave (age range)	Mean age (SD)	N	n	% (95% CI)	Female n (%)	Male n (%)	Missing n (%)
2 (4-7 years)	5.2 (0.5)	504	53	10.5 (8.0, 13.5)	28 (52.8)	25 (47.2)	62 (11.0)
4 (6-9 years)	7.1 (0.5)	515	46	8.9 (6.6, 11.7)	19 (41.3)	27 (58.7)	18 (3.5)
6 (8-10 years)	9.2 (0.5)	490	79	16.1 (13.0, 19.7)	43 (54.4)	36 (45.6)	16 (3.2)
8 (10-12 years)	11.1 (0.7)	125	22	17.6 (11.4, 25.4)	10 (45.5)	12 (54.6)	381 (75.3)

As expected, rates of racism exposure generally increased with age and in the oldest children (aged 10-12 years) close to one in five children had been exposed to racial discrimination. In the birth cohort, rates of exposure steadily increased with age from wave 4 to wave 8. Although the trajectory was less uniform, proportions also increased with age

² Missing data as a proportion of the total sample of study children at school in each wave and cohort.

in the child cohort. Slight differences were seen in the prevalence of direct racism exposure between the birth and child cohorts. The proportion of those at mean age 5 years in the child cohort reporting direct racism exposure was approximately two-fold higher than those of the same age in the birth cohort (10.5% compared with 6.0%), while a larger proportion of those with a mean age of 7 years in the birth cohort reported direct racism exposure compared to those aged 7 years in the child cohort (13.6% compared with 8.9%).

Table 3: Prevalence of vicarious racism (primary carer) across waves and cohorts

Birth cohort							
		Prevalence			Gender distribution of those who experienced racism		
Wave (age range)	Mean age (SD)	N	n	% (95% CI)	Female n (%)	Male n (%)	Missing ³ n (%)
1 (0-2 years)	1.1 (0.5)	797	238	29.9 (26.7, 33.2)	126 (52.9)	112 (47.1)	23 (2.8)
4 (3-5 years)	4.1 (0.4)	613	148	24.1 (20.8, 27.7)	72 (48.7)	76 (51.4)	4 (0.7)
8 (7-9 years)	8.1 (0.5)	617	135	21.9 (18.7, 25.4)	73 (54.1)	62 (45.9)	9 (1.4)
Child cohort							
		Prevalence			Gender distribution of those who experienced racism		
Wave (age range)	Mean age (SD)	N	n	% (95% CI)	Female n (%)	Male n (%)	Missing n (%)
1 (3-6 years)	4.1 (0.5)	587	193	32.9 (29.1, 36.8)	102 (52.8)	91 (47.2)	21 (3.5)
4 (6-9 years)	7.1 (0.4)	446	119	26.7 (22.6, 31.0)	53 (44.5)	66 (55.5)	6 (1.3)
8 (10-12 years)	11.2 (0.5)	404	123	30.5 (26.0, 35.2)	66 (53.7)	57 (46.3)	7 (1.7)

Overall, rates in the prevalence of vicarious racism via the primary carer were considerably higher than those seen for direct racism experienced by the study child in LSIC. Prevalence rates were slightly lower in the birth cohort overall when compared to the child cohort. The gender balance of those exposed to this form of racial discrimination remained relatively steady over time for both cohorts.

³ Missing data as a proportion of the total sample of study children in each wave and cohort.

Table 4: Prevalence of vicarious racism (family) across waves and cohorts

Birth cohort							
		Prevalence			Gender distribution of those who experienced racism		
Wave (age range)	Mean age (SD)	N	n	% (95% CI)	Female n (%)	Male n (%)	Missing n (%)
3 (2-4 years)	3.1 (0.4)	82 1	27 1	33.0 (29.8, 36.3)	143 (52.8)	128 (47.2)	13 (1.6)
5 (4-6 years)	5.1 (0.4)	72 0	24 4	33.9 (30.4, 37.5)	127 (52.0)	117 (48.0)	15 (2.0)
8 (7-9 years)	8.1 (0.5)	74 7	22 4	30.0 (26.7, 33.4)	123 (54.9)	101 (45.1)	12 (1.6)
Child cohort							
		Prevalence			Gender distribution of those who experienced racism		
Wave (age range)	Mean age (SD)	N	n	% (95% CI)	Female n (%)	Male n (%)	Missing n (%)
3 (5-8 years)	6.1 (0.5)	58 0	17 8	30.7 (27.0, 34.6)	84 (47.2)	94 (52.8)	15 (2.5)
5 (7-10 years)	8.1 (0.5)	52 8	18 1	34.3 (30.2, 38.5)	79 (43.7)	102 (56.4)	4 (0.8)
8 (10-12 years)	11.1 (0.5)	49 7	16 7	33.6 (29.5, 37.9)	83 (49.7)	84 (50.3)	9 (1.8)

Prevalence rates for vicarious racism via the family were consistent across the birth and child cohorts, across waves and between those of comparative age. Rates differed slightly from those of vicarious racism via the primary carer, however it is likely that this simply reflected differences in the structure and content of each question. Although both measures captured frequency, the family racism measure included more explicit timeframes (e.g. every week, every day) compared to the primary carer measure (e.g. fair bit, lots of times). Additionally, the family racism measure was reported by primary carers who may not have been aware of all experiences of racial discrimination in other family members.

A relatively even gender balance was seen across waves and cohorts for those experiencing vicarious racism via the family and no significant differences were seen between genders for either cohort at any wave.

Accumulation of racism exposure

Accumulation of exposure to each racism measure has been presented in Tables 5 and 6.

Table 5: Accumulation of exposure to direct racism measure by cohort

Direct racism								
	N	No exposure		1 exposure		2+ exposures		Missing ⁴
		n	% (95% CI)	n	% (95% CI)	n	% (95% CI)	n (%)
Full sample	594	463	78.0 (74.4, 81.2)	105	17.7 (14.7, 21.0)	26	4.4 (2.9, 6.4)	1,165 (66.2)
Birth cohort	295	239	81.0 (76.1, 85.3)	59	15.6 (11.5, 20.3)	10	3.4 (1.6, 6.2)	715 (70.8)
Child cohort	299	224	74.9 (69.6, 79.7)	46	19.7 (15.4, 24.7)	16	5.4 (3.1, 8.5)	450 (60.1)

The majority of children (78.0%) did not have any recorded exposure to direct racism at school, while close to one in five (17.7%) reported only one exposure during the three possible time points. Few children reported racism exposure at two or more time points, with only 26 children (4.4%) recording this level of exposure across the full sample.

⁴ Missing data as a proportion of the total sample of study children and of those in each cohort.

Table 6: Accumulation of exposure to vicarious racism measures by cohort

Vicarious racism (primary carer)										
	N	No exposure		1 exposure		2 exposures		3 exposures		Missing
		n	% (95% CI)	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)	n (%)
Full sample	764	388	50.8 (47.2, 54.4)	202	26.4 (23.3, 29.7)	120	15.7 (13.2, 18.5)	54	7.1 (5.4, 9.1)	995 (56.6)
Birth cohort	460	247	53.7 (49.0, 58.3)	121	26.3 (22.3, 30.6)	69	15.0 (11.9, 18.6)	23	5.0 (3.2, 7.4)	550 (54.5)
Child cohort	304	141	46.4 (40.7, 52.2)	81	26.6 (21.8, 32.0)	51	16.8 (12.8, 21.5)	31	10.2 (7.0, 14.2)	445 (59.4)
Vicarious racism (family)										
	N	No exposure		1 exposure		2 exposures		3 exposures		Missing
		n	% (95% CI)	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)	n (%)
Full sample	928	410	44.2 (41.0, 47.4)	244	26.3 (23.5, 29.3)	159	17.1 (14.8, 19.7)	115	12.4 (10.3, 14.7)	831 (47.2)
Birth cohort	549	242	44.1 (39.9, 48.4)	148	27.0 (23.3, 30.9)	94	17.1 (14.1, 20.5)	65	11.8 (9.3, 14.8)	461 (45.6)
Child cohort	379	168	44.3 (39.3, 49.5)	96	25.3 (21.0, 30.0)	65	17.2 (13.5, 21.3)	50	13.2 (10.0, 17.0)	370 (49.4)

Approximately half of those with complete responses to the measure of vicarious racism via the primary carer reported no exposure across all relevant waves in the full sample, with a slightly higher proportion of those in the birth cohort reporting no exposure compared to the child cohort (50.8% compared to 44.2%). The proportion of those reporting exposure decreased successively with each additional exposure level. Rates were very similar between the full sample, birth and child cohorts for one exposure (26.4%, 26.3% and 26.6% respectively) and two exposures (15.7%, 15.0% and 16.8% respectively) to vicarious racism via the primary carer. Twice the proportion of those in the child cohort reported three exposures compared to the birth cohort (10.2% compared with 5.0%).

The majority of those who responded at all three time points to the measure of vicarious racism via the family indicated some level of exposure to this form of racism. Overall, while

the proportion of children with one or two exposures to vicarious racism via the family was similar to that found for vicarious racism via the primary carer, the proportion reporting exposure at three time points is somewhat higher.

Accumulation of exposure by sociodemographic factors

Overall, financial difficulty and remoteness were both found to be significantly associated with direct racism. However, all significant associations were found with single exposure and not accumulated exposure.

Remoteness was found to be significantly related to single exposure to direct racism ($\chi^2=9.88$; $df=3$; $p=0.0196$). However, pairwise comparisons of remoteness levels only revealed a significant difference between those living in non-remote areas and areas of high remoteness ($p=0.0093$), with no significant difference found between those living in non-remote areas and areas of low ($p=0.5985$) or moderate ($p=0.8478$) remoteness. Children living in areas of high remoteness had 2.1 (95% CI: 1.2 – 3.5) times the risk of single exposure to direct racism compared to those living in non-remote areas.

Financial difficulty was also found to be significantly associated with single exposure to direct racism ($\chi^2=7.37$; $df=2$; p -value 0.0251). Children whose primary carer reported financial difficulty had 1.7 (95% CI: 1.1 – 2.5) times the risk of single exposure to direct racism compared to those whose primary carer reported no financial difficulty.

Age of first exposure

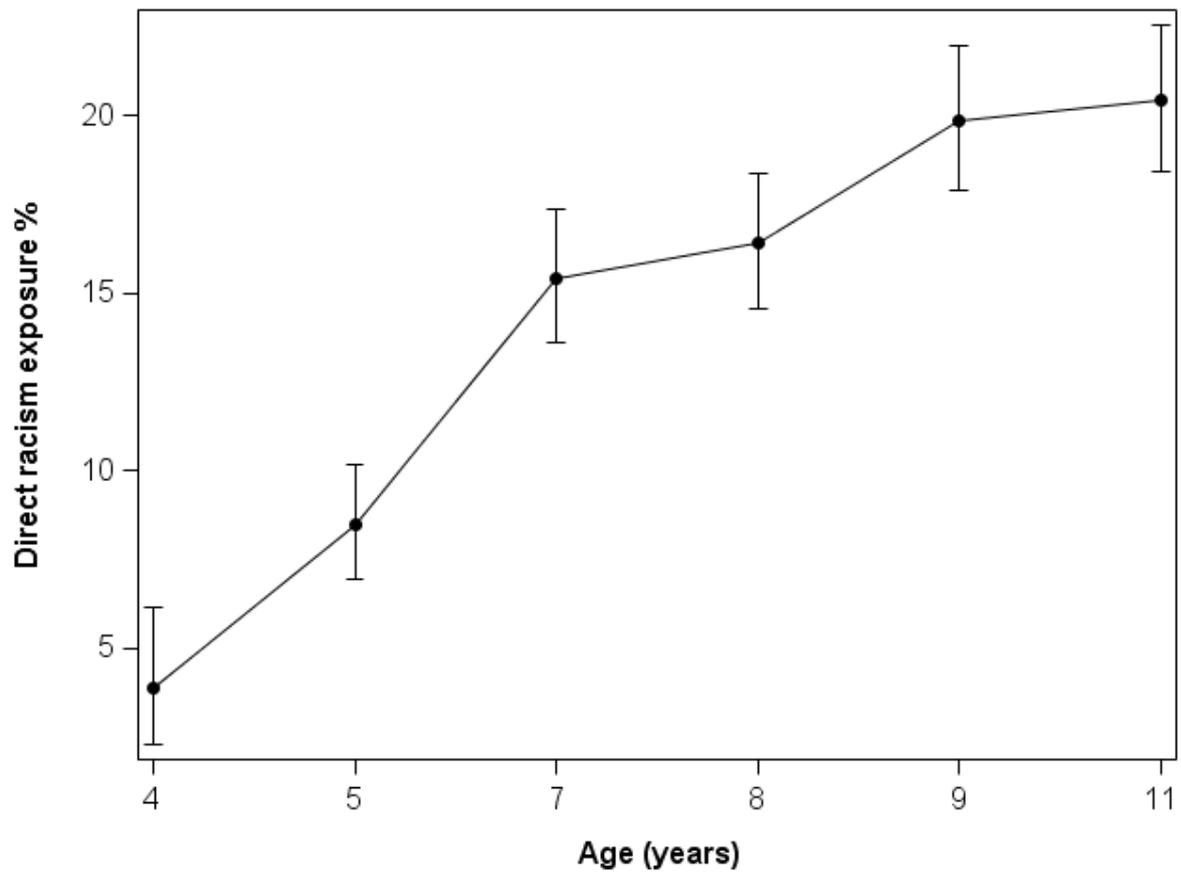
The count and proportion of children with first exposure to each racism measure at each mean age is presented in Tables 7-9 below. The count data at each age is then presented as a proportion of the total number of children who responded to each racism measure during any wave of LSIC for the full sample and each cohort. The proportions in the full sample have been summed at each successive age after the youngest (e.g. mean age 4 years for direct racism) and cumulative totals at each age are presented in Figures 1-3.

Table 7: Age of first exposure to direct racism by cohort

	Age 4			Age 5			Age 7		
	N	n	%	N	n	%	N	n	%
Full sample	435	17	3.9	1,126	87	7.7	1,234	126	10.2
Birth cohort	435	17	3.9	622	34	5.5	719	87	12.1
Child cohort				504	53	10.5	515	39	7.6
	Age 8			Age 9			Age 11		
	N	n	%	N	n	%	N	n	%
Full sample	207	16	7.7	490	58	11.8	125	9	7.2
Birth cohort	207	16	7.7						
Child cohort				490	58	11.8	125	9	7.2

In the full sample, the largest proportions of children with first exposure to direct racism reported this at mean age 7 (10.2%) and age 9 (11.8%) while relatively few children had their first exposure at age 4 (3.9%). Slightly different patterns were seen between the birth and child cohorts as higher proportions of those in the child cohort had their first exposure to direct racism at mean age 5 (10.5% compared to 5.5% in the birth cohort) while higher proportions of those in the birth cohort had their first exposure at mean age 7 (12.1% compared to 7.6% in the child cohort).

Figure 1: Full sample: age of first exposure to direct racism, cumulatively totalled



Almost 4% of study children were exposed to direct racism at age 4 years, increasing to one in five by age 11 (20.4%; 95% CI: 18.5-22.6). By age 5, the age at which the majority of children in Australia have begun primary education, 8.5% (95% CI: 7.0-10.2) of study children in LSIC had been exposed to direct racism at school or preschool from either adults or peers. Most children with recorded exposures to direct racism had their first exposure by age 7, with only an additional 5.0% of children experiencing their first exposure between ages 7-11 years.

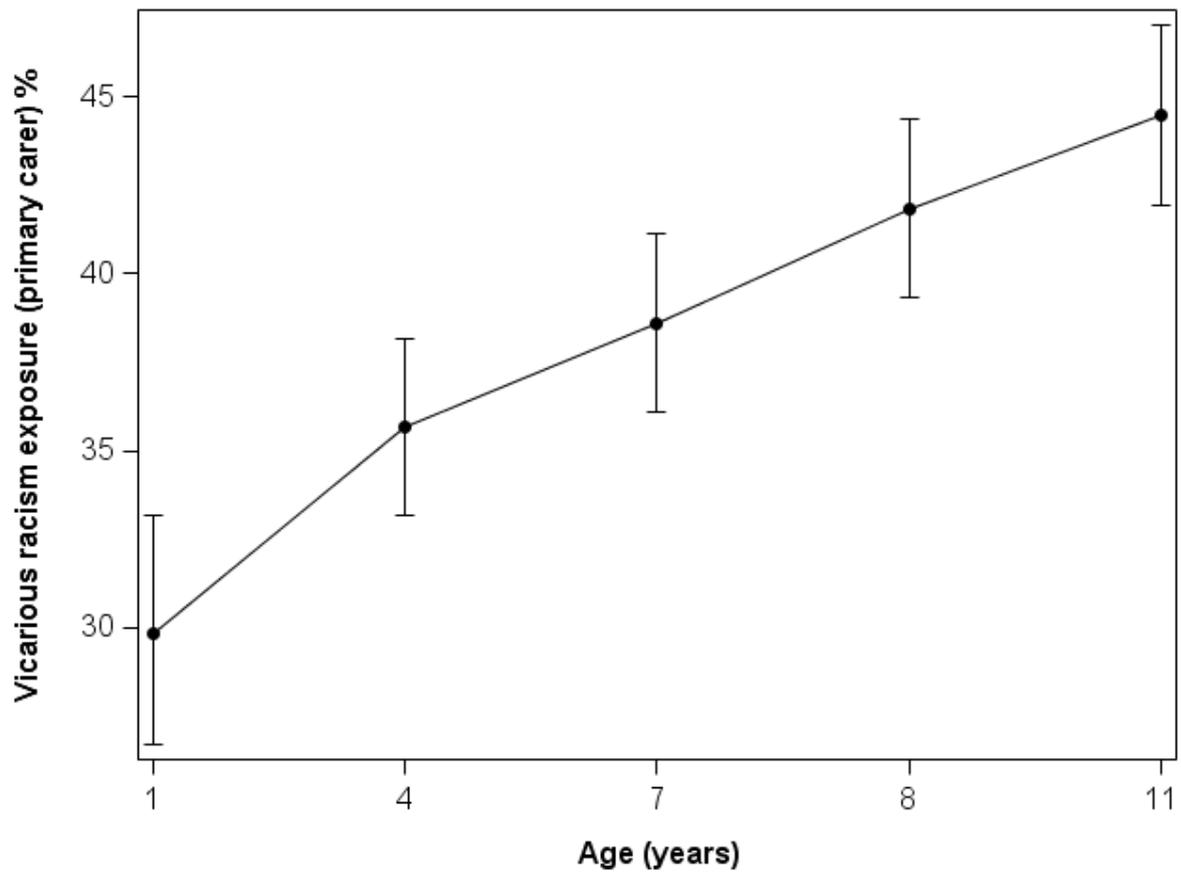
Table 8: Age of first exposure to vicarious racism (primary carer) by cohort

	Age 1			Age 4			Age 7		
	N	n	%	N	n	%	N	n	%
Full sample	797	238	29.9	1,200	275	22.9	446	60	13.5
Birth cohort	797	238	29.9	613	82	13.4			
Child cohort				587	193	32.9	446	60	13.5
	Age 8						Age 11		
	N	n	%				N	n	%
Full sample	617	53	8.6				404	43	10.6
Birth cohort	617	53	8.6						
Child cohort							404	43	10.6

In the full sample, the largest proportions of primary carers who reported experiencing racial discrimination reported this at the first possible wave (wave 1) when the birth cohort was aged mean 1 year and the child cohort were aged mean 4 years. A smaller proportion of primary carers indicated experiencing racism for the first time in LSIC at wave 4 (birth cohort aged 4 years, child cohort aged 7 years) and a yet smaller proportion indicated first experiencing racism at wave 8 (birth cohort aged 8 years, child cohort aged 11 years).

As this variable was not time limited it is possible that experiences of racial discrimination occurred prior to wave 1, when the study child was at an earlier age or during gestation. Overall, proportions of children exposed to vicarious racism via the primary carer were similar across both cohorts.

Figure 2: Full sample: age of first exposure to vicarious racism (primary carer), cumulatively totalled



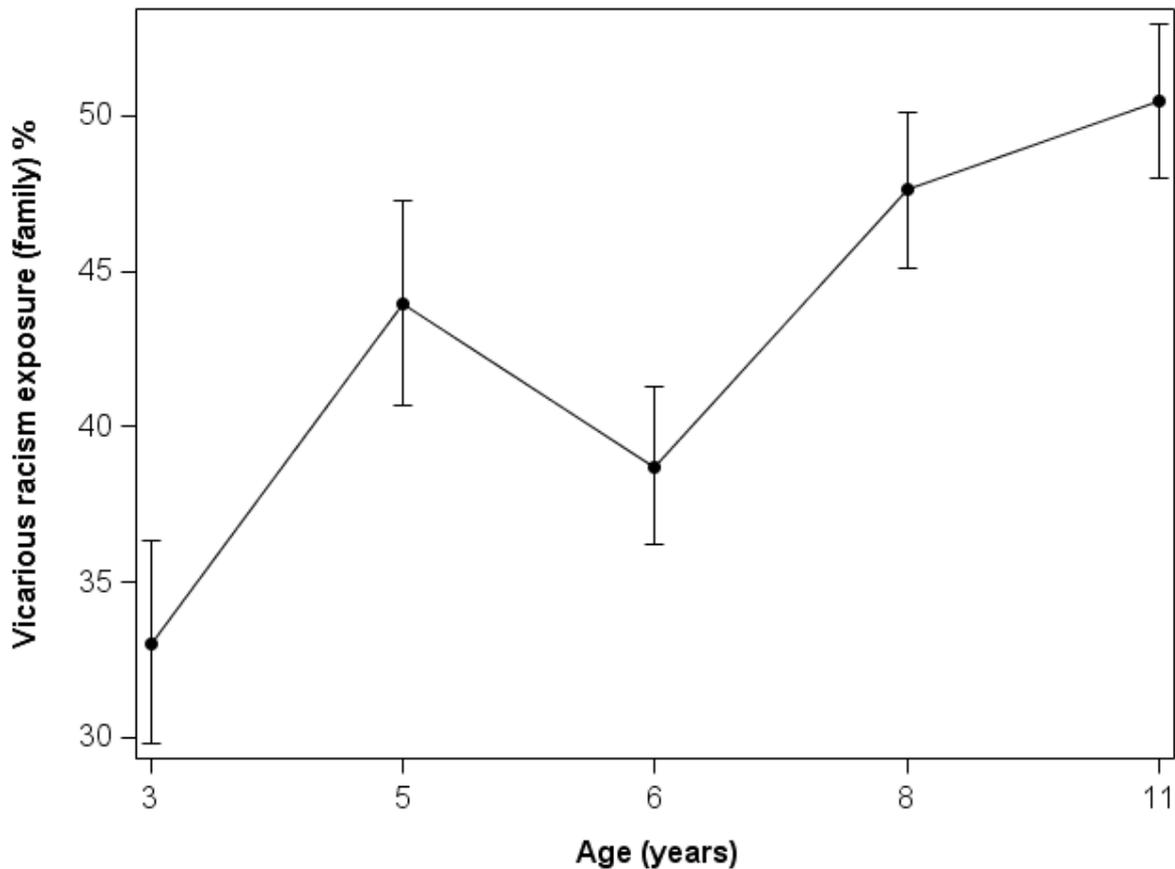
As seen in Figure 2, just over four in ten (44.5%; 95% CI: 42.0-47.0) children had been exposed to vicarious racism through their primary carer at some point by age 11 years. The largest proportion of children who were exposed had been exposed by ages 1-4 (35.7%; 95% CI: 33.2-38.2) with only a further 8.8% of those with any exposure to vicarious racism via the primary carer reporting a first occurrence between ages 4-11.

Table 9: Age of first exposure to vicarious racism (family) by cohort

	Age 3			Age 5			Age 6		
	N	n	%	N	n	%	N	n	%
Full sample	821	271	33.0	720	121	16.8	580	178	30.7
Birth cohort	821	271	33.0	720	121	16.8			
Child cohort							580	178	30.7
	Age 8						Age 11		
	N	n	%				N	n	%
Full sample	1,275	176	13.8				497	58	11.7
Birth cohort	747	77	10.3						
Child cohort	528	99	18.8				497	58	11.7

Across the full sample, prevalence rates of exposure to vicarious racism via the family appear to be inconsistent over time. However, this is due to the timing of the exposure measure and the age of children at each time point. In each cohort rates of exposure were similar to those of vicarious racism via the primary carer. Three in ten (30.7%) children from the child cohort and one third (33.0%) of children in the birth cohort had their first exposure in the first possible wave (birth cohort: age 3; child cohort: age 6).

Figure 3: Full sample: age of first exposure to vicarious racism (family), cumulatively totalled



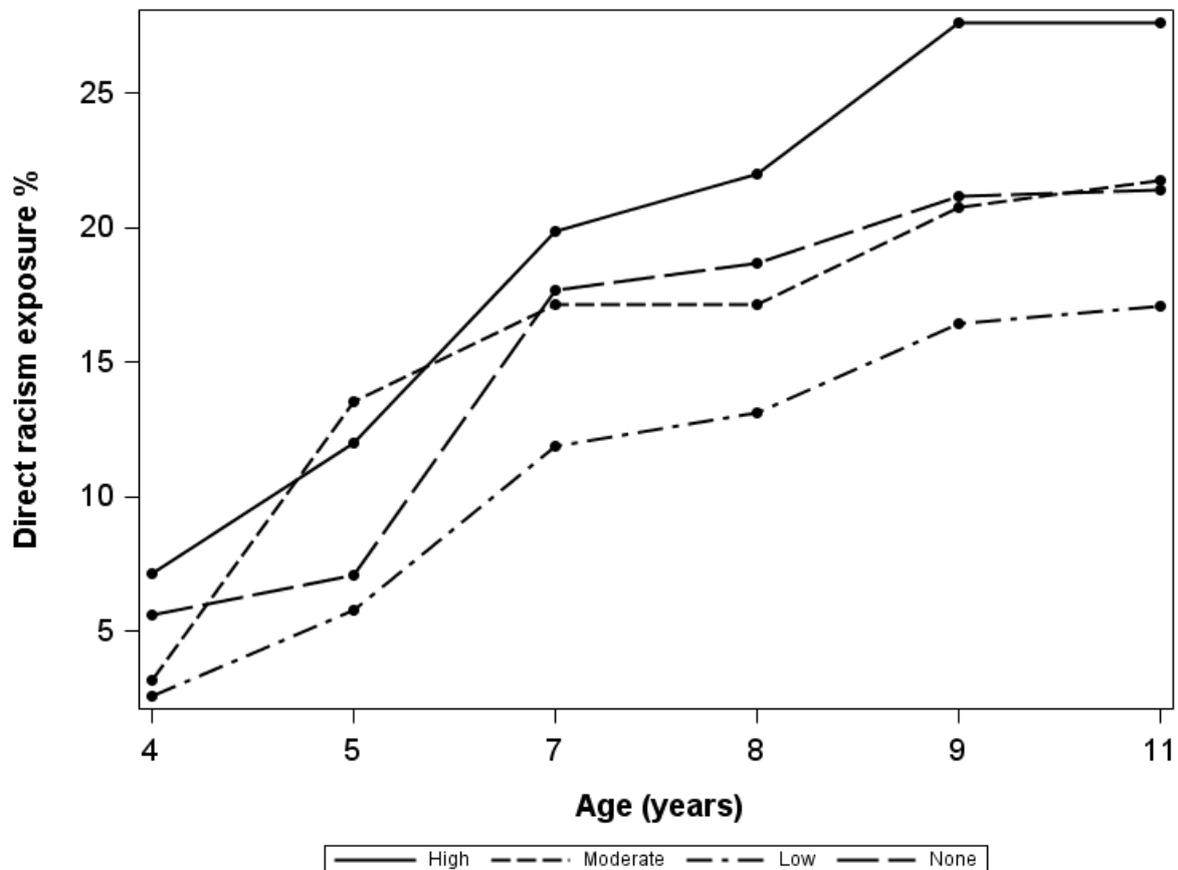
With slightly higher rates than those seen for vicarious racism via the primary carer, just over half (50.5%; 95% CI: 48.0-53.0) of children had at least one point of exposure for vicarious racism via the family by age 11 (compared to 44.5% exposed to vicarious racism via the primary carer and 20.4% exposed to direct racism). A slight decrease was seen at age 6 as there was an increase in the number of children with a response to this measure that was not matched by the number of children with an additional exposure at that age. However, there was a linear increase with age overall.

Age of first exposure by sociodemographic factors

Age of first exposure to direct racism by key sociodemographic factors have been presented in Figures 4-8. Cumulative proportions at each age have been presented for each level of the categorical and binary variables.

Level of relative isolation

Figure 4: Direct racism: full sample by LORI and racism exposure, cumulatively totalled

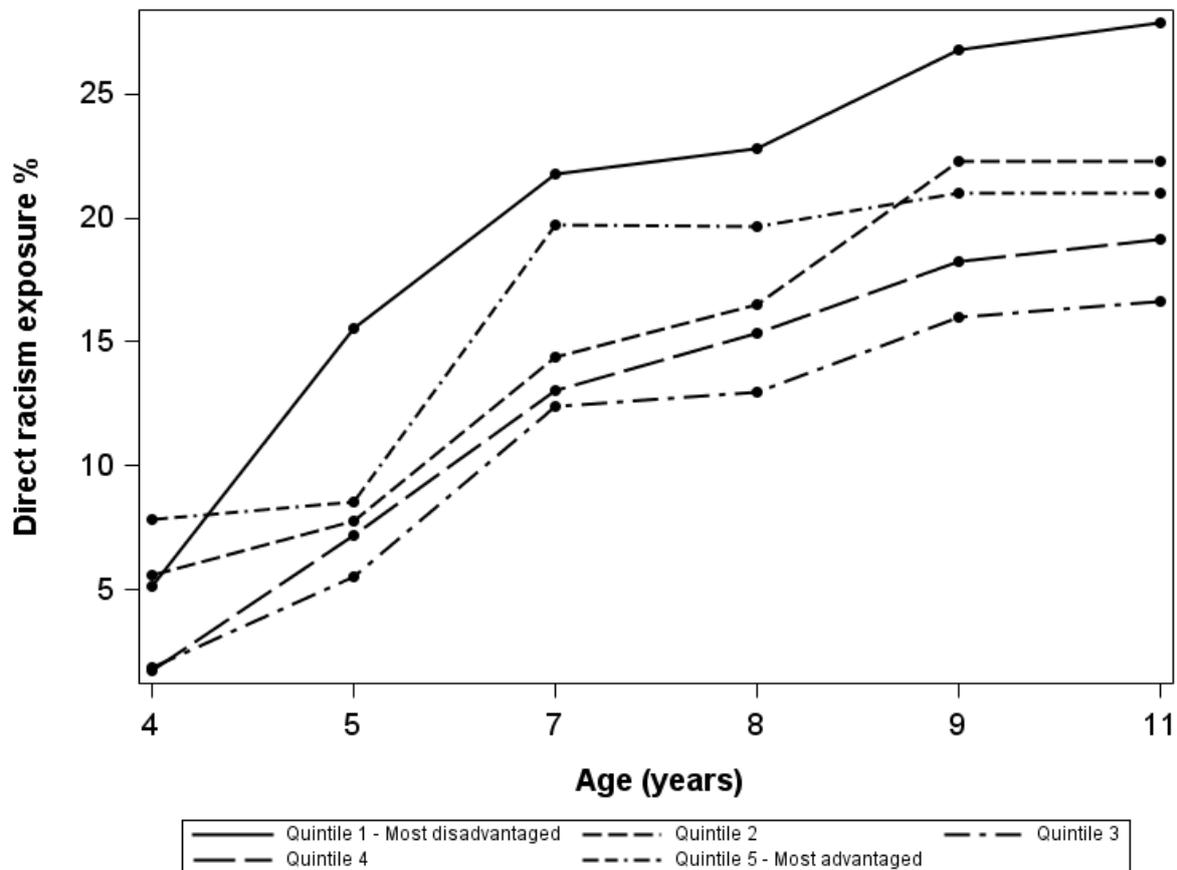


As seen in Figure 4, similar rates of exposure were seen in areas with moderate and no isolation, while consistently lower rates of exposure were seen in areas of low isolation and somewhat higher rates of exposure were found in areas with high isolation. Around one in four (27.6%; 95% CI: 20.0-35.2) children living in areas of high isolation were exposed to direct racism by age 11, compared to 17.1% (95% CI: 14.3-19.9) of children living in areas with low isolation.

Remoteness was related to exposure to direct racism by age 11 ($\chi^2=9.44$; $df=3$; p -value 0.0240). Although pairwise comparisons did not reach significance for children living in areas of low remoteness compared with moderate ($p=0.1290$) and non-remote areas ($p=0.0787$), a significant risk of exposure to direct racism by age 11 was found between children living in areas of low remoteness and high remoteness ($p=0.0043$). Children living in areas with low remoteness had 1.6 (95% CI 1.2 – 2.2) times the risk of exposure to direct racism by age 11 compared to those living in areas with high levels of remoteness.

Socioeconomic status

Figure 5: Direct racism: full sample by IRISEO and racism exposure, cumulatively totalled



Children living in regions classified as the most disadvantaged (quintile 1) were most likely to have been exposed to direct racism by age 11, as seen in Figure 5. Although rates for children living in the most advantaged regions (quintile 5) were slightly higher by age 7, rates in this quintile then remain steady and by age 11 children living in quintiles 2, 3, 4 and 5 all had similar rates of exposure to direct racism, encompassing children living across both more disadvantaged and more advantaged regions. Overall, rates of exposure for children living in moderately advantaged regions (quintile 3) remained consistently lower throughout.

IRISEO was related to exposure to direct racism by age 11 ($\chi^2=12.34$; $df=4$; p -value 0.0150). While pairwise comparisons found no significant differences between children classified as living in quintile 1 and quintile 2 ($p=0.1866$) or quintile 5 ($p=0.1126$) regions, significant differences were found between children living in quintile 1 and quintile 3 regions ($p=0.0007$) and between children living in quintile 1 and quintile 4 regions ($p=0.0367$). Children living in areas classified as quintile 1, the most disadvantaged regions, had 1.7 (95%

CI 1.3 – 2.3) times the risk of direct racism by age 11 compared to those living in areas classified as quintile 3 and 1.5 (95% CI 1.0 – 2.1) times the risk of exposure compared to those living in areas classified as quintile 4.

Figure 6: Direct racism: full sample by primary carer highest education completed and racism exposure, cumulatively totalled

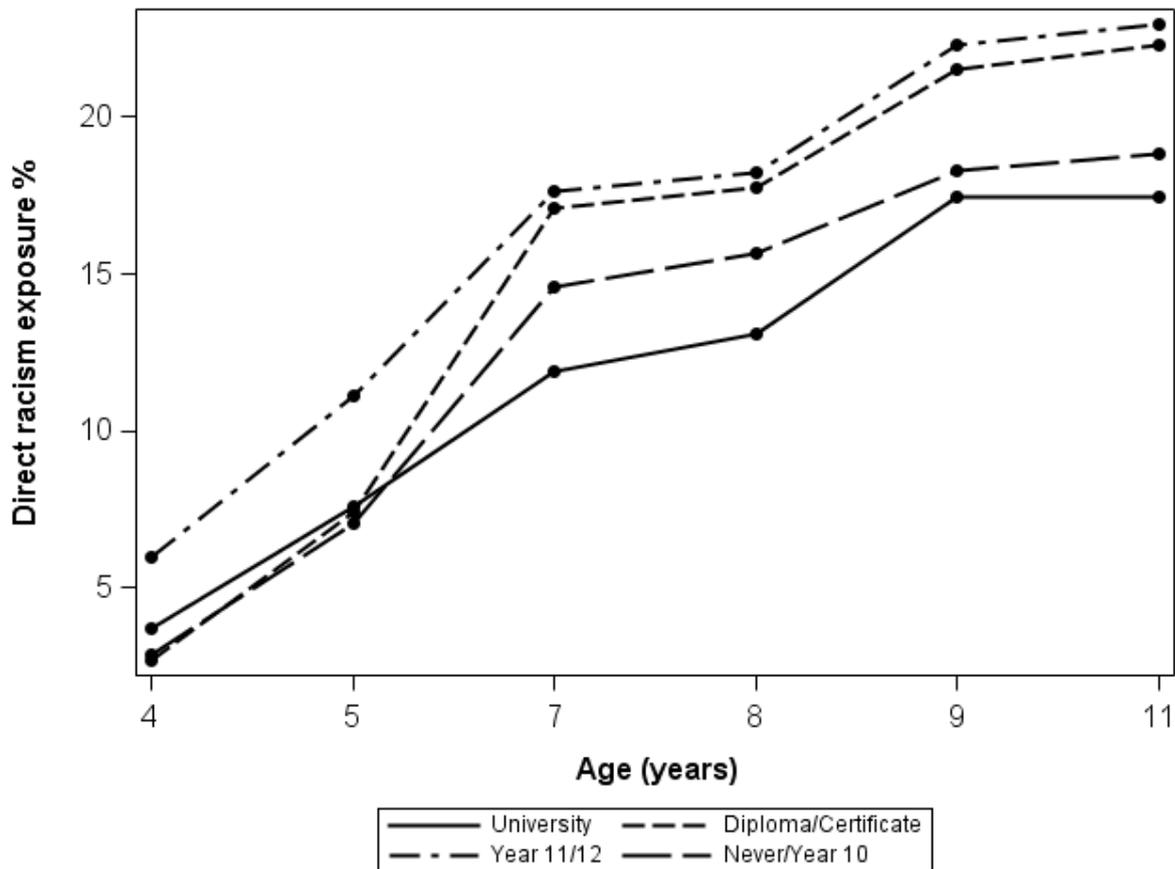
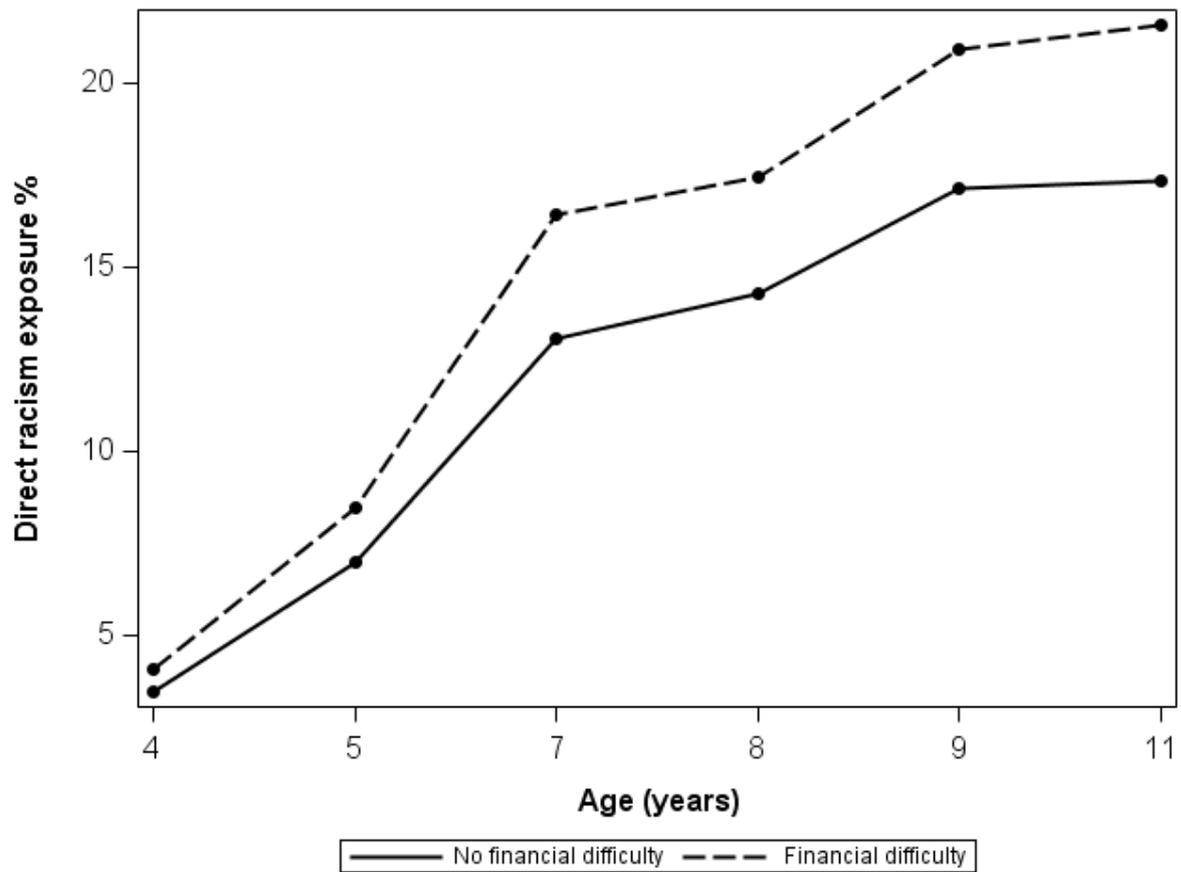


Figure 6 shows that rates of exposure to direct racism were fairly consistent across differing levels of primary carer education. Children whose primary carer completed university had slightly lower rates of exposure at ages 7 and 8, however by age 11 these rates were similar to primary carers who had never attended school to Year 10 completion.

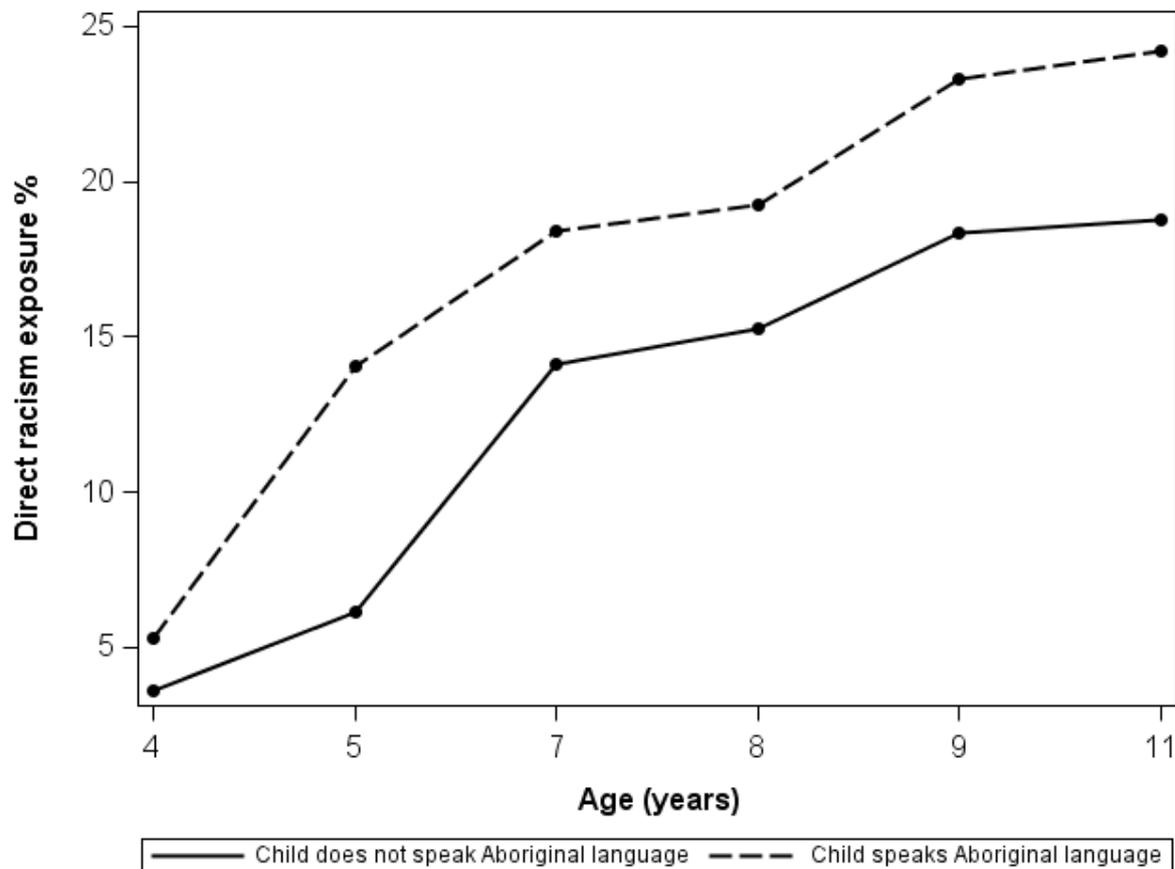
Figure 7: Direct racism: full sample by financial difficulty and racism exposure, cumulatively totalled



By age 11, 21.6% (95% CI: 18.9-24.3) of children whose primary carer reported financial difficulty reported exposure to direct racism compared to 17.3% (95% CI: 14.0-20.7) who reported no financial difficulty. These rates remained consistently higher at each age during LSIC.

Cultural attachment

Figure 8: Direct racism: full sample by whether child spoke Aboriginal language and racism exposure, cumulatively totalled



Overall, there was a higher prevalence of exposure to direct racism among children who spoke an Aboriginal language compared with those who did not. By age 11, close to one quarter (24.2%; 95% CI: 19.6-29.3) of study children who spoke an Aboriginal language had been exposed to direct racism at least once compared to 18.8% (95% CI: 16.6-21.2) of those who did not speak an Aboriginal language.

Whether study children spoke an Aboriginal language was strongly related to exposure to direct racism by age 11 ($\chi^2=4.62$; $df=1$; p -value 0.0317). Study children who spoke an Aboriginal language had 1.4 (95% CI 1.0 – 1.9) times the risk of exposure to direct racism by age 11 compared to those who did not speak an Aboriginal language.

Discussion

As anticipated, this study further confirmed that a substantial proportion of Aboriginal children experience direct interpersonal racism during childhood. Around one in five

children were observed to have been exposed to direct racism during at least one time point by age 11 years. The prevalence rates for direct racism found in this study reflect those found for Aboriginal children of a similar age (23, 25) and are somewhat lower than rates found for Aboriginal adolescents and young people (24, 26, 33, 34). While children can understand and recognise discriminatory behaviour and actions by ages 5-6, as children age their ability to discern and contextualise discrimination becomes more consistent (28) and Aboriginal children aged 8-12 have conceptualised and discussed clear instances of racial discrimination (35). Increased perceptions of direct racism are likely to occur as children develop from early to late childhood and into adolescence, given that adolescent's increased autonomy likely leads to greater risk of exposure in a wider variety of contexts (36). As the direct racism measure from this study was specific to the school context, it is critically important that strategies aimed at addressing this form of racism are developed in collaboration with education providers and relevant State/Territory education departments, ensuring that the policies and interventions required are appropriate, responsive and targeted.

Also as expected, prevalence rates for vicarious racism were found to be considerably higher than those seen for direct racism in LSIC children, with close to half of all children exposed to vicarious racism via the primary carer or the family by age 11. These higher rates may reflect the restricted context of the direct racism measure (i.e. school), children's inability to recognise instances of discrimination during early childhood or their decision not to report these incidences to their parent/carer as well as an increased awareness and incidence of racism in adulthood. Prevalence rates for vicarious racism found in this study are slightly higher than rates seen for similar measures in Aboriginal children aged below 7 years in the Northern Territory (NT) (27). This difference may be accounted for by the time-limited nature of the measurement item used in the NT study, which referred to experiences of racial discrimination as a stressor over the last year while the measurement item within LSIC did not specify an exposure timeframe. The considerable proportion of Aboriginal children exposed to either form of vicarious racial discrimination in this study highlights the compounding effect that racism can have within Aboriginal families and further reiterates the crucial need for coordinated strategies to be developed to address discriminatory behaviour directed towards Aboriginal populations in Australia.

This study is the first to describe the age of first exposure to direct and vicarious racial discrimination in a longitudinal study of Aboriginal children in Australia. We found that one third of all children with at least one exposure to direct racism had first been exposed by age 5 years (33%), the average age of school-entry, while the majority had their first exposure by age 7 years (74%). Proportions were similar for children exposed to vicarious racism via the family, with the majority of all children with at least one experience of this form of racism being first exposed by age 6 (71%). For those with exposure to vicarious racism via the primary carer, these proportions are even starker, with 77% of children with at least one exposure to vicarious racism via the primary carer having first exposure by age 4. It is concerning that the majority of these exposures were observed to occur during the formative years of child development, given that children have been shown to be particularly vulnerable to the negative health outcomes associated with racial discrimination (4, 18). Early developmental periods should be an integral focus in future research examining the pathways between racism and child health outcomes.

A number of associations were found between socio-demographic factors and the derived racism variables for accumulation of exposure and age of first exposure in this study. In a novel finding, this study found a moderate relationship between speaking an Aboriginal language and exposure to direct racism. Children who spoke an Aboriginal language had 1.4 times the risk of exposure to direct racism by age 11, compared to children who did not speak an Aboriginal language. To the best of our knowledge, this is the first study to include a cultural identifier in the examination of risks for racial discrimination exposure in Aboriginal children. Western Australian Aboriginal children aged 8-12 have identified Aboriginal language as a valued part of their racial identity, acting to distinguish them from non-Aboriginal children and within their own specific language group (37). In the school context, where the direct racism measure within LSIC is situated, speaking an Aboriginal language likely highlights the Aboriginal identity of the child even where language is not spoken on school grounds. As Aboriginal children have identified bullying within school due to their Aboriginal identity in qualitative studies (35), it is possible that any explicit indication of Aboriginal identity – such as through speaking an Aboriginal language – may lead to increased exposure to incidences of racialised bullying.

Moderate associations were found between racism variables and measures of geographic remoteness. Single exposure to direct racism and direct racism exposure by age 11 were found to be associated with levels of relative isolation, whereby children living in areas of high/extreme remoteness were observed to have the highest proportions of direct racism exposure compared to those living in areas of low or non-remoteness. These results differ from those found in the WAACHS where racism was reported less often in areas of extreme remoteness, though these results were not statistically significant(24). Areas of extreme remoteness, as classified by LORI, are generally communities which experience limited contact with non-Aboriginal people (24), which may have influenced the prevalence of racism in these communities. The categories for high and extreme isolation were collapsed in the LSIC dataset which may have contributed to the discrepancy. Further examination of the association between remoteness and racism exposure in children is required to fully understand this relationship.

Socioeconomic indicators also revealed an association with direct racism exposure although associations were not uniform across racism measures. Financial difficulty was found to have a significant association with single exposure to direct racism but no association was found with direct racism exposure by age 11. The IRISEO measure did not appear to be associated with single exposure to direct racism, although children living in the most disadvantaged areas had a greater risk of being exposed at age 11 years than those living in areas classified as moderately advantaged and more advantaged.

Limitations

The limitations of this study centre predominantly around the measures of racial discrimination. Each measure was not time limited, making it difficult to extrapolate data recording multiple exposures. Due to the wording of the direct racism and vicarious racism via the primary carer measures, each record of exposure may refer to either recent or distant past experiences of racial discrimination. While multiple records of exposure can be interpreted as multiple recent exposures, the language utilised in these measures does not explicitly define the exposure as such.

All three measures of racial discrimination were reported by the primary carer, not directly by the study child or other family members, limiting the validity of this measure to the

perspective of the primary carer. Measures of racial discrimination were not recorded in all waves, limiting points of exposure to those in which data was recorded.

All measures of racism were single-item measures, potentially underestimating the extent of racism exposure in study children. This study has only undertaken a close examination of interpersonal racism, which only represents a single component of racism. Systemic and internalised racism are both critical components of the experience of racial discrimination although they are outside the scope of the current study.

As notable differences were found between children included and excluded from the derived racism variables across measures of remoteness and SES and increased risk of exposure to racism was found to be associated with these measures, it may be expected that the prevalence of direct and vicarious racism would differ with the inclusion of certain missing cases. However, overrepresentation of missing cases in areas of low/high remoteness and SES differed according to the racism variable under examination.

Finally, although the LSIC chose study sites to accurately represent the community context of Aboriginal children across Australia, the study employed a non-random sampling design and the sample is not held as representative of the total population of Aboriginal children. As a result, findings may not be generalisable to the broader population of Aboriginal children in Australia.

Conclusion

Direct and vicarious racism is commonly experienced by Aboriginal children and exposure often occurs within the first years of life. This study is one of the first studies internationally to characterise the prevalence of both direct and vicarious forms of racism among a cohort of children using longitudinal data. Findings contributed to the development of variables investigating the age of first exposure and accumulation of exposure to racial discrimination across the lives of Aboriginal children. Understanding the prevalence of racial discrimination and sociodemographic factors associated with increased risk of exposure to racism during childhood are important first steps to developing meaningful insights into racial disparities between Aboriginal and non-Aboriginal children in Australia.

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