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Original research

Parental awareness and engagement in the Active Kids program across socioeconomic groups

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ABSTRACT

Objectives: In 2018, the New South Wales (NSW) Government implemented a State-wide program to reduce the cost barrier to organised sport and physical activity participation. We explored parent/carer's awareness and children's engagement in the Active Kids program across socioeconomic groups and used the NSW Population Health Survey (PHS) to validate engagement in the program.

Design: Cross-sectional.

Methods: Data were obtained from the 2018 NSW PHS and the Active Kids program registration database. We compared demographic characteristics of children who had registered for the program in the registration database with children in the weighted NSW PHS. Multinomial regression models were used to determine whether socioeconomic status was associated with parent/carer awareness and children's engagement in the program.

Results: Parent/carer's in the most disadvantaged quartile were twice as likely to have never heard of the Active Kids program (OR: 2.04, 95% CIs 1.31, 3.16) or to have heard of the program but not registered (OR: 1.94, 95% CIs 1.26, 3.00), and more than twice as likely to have registered for a voucher, but not followed through and redeemed the voucher (OR: 2.68, 95% CIs 1.27, 5.63) compared with the least disadvantaged quartile.

Conclusions: The Active Kids program has provided financial support for organised sport and physical activity to a large number of children. However, there are still a substantial proportion of socially disadvantaged groups who are unaware or have not engaged in the program. Further targeted work is required to increase the awareness and engagement in the program for socially disadvantaged groups.

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Practical implications

- The Active Kids program has reached over half (53%) of all school-enrolled children in NSW and subsequently reduced the cost barrier to organised sport and physical activity for these children. This reach supports continued government investment in the program.
- A substantial proportion of children who live in the most disadvantaged areas have engaged in the Active Kids program. However, there are still a large proportion of socially disadvantaged groups who have not engaged in the program.

- Further targeted work is required to increase the awareness and engagement in the Active Kids program for socially disadvantaged groups.

1. Introduction

Physical inactivity is a public health concern worldwide.¹ Being physically active has numerous physical (e.g., increased bone mineral density and weight maintenance)² and mental health benefits (e.g., increased self-esteem and emotional regulation)³ in children. Additional mental and social health benefits may be gained from specific types of physical activity, such as participating in organised sport. Sport involves physical exertion, skill and/or hand-eye coordination as the focus of the activity, with elements of competition and rules set formally through organizations; and may be participated in either individually or as a team.¹ The social nature of sport can provide additional social connectedness, social support, peer

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bonding, increased life satisfaction, and self-esteem, reduce stress, anxiety, and depression.⁴ Unfortunately, a large proportion of children are not sufficiently active and are subsequently not acquiring these health benefits.

In New South Wales (NSW), Australia, 77% of children do not meet the global physical activity guidelines of at least 60 min every day.^{5,6} Sport can contribute to children meeting physical activity guidelines; however, 74% of children do not play sport at least 3 times per week.⁷ Perhaps even more concerning, is the disparity in organised sport and physical activity between those across the socioeconomic status (SES) spectrum.⁸ Of those living in low SES areas (according to the Socio-Economic Index for Areas; SEIFA), 81% of children do not meet physical activity guidelines, compared with 77% in high SES areas⁶ and 79% do not play sport at least 3 times per week, compared with 75% in high SES areas.⁷ This SES disparity is even greater in sport compared to overall physical activity participation and this may be due to additional participation barriers faced by those living in low SES areas.

The most commonly reported barriers to organised sport and physical activity participation for youth include cost, accessibility, lack of parental support and a lack of local facilities.^{9,10} Sport participation can require mandatory expenses such as club membership, entry fees, shoes, uniforms, and sports equipment, which could contribute to the SES differential in sport participation.¹¹ To overcome the cost barrier, sports voucher programs have been implemented across Australia.¹²

The NSW Government has implemented a State-wide program to reduce the cost barrier to organised sport and physical activity. The Active Kids Program began in 2018 and provides all primary and secondary school-enrolled children in NSW with a \$100 voucher that can be used towards membership costs for sport, fitness and active recreation activities.¹³ Unfortunately, previous evidence suggests that interventions such as the Active Kids program are more likely to be adopted by people living in high socioeconomic areas, further widening the inequalities.¹⁴ There are a number of possible explanations for this, including people from low socioeconomic backgrounds lacking knowledge and health literacy, having increased daily and chronic stresses, low social support and competing life demands.^{15,16} Therefore, the primary objective of this study was to explore parent/carer's awareness and associated children's engagement in the Active Kids program across socioeconomic groups. The secondary objective was to cross-validate engagement in the Active Kids program comparing uptake in the Active Kids registration data with the NSW Population Health Survey (PHS).

2. Methods

Data were obtained from the 2018 NSW PHS, an ongoing survey about the health of people living in NSW that uses computer assisted telephone interviewing. Interviews are conducted continuously each year between February and December. Additional items regarding awareness and engagement of the Active Kids program were added to the 2018 PHS by the cross-government steering committee. The PHS participants are selected using random digit dialling, with a dual overlapping frame for landlines and mobiles for people living in NSW. The survey data are weighted to account for the probability of raw person selection, dual frame selection, and post-stratification to match the externally derived population distribution for age, sex and Local Health District.¹⁷

The 2018 Active Kids program registration data was obtained from the NSW Office of Sport registration database. Each parent or carer completed an online registration form in order to receive the Active Kids voucher. The form included questions about the

child's demographics, organised sport and physical activity participation. The Human Research Ethics Committee at University of Sydney granted approval for the evaluation of Active Kids (Project number: 2017/946).

Awareness and engagement of the Active Kids program was measured using two items in the 2018 NSW PHS. The parent/carer was first asked how many children in the household were enrolled in primary or high school to determine eligibility. If the parent/carer responded that there was at least one child enrolled in primary or high school, they were asked: "There is an Active Kids program in NSW to support participation in organised sport. Which of the following applies to you and the child/children in your household?" The parent/carer responded with:

- a) never heard of scheme [unaware and unengaged]
- b) heard of scheme but not registered [aware and unengaged]
- c) registered but not followed through and redeemed the voucher [aware and partially engaged]
- d) registered and have redeemed the voucher to participate [aware and fully engaged]
- e) don't know.

Demographic characteristics included age, sex, SES, and remoteness. SES was determined using postcode of residence and categorised using the SEIFA, specifically the Index of Relative Socio-Economic Disadvantage.¹⁸ This index ranks areas in Australia according to relative socioeconomic disadvantage. Remoteness was assessed using postcode of residence and categorised using the Accessibility and Remoteness Index of Australia (ARIA+). ARIA+ groups areas on the basis of relative access to services into major city, inner regional, outer regional or remote.¹⁹

Frequencies and proportions for the parent/carers demographic characteristics (age, sex, socioeconomic status and remoteness) by awareness and engagement in the Active Kids program were calculated. We compared the demographic characteristics of children who had registered for the program in the Active Kids registration database with the school-enrolled children in the weighted NSW PHS. Next, we conducted multinomial regression models to determine whether SES was associated with awareness and engagement in the program. The first model examined the association between SES and awareness and engagement in the program and the second model examined this association while controlling for the parent/carers age, sex, and location.

3. Results

In 2018, 1638 (13%) adults who completed the NSW Population Health Survey had a child enrolled in primary or high school and were therefore, eligible to be asked the additional items about Active Kids program. Of the eligible adults, 32% (95% CIs 29.3, 34.1) adults had never heard of the Active Kids program, 32% (95% CIs 29.1, 33.9) had heard of the program but not registered, 6% (95% CIs 4.2, 7.5) had registered but not followed through and redeemed the voucher, and 28% (95% CIs 25.4, 30.1) had registered and redeemed the voucher (Table 1).

Table 2 compares the demographic characteristics of children who had registered for the Active Kids program and the children in the NSW PHS. A similar proportion of children who lived in the most disadvantaged area registered in the Active Kids program (16.6%) and were in the weighted PHS (17.8%). However, a significantly lower proportion of 15–18 year old children registered in the program compared to the PHS.

Awareness and engagement in the Active Kids program was lowest in the most disadvantaged quartile. A higher proportion of parents/carers in the most disadvantaged quartile had never heard

Table 1

Demographics of parents/carers by awareness and engagement in the Active Kids program.

	Never heard of scheme		Heard of scheme but not registered		Registered but not redeemed voucher		Registered and redeemed voucher to participate	
	%	(95% Cis)	%	(95% Cis)	%	(95% Cis)	%	(95% Cis)
All persons	31.7	(29.3, 34.1)	31.5	(29.1, 33.9)	5.9	(4.2, 7.5)	27.8	(25.4, 30.1)
Age category								
19–34	45.3	(41.6, 49.1)	24.8	(21.3, 28.3)	6.8	(4.2, 9.3)	18.9	(15.5, 22.3)
35–44	20.9	(18.0, 23.8)	31.8	(28.7, 34.9)	7.6	(5.4, 9.9)	37.3	(34.1, 40.5)
45–54	33.5	(30.3, 36.7)	36.2	(33.1, 39.3)	3.8	(1.9, 5.7)	24.1	(21.3, 27.0)
55+	39.4	(35.5, 43.3)	27.7	(23.9, 31.4)	4.0	(1.4, 6.7)	21.9	(18.1, 25.7)
Sex								
Male	38.5	(35.5, 41.5)	29.3	(26.4, 32.2)	5.3	(3.5, 7.2)	23.3	(20.5, 26.1)
Female	26.1	(23.4, 28.8)	33.3	(30.5, 36.0)	6.3	(4.3, 8.3)	31.5	(28.7, 34.2)
Socio-economic status								
1st (most disadvantaged)	39.7	(36.0, 43.5)	34.6	(30.9, 38.3)	5.1	(2.8, 7.4)	17.7	(14.3, 21.0)
2nd	27.0	(23.6, 30.5)	32.2	(28.8, 35.7)	8.5	(5.9, 11.1)	30.3	(26.7, 33.8)
3rd	31.4	(28.1, 34.7)	29.5	(26.3, 32.8)	6.2	(3.9, 8.5)	29.0	(25.8, 32.2)
4th (least disadvantaged)	30.9	(27.8, 34.0)	30.7	(27.6, 33.9)	3.9	(2.0, 5.8)	30.9	(27.8, 34.1)
Remoteness								
Major Cities	33.4	(30.9, 36)	31.4	(28.8, 33.9)	6.5	(4.7, 8.3)	25.6	(23.1, 28.0)
Inner Regional	24.2	(20.7, 27.7)	31.3	(27.7, 34.9)	3.6	(1.5, 5.7)	37.3	(33.5, 41.2)
Outer Regional and remote	32.1	(27.4, 36.8)	34.2	(29.4, 39.0)	3.4	(0.9, 5.8)	28.5	(23.7, 33.4)

Note. 1st quartile = most disadvantaged; 4th quartile = least disadvantaged.

Table 2

Child information from the Active Kids registration database and NSW PHS.

	AK Registration		NSW PHS		χ^2 p-value
	N	%	N	%	
All children	671,375	100.0	1,943	100.0	
Age category					
4–8	269,457	40.1	489	31.7	390.6
9–11	185,931	27.7	443	22.2	<0.001
12–14	138,063	20.6	582	23.8	
15–18	77,924	11.6	429	22.0	
Sex					
Boys	361,852	54.0	1,007	50.8	1.3
Girls	308,543	46.0	904	49.2	0.26
Socio-economic status					
1st (most disadvantaged)	99,583	16.6	386	17.8	127.6
2nd	140,302	23.4	600	24.5	<0.001
3rd	158,783	26.5	519	26.5	
4th (least disadvantaged)	200,566	33.5	438	31.2	
Remoteness					
Major Cities	440,793	73.5	1,114	76.4	334.5
Inner Regional	126,594	21.1	579	18.3	<0.001
Outer Regional and remote	32,622	5.4	250	5.3	

Note. PHS = Population Health Survey, AK = Active Kids, NSW = New South Wales.

of the program compared with parents/carers in the least disadvantaged quartile (40% vs. 31%, respectively). A higher proportion of parents/carers in the most disadvantaged quartile had heard of the program but not registered (35% vs. 31%). In contrast, a lower proportion of parents/carers in the most disadvantaged quartile had registered and used a voucher compared to the least disadvantaged quartile (18% vs. 31%).

Table 3 displays results of the multinomial models. Parents/carers in the most disadvantaged quartile were twice as likely to have never heard of the Active Kids program (OR: 2.04, 95% CIs 1.31, 3.16) or to have heard or the program but not registered (OR: 1.94, 95% CIs 1.26, 3.00) compared with the least disadvantaged quartile. Those in the second and third most disadvantaged quartiles were not less likely to have never heard of the program or to have heard or the program but not registered compared to those in the least disadvantaged area. Parents/carers in the most disadvantaged quartile (OR: 2.68, 95% CIs 1.27, 5.63) and second most disadvantaged quartile (OR: 2.23, 95% CIs 1.12, 4.41) were more than twice as likely to have registered for a voucher, but not followed through and redeemed the voucher compared with the least disadvantaged quartile.

Compared to parents/carers living in metropolitan areas, parents/carers living in inner regional areas were less likely to have never heard of the program (OR: 0.52, 95% CIs 0.36, 0.73), have heard of the program but not registered (OR: 0.59, 95% CIs 0.42, 0.82), and have registered but not followed through and redeemed the voucher (OR: 0.35, 95% CIs 0.18, 0.67). There were no differences between parents/carers living in metropolitan areas and outer regional or remote areas.

4. Discussion

This study explored engagement in the Active Kids program and compared engagement between those of high and low socioeconomic positions. This study also cross-validated engagement in the program comparing uptake in the Active Kids registration database with those obtained through the NSW Population Health Survey (PHS). A large number of children in NSW registered for an Active Kids voucher ($n=671,375$), and a substantial proportion of these children lived in the most disadvantaged areas ($n=99,583$; 16.6%). However, parents and carers of children living in the most dis-

Table 3

Multinomial regression: SEIFA quartile and awareness and uptake of the Active Kids program.

	Unadjusted			Adjusted		
	Never heard of scheme	Heard of scheme but not registered	Registered but not redeemed voucher	Never heard of scheme	Heard of scheme but not registered	Registered but not redeemed voucher
	OR (95% CIs)	OR (95% CIs)	OR (95% CIs)	OR (95% CIs)	OR (95% CIs)	OR (95% CIs)
Socio-economic status						
1st (most disadvantaged)	1.80 (1.22, 2.66)	1.66 (1.11, 2.47)	1.96 (0.97, 3.94)	2.04 (1.31, 3.16)	1.94 (1.26, 3.00)	2.68 (1.27, 5.63)
2nd	0.85 (0.60, 1.20)	1.10 (0.78, 1.55)	1.42 (0.76, 2.65)	1.06 (0.71, 1.59)	1.40 (0.95, 2.07)	2.23 (1.12, 4.41)
3rd	0.84 (0.6, 1.18)	0.95 (0.68, 1.33)	1.28 (0.69, 2.4)	0.93 (0.65, 1.34)	1.05 (0.74, 1.48)	1.46 (0.77, 2.75)
4th (least disadvantaged)	Ref	Ref	Ref	Ref	Ref	Ref
Age category						
19–24				1.40 (0.84, 2.31)	0.85 (0.50, 1.45)	3.06 (1.10, 8.50)
35–44				0.27 (0.18, 0.42)	0.49 (0.32, 0.75)	1.72 (0.68, 4.33)
45–54				0.51 (0.33, 0.77)	0.78 (0.51, 1.20)	1.31 (0.50, 3.40)
55+				Ref	Ref	Ref
Sex						
Male				2.08 (1.59, 2.72)	1.12 (0.86, 1.46)	1.62 (1.03, 2.55)
Female				Ref	Ref	Ref
Remoteness						
Major Cities				Ref	Ref	Ref
Inner Regional				0.52 (0.36, 0.73)	0.59 (0.42, 0.82)	0.35 (0.18, 0.67)
Outer Regional and remote				0.79 (0.47, 1.30)	0.79 (0.48, 1.28)	0.52 (0.22, 1.24)

Note. Base category = 'has registered and used an Active Kids voucher'.

advantaged socioeconomic area were more likely to register for a voucher but not follow through and redeem the voucher. These parents were also more likely to be unaware of the program altogether. Although a substantial proportion of children in the most disadvantaged socioeconomic area are registering for an Active Kids voucher, there is still the potential to increase voucher use and program awareness.

In 2018, the Active Kids program reached a large number of all children in NSW ($n=671,375$). This represents just over half of all school-enrolled children in NSW (53%). The PHS indicated that 34% of children had registered for an Active Kids voucher. This discrepancy between data sources is likely due to the PHS interviews being conducted continuously between February and December, whereas, the Active Kids data includes the final sample of children who registered up until December. If parents/carers were interviewed for the PHS in the early months of the year, it is more likely that they weren't aware of the Active Kids program or the activity that their child intended to use the voucher for had not started yet.

A substantial proportion of children who live in the most disadvantaged areas have engaged in the Active Kids program. Of all children registered in the program, 16.6% lived in the most disadvantaged area. This is similar to the 17.8% of children in the NSW PHS who lived in the most disadvantaged area. However, those in the most disadvantaged area were more than twice as likely to have not heard of the program or to have heard but not registered compared to those in the least disadvantaged area, but there was no difference between those in the second and third most disadvantaged areas. This suggests that further targeted work is required to increase the awareness and engagement in the Active Kids program for those in the most disadvantaged areas.

Previous voucher schemes have reported inconsistent results for engagement of those living in disadvantaged areas. In Canada, the Children's Fitness Tax Credit was implemented between 2007 and 2016 which allowed a tax credit of up to \$500 per year to register children in organised sport and physical activity programs. Engagement in the Active Kids program for those in the most disadvantaged areas.

Previous voucher schemes have reported inconsistent results for engagement of those living in disadvantaged areas. In Canada, the Children's Fitness Tax Credit was implemented between 2007 and 2016 which allowed a tax credit of up to \$500 per year to register children in organised sport and physical activity programs. Consis-

tent with this study, evaluations indicated that parents/carers in the most disadvantaged areas were significantly less likely to be aware or engage in the tax scheme.²⁰ In contrast, in the United Kingdom in 2017, 13–14 year old children received £20 of organised sport and physical activity vouchers each month for one year. Mixed methods findings showed that children in disadvantaged areas had increased levels of fitness, health and perceptions of physical activity.²¹ Other organised sport and physical activity voucher schemes have been implemented, particularly in other parts of Australia^{12,22}; however, information pertaining to the effectiveness of these schemes for disadvantaged groups is not available.

One group of children that the Active Kids program did not successfully reach was the older children/adolescents. Of all children registered in the program, 11.6% were 15–18 years old, which is significantly less than the 22.0% in the weighted NSW PHS. As participation in organised sport and physical activity is known to decline with age,²³ it is particularly important that interventions reach this older inactive group. There is potential to increase the reach of the program into older children (15–18 years) by more focused targeting of the Active Kids program.

Parents of children living in the most disadvantaged areas were twice as likely to be unaware of the Active Kids program compared with parents of children living in the least disadvantaged area. This could be due to disparities in opportunities and marketing across areas. Marketing of the Active Kids program was mostly done by the Active Kids accredited providers. However, as there tends to be fewer participation opportunities (i.e., less facilities and programs) for children in disadvantaged areas,^{24,25} there are fewer providers and subsequently less marketing. The NSW State Government's Office of Sport is currently implementing a variety of strategies to increase awareness of the program in the most disadvantaged areas. One example of a strategy is the Active Kids Go Far marketing campaign which aims to increase awareness and address some of the cultural barriers to participation. The campaign materials have been translated to a number of different languages and highlights the benefits of participating in sport and active recreation. An evaluation of the impact of this strategy on awareness and engagement in the Active Kids program is warranted.

Parents of children living in disadvantaged areas who had heard of the Active Kids program were also twice as likely to have not registered, or to have registered but not followed through and redeemed the voucher. This could be explained by the disparity in

health literacy between those living in disadvantaged and advantaged areas.²⁶ Health literacy refers to the degree that individuals can obtain, process and understand the health information and services they need to make effective health decisions.²⁷ Registering for an Active Kids voucher involves creating an online MyServiceNSW account, logging in to the account, and following the prompts to apply for a voucher. Once the voucher has been issued, the parent needs to take the voucher to the selected registered provider and redeem the voucher through the provider's chosen process. This can be a time consuming and technologically challenging process. Future qualitative research is needed to develop a comprehensive understanding of why parents living in the most disadvantaged area did not use the Active Kids voucher.

5. Conclusion

The Active Kids program has provided financial support for organised sport and physical activity to a significantly large number of children in NSW, including a substantial proportion living in disadvantaged areas. The program reduces the cost barrier to sport faced by children by providing financial support for membership, and could therefore, lessen the disparity in organised sport and physical activity participation between children of high and low socioeconomic positions. It is important to recognise that voucher programs only address one of the many barriers (e.g., accessibility, lack of parental support and a lack of local facilities) to sport participation and additional community development initiatives are needed to support community behavioural change. Using a population-level surveillance system (PHS), we determined that there are still a large proportion of socially disadvantaged groups who are unaware of the program or have not engaged in the program. Targeted work is required to increase the awareness and engagement in voucher programs for socially disadvantaged groups.

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Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.jsams.2020.01.015>.

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