Socioeconomic position and physical activity among women in Melbourne, Australia: does the use of different socioeconomic indicators matter?

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Abstract

This study aimed to identify which indicators of socioeconomic position (SEP) are independently associated with leisure-time physical activity among women. In 2005, women (n=1,166; 18-65 years) from Melbourne, Australia, reported their own (education, occupation, income), their partner's (education, occupation), their household (home ownership, ability to cope with income), and their neighbourhood (area-level) SEP, and leisure-time physical activity. Multinomial logistic regression examined associations between SEP indicators and leisure time physical activity categorized as: none (no mins/wk; reference group), insufficient (1-149 mins/wk), and sufficient (≥150 mins/wk). In the fully adjusted model, lower education, lower partner's education (where applicable), and non-home ownership were independently associated with between 33% and 50% lower odds of sufficient physical activity, while lower income and lower area-level SEP were associated with 40% lower odds of insufficient physical activity. Understandings of socioeconomic inequalities in physical activity among women may be enhanced if a range of SEP indicators are used, particularly education, partner's education and home ownership.

Introduction

Physical inactivity increases the risk of mortality, heart disease, stroke, certain cancers, type 2 diabetes, and obesity (Haskell, Lee, Pate, Powell, Blair, Franklin et al., 2007), but a significant proportion of adults in 'developed' (i.e. relatively wealthy) countries do not meet conventional physical activity guidelines (Haskell et al., 2007). Furthermore, physical activity is socioeconomically patterned, with those of higher socioeconomic position (SEP) demonstrating higher levels of physical activity during their leisure (or discretionary) time those of lower SEP (Gidlow, Johnston, Crone, Ellis, & James, 2006).

There is currently little evidence to guide the selection of SEP indicators in physical activity research, and few studies have provided explicit rationale for their choices. This insufficiency of knowledge is important because although they are inter-related, different SEP indicators reflect conceptually different constructs that are likely to influence physical activity through different pathways, as has been observed in the dietary behaviour literature (Galobardes, Morabia, & Bernstein, 2001). For instance, income may affect physical activity resource purchasing ability; education may affect physical activity benefits knowledge; occupation may exert its influence through workplace peer groups and social norms; and home ownership may reflect assets and accumulated wealth, which influence the human and financial resources available for physical activity. Furthermore, previous studies have involved analysis of existing datasets where physical activity or SEP were not primary study factors (e.g. (Bertrais, Preziosi, Mennen, Galan, Hercberg, & Oppert, 2004; Laaksonen, Prattala, Helasoja, Uutela, & Lahelma, 2003; Lindstrom, Hanson, & Ostergren, 2001)). Consequently, these studies include weaker or limited measures of physical activity and/or SEP.

LTPA is an important dimension of total physical activity to understand because evidence from the United States (US) suggests that it contributes substantially to total physical activity (Centers for Disease Control and Prevention, 2011). Although caution should be taken in generalising findings from the US internationally, the prevalence of physical inactivity (approximately 50%) is very similar in the US and Australia (Bauman, Armstrong, Davies, Owen, Brown, Bellew et al., 2003; Centers for Disease Control and Prevention, 2007). Furthermore, LTPAis under volitional control, therefore being more amenable to intervention than for example, occupational physical activity.

Women in developed countries are an important group for physical activity research and promotion because they participate in less leisure time physical activity (LTPA) than do men (Crespo, Ainsworth, Keteyian, Heath, & Smit, 1999; Trost, Owen, Bauman, Sallis, & Brown, 2002; World Health Organization, 2007). In addition, the conceptualisation and measurement of SEP amongst women is challenging and deserves focused attention. Historically, a woman's SEP was thought best reflected by her husband's occupational class (Goldthorpe, 1983), and earlier studies of the association between SEP and health outcomes often relied on male partners' social class/status to classify women's SEP (Lapidus & Bengtsson, 1986). However, this is unlikely to be appropriate in contemporary populations (Bartley, Martikainen, Shipley, & Marmot, 2004; McDonough, Williams, House, & Duncan, 1999). Changing social roles, increased and diversifying workforce participation, and increases in female-headed families have implications for the conceptualisation of SEP and its relationship with physical activity among women. However, little research has attempted to simultaneously examine the complex relationships among women between LTPA and indicators of SEP that are proximal (e.g. own education or occupation), medial (e.g.

partner's education or occupation, home ownership), or distal (e.g. area-level). This study aimed to identify which SEP indicators are independently associated with LTPA among adult women in Melbourne, Australia.

Methods

Data were collected for the 2003 Socio-Economic Status and Activity in Women (SESAW) study (Ball, Timperio, Salmon, Giles-Corti, Roberts, & Crawford, 2007), approved by the Deakin University Human Research Ethics Committee. All participants provided written consent.

Participants

Participants were recruited from 15 low, 15 medium and 15 high socioeconomic neighborhoods in Melbourne, Australia. Area-level SEP was based on the Socioeconomic Index for Areas (SEIFA), a score constructed from population census data based on a suburb's relative disadvantage (Australian Bureau of Statistics, 2003). Women (n=2400; 18-65 years) were randomly selected from the electoral roll within each neighborhood to complete a physical activity survey. To counter typically observed differential response rates (Madigan, Troisi, Potischman, Brogan, Gammon, Malone et al., 2000; Sheikh & Mattingly, 1981), oversampling from the low and mid SEIFA neighborhoods, relative to the high SEIFA neighborhoods, was employed, using a ratio of 1.5: 1.2: 1 (that is, for every person sampled from a high SEIFA neighborhood, 1.2 people from a mid and 1.5 people from a low SEIFA neighborhood were sampled). A second independent sample was drawn from the same neighbourhoods in the same manner to complete a separate nutrition survey (n=2400 women), with respondents to that survey being asked to complete the physical activity survey. Overall, 1045 women responded to the initial physical activity survey (44% response), and of those completing the nutrition survey (n=1136; 47% response), 509 also completed the physical activity survey. A total of 1554 women completed the survey.

Measures

<u>Leisure-time physical activity (LTPA)</u>

The long, self-administered version of the International Physical Activity Questionnaire assessed walking, moderate- and vigorous-intensity LTPA (Craig, Marshall, Sjostrom, Bauman, Booth, Ainsworth et al., 2003). This instrument defines leisure physical activities as those done for recreation, sport, exercise or leisure, and examples of walking, aerobics, running, bicycling, swimming, and tennis are provided. Because the data were highly skewed LTPA was categorised as: 'none' (0 minutes/week), 'insufficient' (1-149 minutes/week), and 'sufficient' (≥150 minutes/week) in line with national and international recommendations (Australian Department of Health and Aged Care, 1999; US Department of Health and Human Services, 2008; World Health Organization, 2010).

<u>Socioeconomic position</u>

Four 'blocks' of SEP indicators ranging from the most proximal to the most distal were examined: own (education, occupation, income), partner (education, occupation), household (ability to cope with household income, home ownership), and area-level SEP (based on SEIFA tertiles).

Own SEP

Highest level of education was classified as low ('no formal qualification'/ '≤year 10'), medium ('year 12'/ 'trade/apprenticeship'/ 'certificate/diploma'), or high ('university'/ 'higher degree'). The Australian Standard Classification of Occupations (Australian Bureau of Statistics, 1997) classified occupation as 'not working', 'blue collar', 'white collar', or 'manager/professional'. Average before tax income was reported categorically and

collapsed as: '<$299/week', '$300-699/week', '≥$700/week', or 'don't know'/ 'don't want to report'. The number of people dependent on household income was reported ('one', 'two', 'three', 'four', '≥five') with the last two categories combined due to small numbers.

Partner's SEP

Participants reported their partner's (if applicable) education and occupation as described above for 'Own SEP'. Education and occupation were classified similarly, with an additional category for 'no partner' created.

Household SEP

Participants indicated how they managed on their available income: 'always impossible', 'difficult all the time', 'difficult some of the time', 'not too bad', or 'easy'; the first two categories were collapsed. Participants reported home ownership ('owner', 'purchaser', 'renter', 'living rent-free'/'boarder').

Area-level SEP

Area-level SEP was considered as 'low', 'medium' and 'high' based on the SEIFA, as detailed earlier in the 'Participants' section.

Demographic variables

Age, body mass index (BMI), country of birth (Australia or other), marital status (not married, previously married, married/living as married) and children (none, one, two, ≥three) were examined as potential covariates, based on evidence of associations with

physical activity from review studies (Trost et al., 2002) and our own work (Cleland, Ball,

Hume, Timperio, King, & Crawford, 2010b).

Analyses

Of 1554 respondents, those who moved before completing the survey (n=14), were

pregnant (n=31), had missing pregnancy data (n=20), had incomplete LTPA data (n=57), or

had missing SEP indicator data (n=266) were excluded, leaving 1166 participants for

analyses. Descriptive statistics included Kruskal-Wallis equality-of-populations rank tests and

Pearson's chi-square tests. Demographic variables significantly associated with the outcome

were included as covariates in regression analyses.

Multinomial logistic regression was used to examine the association between each SEP

indicator and LTPA (none, insufficient, sufficient; 'none' is the reference group). Unlike

binomial logistic regression which only allows the outcome variable to have two discrete

categories (e.g. low/high), multinomial logistic regression allows the outcome variable to

have more than two discrete categories (e.g. low/medium/high). 'Partial' models were first

examined, which include the SEP indicator, LTPA and adjustment for covariates. Odds ratios

and 95% confidence intervals (CI) are presented with robust standard errors adjusted for

clustering within suburbs (the unit of recruitment).

A backward purposeful selection approach (Hosmer & Lemeshow, 2000) was then used to

build multinomial logistic regression models containing all SEP indicators significantly

associated with LTPA ('Full' Model). SEP indicators associated with LTPA at the $p<0.05$ level

were selected for entry into a preliminary model. 'Blocks' of SEP indicators were entered

one at a time starting with the most proximal indicators (education, occupation, income),

then the medial indicators (partner's education, occupation; then home ownership, ability

to cope with income), then the most distal indicator (area-level SEP). The number of people

dependent on household income was adjusted for in all analyses that included the income

variable. SEP variables demonstrating p-values ≥ 0.05 were removed from the model in

order of least significance until all remaining variables met significance criteria. SEP

variables not retained were added back into the model, one at a time, to verify the absence

of statistical significance and/or confounding effects (Hosmer & Lemeshow, 2000). Odds

ratios and 95% confidence intervals (CI) are presented with robust standard errors adjusted

for clustering within suburbs (the unit of recruitment).

All analyses were conducted in Stata Version 10.2 (Statacorp, College Station, Texas).

Results

Mean (standard deviation [SD]) age and BMI were 41.2 (12.7) years and 25.1 (5.5) kg/m^2, respectively. BMI differed significantly (p<0.05) between those doing none (26.2 [5.8] kg/m^2), insufficient (25.0 [5.3] kg/m^2) and sufficient (24.5 [5.3] kg/m^2) LTPA. A greater proportion of women born in Australia reported participating in LTPA compared to those born outside Australia (Table 1). Age, marital status and number of children were not significantly associated with LTPA.

Education, occupation, income, partner's education, partner's occupation, ability to cope with income, and area-level SEP were positively associated with increasing categories of LTPA (Table 2). Median hours/week of LTPA were greater in the higher SEP categories for these indicators except income.

In the partial models, lower levels of each SEP indicator (e.g. low education, blue collar occupation, income <$299/week) compared to higher levels of each indicator (e.g. high education, manager/professional occupation, income ≥$700/week) were associated with lower odds of achieving insufficient and sufficient (versus none) LTPA (Table 3). In the final model, medium (versus high) education, medium or low (versus high) partner's education, and being a purchaser, renter/boarder, or living rent-free (versus owner) were independently associated with 33%- 50% lower odds of sufficient LTPA. Having a weekly income of <$299/week (versus ≥$700/week) and low (versus high) area-level SEP were associated with 42% and 40% lower odds, respectively, of insufficient LTPA.

Discussion

Education, partner's education, and home ownership status demonstrated independent associations with achieving sufficient LTPA. Income and area-level SEP were also independently associated with LTPA, but only at lower levels. Our findings are consistent with other studies observing socioeconomic differentials in physical activity, and that have found education to be a consistent predictor of activity (Gidlow et al., 2006). The findings suggest that education and home ownership status may be the most useful indicators of SEP for examining associations with LTPA among women living in Melbourne, Australia.

It is plausible that education, partner's education and home ownership exert their influence on LTPA via independent pathways. Women's education may affect physical activity knowledge (e.g. regarding resources or health benefits), or could be a marker of life skills (e.g. ability to organise, plan, prioritise, problem-solve), which have demonstrated positive associations with physical activity among women (Cleland, Ball, Hume, Timperio, King, & Crawford, 2010a; Cleland, Ball, Salmon, Timperio, & Crawford, 2010). Partner's education was moderately correlated with own education but was independently associated with LTPA. Similar to women's own education level, this may be related to the partner's physical activity knowledge or life skills, which may influence a woman's LTPA, independently of her own knowledge and skills. Alternately, men typically have fewer workforce interruptions so education may be more directly related to income and more stable over the lifecourse. Own education was moderately correlated with own income (Spearman's $r=0.31$, $p<0.001$), but data on partner's income were not collected.

Home ownership may represent assets and accumulated wealth, factors that may not be influenced by current employment status or income. Transitions in and out of the workforce related to pregnancy and childrearing may mean that occupation- and employment-related indicators of SEP may not be as useful as once supposed in predicting health behaviours such as LTPA among women in this sample, whereas a purchased home may better reflect financial stability.

As compared to the highest income group, low income among women was associated with lower odds of insufficient, but not sufficient, LTPA. Inconsistencies in associations between income and physical activity have been observed in a review of 18 studies (Gidlow et al., 2006). Reasons for these inconsistences could relate to poor, incomplete or inaccurate reporting of sensitive income data; in this study, 170 participants did not know or did not want to report income on a categorical response scale. While we adjusted for the number of individuals dependent on income, imprecision in estimates of income (e.g. the broad income categories, which may not differentiate middle from high or very high incomes) may be responsible. However, when data were re-analysed splitting the top income category into two categories ($700-999/wk and $1000+/wk), results were essentially unchanged.

Low area-level SEP was independently associated with achieving insufficient, but not sufficient, LTPA. Although not examined extensively, associations between area-level SEP and physical activity, independent of individual-level SEP indicators, have been identified (Giles-Corti & Donovan, 2002; Yen & Kaplan, 1998). In the current study, area-level SEP may be associated with lower levels of LTPA but other unmeasured factors may contribute to higher levels of LTPA, or area-level measures may have been insensitive to differences at

higher activity levels. This latter explanation is plausible given the proximity of confidence intervals to 1.0 for sufficient LTPA.

A limitation of this study is that causal inferences cannot be made. Also, other unmeasured SEP indicators may be important for LTPA. Limitations of self-reported physical activity measures are well-documented (Sallis & Saelens, 2000), although the instrument used in this study has demonstrated excellent reliability and acceptable validity (Craig et al., 2003). Furthermore, only LTPA was assessed; other domains of physical activity (e.g. transport, occupational, domestic) may demonstrate different associations, although some evidence (Salmon, Owen, Bauman, Schmitz, & Booth, 2000) suggests that non-discretionary physical activity (occupational and domestic) does not explain socioeconomic differences in women's LTPA. Furthermore, research from the US suggests that LTPA contributes a substantial component of total physical activity (Centers for Disease Control and Prevention, 2011) and is discretionary and therefore amenable to intervention, so is an important domain of physical activity to examine. The findings may not be generalisable beyond the study area, but there was broad representation in terms of age, SEP indicators, and LTPA. Study strengths include the large, population-based sample and the use of multiple SEP indicators reported at individual, household and area levels, allowing for simultaneous adjustment for the confounding effects of other SEP indicators.

This study provides insights into the independent associations of various SEP indicators and LTPA among women in Melbourne, Australia, and provides guidance for the selection of SEP indicators in further research. Education and home ownership independently contributed to the socioeconomic differences observed in LTPA among women. Although findings were less

consistent, income and area-level SEP indicators may warrant consideration in further studies. Inclusion of assessment of each of these indicators in further work may further improve our understanding of LTPA, which may in turn provide insights for how and where health promotion programs and policies may best be targeted.

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Table 1: Demographic characteristics of participants in the SESAW study overall and by LTPA, 2004

	n (%)	LTPA [a]			Median
		% None	% Insufficient	% Sufficient	LTPA (IQR) hrs/wk
Country of birth[b]					
Born in Australia	887 (76.3)	68.2	76.6	80.3**	2 (0.5, 5)*
Not born in Australia	276 (23.7)	31.8	23.4	19.7	1.3 (0, 3.8)
Marital status					
Married/Living as married	697 (59.8)	59.9	61.7	58.4	2 (0.3, 4.5)
Previously married	166 (14.2)	17.0	13.0	13.6	2 (0, 4)
Not married	303 (26.0)	23.1	25.3	28.0	2.3 (0.5, 5.3)
No. of children <18yrs					
None	706 (60.6)	56.0	60.1	63.3	2.2 (0.5, 5)
One	169 (14.5)	17.3	13.3	13.8	1.5 (0, 4.4)
Two	174 (14.9)	15.9	16.3	13.4	1.8 (0, 4.3)
≥Three	117 (10.0)	10.8	10.3	9.4	1.5 (0.3, 4)

IQR: inter-quartile range; LTPA: leisure-time physical activity

[a] Insufficient: 1-149 minutes/week; Sufficient: ≥150 mins/week; [b] n=1163 due to missing data for three participants

**p<0.01 *p<0.05 from Pearson's chi-square test (comparing proportion of participants achieving none, insufficient and sufficient LTPA across demographic characteristic categories) or Kruskal-Wallis equality-of-populations rank test (comparing median LTPA across demographic characteristic categories)

Table 2: Socioeconomic position and LTPA among women in the SESAW study, 2003

SEP Indicator	Categories	n (%)	LTPA [a]			Median LTPA (IQR) hrs/wk
			% None	% Insufficient	% Sufficient	
Own Indicators (proximal)						
Education	High	465 (39.9)	29.2	40.8	44.9***	2.5 (0.7, 5)***
	Medium	469 (40.2)	44.0	42.9	36.3	1.8 (0, 4.7)
	Low	232 (19.9)	26.7	16.3	18.8	1.5 (0, 4.5)
Occupation	Manager	522 (44.8)	36.8	46.7	47.6**	2.3 (0.5, 5)*
	White collar	299 (25.6)	24.9	26.6	25.3	2 (0.5, 4.5)
	Blue collar	106 (9.1)	13.4	9.2	6.7	1 (0, 3.5)
	Not working	239 (20.5)	24.9	17.4	20.4	2 (0, 5.3)
Income	≥$700/wk	354 (30.4)	24.9	33.7	30.9*	2 (0.5, 4.7)
	$300-699/wk	331 (28.4)	25.3	31.0	28.2	2 (0.5, 4.8)
	<$299/wk	311 (26.7)	33.9	21.5	26.5	1.8 (0, 5)
	Don't know/want to answer	170 (14.6)	15.9	13.9	14.4	2 (0, 5)
Partner Indicators (medial)						
Education	High	300 (25.7)	17.3	26.4	29.8**	2.5 (0.6, 5)***
	Medium	283 (24.3)	29.6	25.5	20.5	1.3 (0, 4)
	Low	114 (9.8)	13.0	9.8	8.1	1.3 (0, 4)
	N/A	469 (40.2)	40.1	38.3	41.7	2 (0.3, 5)
Occupation	Manager	443 (38.0)	30.0	39.4	41.3**	2.3 (0.5, 5)***
	White collar	45 (3.9)	5.4	4.1	2.9	1 (0, 3.5)
	Blue collar	152 (13.0)	18.8	13.0	10.0	1 (0, 3.8)
	Not working	57 (4.9)	5.8	5.2	4.2	1 (0, 4.5)
	N/A	469 (40.2)	40.1	38.3	41.7	2 (0.3, 5)
Household Indicators (medial)						

Ability to cope with income	Easy	201 (17.2)	12.6	15.8	20.7*	3 (0.8, 5)**
	Not too bad	462 (39.6)	36.1	41.9	39.9	2 (0.5, 5)
	Sometimes difficult	353 (30.3)	36.5	28.8	28.0	1.5 (0, 4.3)
	Always impossible/difficult	150 (12.9)	14.8	13.6	11.3	1.5 (0, 4)
Home ownership	Owner	346 (29.7)	26.7	28.8	31.9	2.3 (0.5, 5)
	Purchaser	443 (38.0)	41.2	36.7	37.2	2 (0, 4.8)
	Renter/ Boarder	254 (21.8)	21.3	24.7	20.0	1.5 (0.3, 4)
	Living rent-free	123 (10.6)	10.8	9.8	10.9	2.3 (0.1, 5.3)
<u>Area-level Indicator (distal)</u>						
SEIFA	High	403 (34.6)	23.5	35.1	40.1***	2.5 (1, 5.5)*
	Medium	444 (38.1)	39.4	42.4	34.4	1.5 (0.3, 4)
	Low	319 (27.4)	37.2	22.6	25.5	1.5 (0, 4.5)

SEP: socioeconomic position; IQR: inter-quartile range; SEIFA: socioeconomic index for areas; N/A: not applicable; LTPA: leisure-time physical activity

[a] None: 0 minutes/week; Insufficient: 1-149 minutes/week; Sufficient: ≥150 minutes/week

***$p<0.001$ **$p<0.01$ *$p<0.05$ from Pearson's chi-square test (comparing proportion of participants achieving none, insufficient and sufficient physical activity across SEP indicator categories) and Kruskal-Wallis equality-of-populations rank test (comparing median leisure-time physical activity across SEP indicator categories)

Table 3: Socioeconomic position and odds ratios (95% confidence intervals) of achieving insufficient and sufficient (versus none) LTPA among women in the SESAW study, 2003

SEP Indicator	Categories	Partial Model 1 [a, c]		Full Model 2 [b, c]	
		Insufficient LTPA (vs none)	Sufficient LTPA (vs none)	Insufficient LTPA (vs none)	Sufficient LTPA (vs none)
Own Indicators (proximal)					
Education	High	Reference	Reference	Reference	Reference
	Medium	**0.68 (0.47, 0.98)**	**0.55 (0.39, 0.77)**	0.83 (0.57, 1.21)	**0.67 (0.46, 0.96)**
	Low	**0.46 (0.28, 0.75)**	**0.51 (0.32, 0.81)**	0.66 (0.39, 1.10)	0.64 (0.35, 1.18)
Occupation	Manager	Reference	Reference	NR	NR
	White collar	0.78 (0.48, 1.26)	0.76 (0.50, 1.15)		
	Blue collar	0.59 (0.34, 1.02)	**0.45 (0.27, 0.76)**		
	Not working	**0.50 (0.34, 0.76)**	**0.62 (0.39, 0.98)**		
Income [d]	≥$700/wk	Reference	Reference	Reference	Reference
	$300-699/wk	0.85 (0.54, 1.35)	0.89 (0.59, 1.33)	1.01 (0.63, 1.61)	1.15 (0.76, 1.73)
	<$299/wk	**0.48 (0.31, 0.72)**	**0.69 (0.48, 1.00)**	**0.58 (0.37, 0.90)**	0.90 (0.57, 1.44)
	Don't know/want to answer	0.64 (0.38, 1.07)	0.71 (0.42, 1.21)	0.70 (0.41, 1.18)	0.79 (0.45, 1.40)
Medial Indicators (Partner)					
Education	High	Reference	Reference	Reference	Reference
	Medium	**0.57 (0.36, 0.90)**	**0.42 (0.26, 0.68)**	0.69 (0.42, 1.13)	**0.52 (0.30, 0.89)**
	Low	**0.51 (0.28, 0.92)**	**0.41 (0.25, 0.67)**	0.71 (0.37, 1.36)	**0.55 (0.30, 0.99)**
	N/A	**0.62 (0.45, 0.85)**	**0.57 (0.38, 0.85)**	0.85 (0.51, 1.43)	0.98 (0.51, 1.87)
Occupation	Manager	Reference	Reference	NR	NR
	White collar	0.55 (0.28, 1.08)	**0.40 (0.18, 0.89)**		
	Blue collar	**0.54 (0.33, 0.88)**	**0.47 (0.29, 0.77)**		
	Not working	0.67 (0.34, 1.35)	0.56 (0.29, 1.09)		
	N/A	**0.72 (0.56, 0.52)**	**0.72 (0.54, 0.97)**		
Medial Indicators (Household)					
Ability to cope with income	Easy	Reference	Reference	NR	NR

	Not too bad	0.87 (0.55, 1.39)	**0.61 (0.39, 0.96)**		
	Sometimes difficult	0.65 (0.39, 1.06)	**0.46 (0.28, 0.73)**		
	Always impossible/difficult	0.72 (0.39, 1.31)	**0.47 (0.27, 0.82)**		
Home ownership	Owner	Reference	Reference	Reference	Reference
	Purchaser	0.83 (0.52, 1.30)	0.70 (0.47, 1.04)	0.69 (0.43, 1.12)	**0.64 (0.43, 0.97)**
	Renter/ Boarder	1.00 (0.59, 1.70)	0.65 (0.40, 1.05)	0.94 (0.53, 1.68)	**0.56 (0.34, 0.93)**
	Living rent-free	0.72 (0.39, 1.32)	**0.58 (0.36, 0.93)**	0.74 (0.36, 1.53)	**0.50 (0.26, 0.94)**
Area-level Indicator (distal)					
SEIFA	High	Reference	Reference	Reference	Reference
	Medium	0.77 (0.53, 1.14)	**0.59 (0.38, 0.90)**	0.87 (0.58, 1.28)	0.65 (0.42, 1.01)
	Low	**0.48 (0.33, 0.71)**	**0.52 (0.34, 0.79)**	**0.60 (0.40, 0.90)**	0.69 (0.44, 1.09)

LTPA: leisure-time physical activity; SEP: socioeconomic position; N/A: not applicable; NR: not retained in Full Model

[a] Partial Model examines association between each SEP indicator and LTPA separately, adjusted for country of birth and BMI; robust standard errors are adjusted for clustering by neighbourhood

[b] Full Model includes variables retained from the Partial Model

[c] None: 0 minutes/week; Insufficient: 1-149 minutes/week; Sufficient: ≥150 mins/week

[d] Includes adjustment for number of people in the household dependent upon income