

## Article

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# Participation in sports and cultural activities among Aboriginal children and youth

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## Introduction

Recent studies show that participating in extracurricular activities can have many benefits for children, including positive academic achievement,<sup>1</sup> improved psychological functioning,<sup>2</sup> and good peer relationships.<sup>3</sup> Some research suggests that these activities have a positive effect because they provide children with opportunities to explore their identity, develop initiative, learn to control their emotions, and acquire social skills.<sup>4</sup>

Although less is known about Aboriginal children's participation in extracurricular activities than is known about non-Aboriginal children,<sup>5</sup> previous research has shown that Aboriginal children benefit from engaging in activities outside regular school hours. For instance, Aboriginal children living off-reserve are more likely to do well in school if they volunteer, take part in sports, cultural activities, clubs and groups, and art or music, or spend time with Elders.<sup>6</sup> Physical exercise is also known to be associated with positive outcomes for Aboriginal children, including increased self-esteem<sup>7</sup> and decreased rates of smoking.<sup>8</sup> Conversely, lack of exercise is linked to higher rates of chronic conditions related to obesity such as

diabetes, hypertension and arthritis,<sup>9</sup> findings that are particularly relevant for Aboriginal children who are at two to three times higher risk for obesity than the Canadian average.<sup>10</sup>

Other research is also emerging that confirms the role of cultural identity in supporting Aboriginal health in general,<sup>11,12</sup> and there is mounting evidence about the positive impact of cultural activity on children's health.<sup>13</sup> Cultural identity is considered a key element of support and healing in the Aboriginal tradition,<sup>14</sup> and recent studies have suggested that it lowers youth suicide rates<sup>15</sup> and contributes to improved academic achievement.<sup>16</sup> Some research has found that participation in cultural activities reduces depression and lowers substance and alcohol abuse.<sup>17</sup>

This article draws on the children and youth section of the 2006 Aboriginal Peoples Survey (APS) to explore participation in sports and cultural activities by Inuit, Métis and off-reserve First Nations<sup>18</sup> children aged 6 to 14 (for more on definitions and concepts see "What you should know about this study"). This study examines factors that may be associated with participation in extracurricular activities, including

the child's basic characteristics, cultural factors and time devoted to other extracurricular activities, as well as the family's sociodemographic characteristics.

## The majority of Inuit, Métis and off-reserve First Nations children aged 6 to 14 take part in sports

A little more than two-thirds (69%) of Aboriginal children participated in sports at least once a week: 66% of First Nations children living off-reserve, 71% of Métis and 72% of Inuit children. Boys were significantly more likely to take part than girls, regardless of their Aboriginal identity. Overall, children aged 9 to 11 tended to participate more than younger children, but among Inuit children, 12- to 14-year-olds were proportionally more active than 6- to 8-year-olds. Children were also more likely to play sports at least once a week if they were in very good or excellent health (as reported by a parent) than if their health was less robust (Table 1).

The results of a logistic regression model show that the above-mentioned characteristics remain significantly associated with weekly sports participation, even after accounting for other factors such

## What you should know about this study

Data from the Aboriginal Peoples Survey (APS) children and youth component were used to examine participation in sports and in cultural activities for Inuit, Métis and First Nations children between the ages of 6 and 14 and living off-reserve. Conducted by Statistics Canada in 2006, the Aboriginal Peoples Survey collected information on the social and economic conditions of Aboriginal people in Canada. Included were persons with Aboriginal ancestors and/or who identified with one of the Aboriginal groups (North American Indian, Métis, Inuit), and/or had treaty or registered Indian status, and/or had Indian Band membership. Individuals living on reserves in the provinces were not included in the survey; in the territories, all Inuit, Métis and First Nations children were included in the survey. Only individuals aged 6 to 14 who were reported as having single North American Indian, Métis or Inuit identity were included in the study population, producing a sample of 11,940 respondents representing just under 170,000 Aboriginal children. (For more information about the APS survey sample and design, see *Aboriginal Peoples Survey, 2006: Concepts and Methods Guide*. Statistics Canada Catalogue no. 89-637-XWE2008003).

### Definitions

**Sports participation:** Children played sports (including taking lessons) at least once a week, as reported by the parent. Less frequent involvement was classified as non-participation.

**Participation in cultural activities:** Children took part in culturally related activities regardless of frequency, as reported by the parent. Because these activities may be infrequent, e.g., learning a dance for a ceremony that occurs once a year, it was felt that requiring once a week or even monthly participation would be too strict a condition for inclusion.

**Contact with Elders:** Children spent time at least once a week with Elders.

**Knowledge of an Aboriginal language:** Parents were asked: "Does the child speak an Aboriginal language?" If the answer was "yes," children were considered to speak and understand an Aboriginal language. If the answer was "no," the parent was then asked: "Does the child understand an Aboriginal language even if only a few words?" If this answer was "yes," children were classified as understanding (but not speaking) an Aboriginal language. Children whose parents replied "no"

to both these questions were classified as not knowing an Aboriginal language.

**'Screen time' per day:** The estimated average amount of time per day spent by children watching television, videos or DVDs, on a computer, or playing video games was approximately four hours. Based on this average, children were split into two groups reporting below- and above-average time devoted to these activities.

**Other extracurricular activities:** Parents were asked if their child participated in art or music groups or lessons; in clubs or groups such as dance, youth or drum groups; or helped out without pay (volunteered) in the community or at school. Children were defined as participants if they took part at least once a week in one or more of these activities.

**Place of residence:** The APS allows the aggregation of census subdivisions based on metropolitan areas. In this study, four levels of geography were delineated: census metropolitan areas (CMA), census agglomerations (CA), census metropolitan area and census agglomeration influenced zones (MIZ), and Inuit Nunangat. A MIZ comprises census subdivisions (municipalities) that lie outside CMAs and CAs, but are economically influenced by them (as measured by commuting flows). Depending on the strength of the urban tie, the influence of the closest CMA/CA can range from strong to no influence. Inuit Nunangat is the Inuit homeland and includes communities in Nunatsiavut (Northern coastal Labrador), Nunavik (Northern Quebec), the territory of Nunavut and the Inuvialuit region (Northwest Territories).

### The model

In order to isolate individual factors having an influence on participation in activities, a logistic regression model was developed for each of the extracurricular activities examined here. These models allowed for the estimation of odds that a child with a given characteristic was a *participant* compared to a *non-participant* in an activity, while removing the effect of other confounding factors. Survey sampling weights were applied to account for the complex survey design and to render the analyses representative of the Aboriginal population in Canada (excluding reserves). A bootstrapping technique was utilized to produce all variance estimates, and significance was accepted at the  $p < 0.05$  level (see Table 2 for a complete list of characteristics included in the models).

## What you should know about this study (continued)

### Data limitations

Information about the child's participation relied on parental reporting and was based on a single question. The response might also be influenced by the parent's perception of what constitutes a sport or cultural activity. In addition, the survey was conducted in the winter, which might produce lower estimates of sports participation than in the summer months.

Finally, terms like "extracurricular activity," "sports" and "clubs" may reflect Westernized attitudes or philosophies of time use<sup>1</sup> and thus should be interpreted with some caution.

1. One potential limitation of previous research on extracurricular activities may have been an over-reliance on Western-oriented approaches to leisure pursuits. Iwasaki, Yoshitaka, Judith G. Bartlett, Benjamin Gottlieb and Darlene Hall. 2009. Leisure-like pursuits as an expression of Aboriginal cultural strengths and living actions. *Leisure Sciences*. Vol. 31, issue 2. p. 158-173.

as family characteristics, cultural identification and involvement in other extracurricular activities. The influence of gender was particularly strong: the odds of weekly sports participation were almost 80% higher for Aboriginal boys than girls (Table 2).

Some family characteristics were also associated with a child's weekly participation in sports, confirming the results of an earlier study using the 2001 APS.<sup>19</sup> In 2006, Inuit, Métis and off-reserve First Nations children with two parents in the home were more likely to engage in sports, at 72% compared to 63% for children with one parent. This gap was significant for First Nations and Métis children but not for Inuit children. Overall, children with parents who responded to the survey and had completed high school, college or university also displayed higher rates of weekly sports involvement than those with parents without secondary education. Similarly, children living in households with income over \$30,000 a year were more likely to play sports; furthermore, the higher their family's income, the greater their likelihood of participating.

Even after other factors were controlled for, children living in households with incomes above \$50,000 and living with parents who had completed high school, college or university, remained positively associated with frequent sports

participation. The relationship with parental education was especially strong. Compared to children whose parent had not finished high school, the odds of participating were almost 25% higher for children of high school graduates and almost 75% higher for children of university graduates.

Overall, children with more than three siblings were less likely to play sports at least once a week than those with fewer than two siblings. However, once other variables in the model were controlled for, this characteristic was no longer significantly associated with sports participation. And although a recent study of Canadian children shows that sports participation differs by urban density,<sup>20</sup> this was not the case for Aboriginal children.

### Children who are busy with other extracurricular activities are more likely to take part in sports

Watching TV, using a computer and/or playing video games consumes a lot of children's daily leisure time. Overall, Aboriginal children who spent less than four hours on these activities were more likely to participate in sports at least once a week than those who devoted more time to them (Table 1). Children who took part in cultural activities, participated in music or art lessons or groups, did volunteer work or belonged to a club also had a

greater tendency to participate in sports. After controlling for other characteristics, these leisure-time activities remained significantly associated with sports involvement, with engagement in other weekly activities showing the strongest effect (odds of almost 2.3 to 1.0) (Table 2).

Finally, the effect of certain cultural factors on sports participation was not large, even after controlling for other factors. Aboriginal children who regularly spent time with Elders (at least once a week) had 20% higher odds of sports participation than those who had less contact. On the other hand, knowledge of an Aboriginal language was not significantly associated with the likelihood of a child participating in weekly sports activities.

### Four in ten Aboriginal children participate in cultural activities

Sports are the most popular type of extracurricular activity among Inuit, Métis and off-reserve First Nations children, compared to other out-of-school activities. However, cultural activities also accounted for an important part of their lives, with four in ten children taking part in such activities.

Recent research has found that many Aboriginal adults feel cultural activities like dancing and creating art are strongly associated with positive emotions, identity and aspirations.<sup>21</sup> Many Aboriginal children live in

**Table 1 Aboriginal children aged 6 to 14 participating in sports and cultural activities by selected characteristics, 2006**

	Children who participated in...							
	Sports at least once a week				Cultural activities			
	Total	First Nations	Métis	Inuit	Total	First Nations	Métis	Inuit
	number							
<b>Total number of children in thousands</b>	<b>170</b>	<b>91</b>	<b>68</b>	<b>11</b>	<b>168</b>	<b>91</b>	<b>67</b>	<b>10</b>
	percentage							
<b>Child's characteristics</b>								
<b>Sex</b>								
<b>Total</b>	<b>69</b>	<b>66</b>	<b>71</b>	<b>72</b>	<b>40</b>	<b>43</b>	<b>33</b>	<b>56</b>
Girl †	65	61	69	65	41	44	36	55
Boy	72*	71*	73*	78*	38	41	30*	57
<b>Age group</b>								
6 to 8 years †	66	64	69	66	38	42	30	52
9 to 11 years	72*	70*	76*	73	40	42	34	59
12 to 14 years	67	65	68	78*	41	43	35	58
<b>Self-rated health status</b>								
Good, fair or poor †	58	55	60	67	39	40	34	57
Very good	66*	63*	68*	80*	41	44	33	57
Excellent	73*	72*	75*	71	39	43	32	55
<b>Family characteristics</b>								
<b>Number of parents in household</b>								
One †	63	60	66	76	40	43	34	56
Two	72*	70*	73*	72	39	42	33	57
<b>Number of siblings in household</b>								
None or one †	71	69	74	73	36	40	32	45
Two or three	68	65	71	69	39	42	33	56
Four or more	65*	65	61*	76	48*	49*	38	65*
<b>Education of respondent parent</b>								
Less than high school †	60	57	60	71	39	40	30	57
High school diploma	69*	65*	72*	77	37	40	30	63
Some postsecondary	68*	66*	70*	69	41	44	35	54
College diploma	74*	73*	74*	78	39	44	33	55
University degree	79*	76*	84*	74	46*	48*	44*	F
<b>Household income</b>								
Less than \$30,000 †	60	58	61	70	41	44	36	49
\$30,000 to \$49,999	65*	64	67	69	39	42	31	60
\$50,000 to \$79,999	71*	69*	73*	76	39	43	33	55
\$80,000 or more	78*	77*	79*	73	39	43	32	58
<b>Place of residence</b>								
MIZ <sup>1,2</sup> †	70	69	71	74	41	45	36	37
Census metropolitan area	68	65	72	81	37*	41	31	42
Census agglomeration	68	66	71	74	39	43	32	35 <sup>E</sup>
Inuit Nunangat	71	F	F	71	61*	F	F	61*
<b>Cultural factors</b>								
<b>Knowledge of Aboriginal language</b>								
Speaks and understands	68	66	67	71	63*	65*	59*	61*
Understands only	67	65	70	78	51*	53*	47*	54*
Neither †	70	68	72	72	27	28	27	33

**Table 1 Aboriginal children aged 6 to 14 participating in sports and cultural activities by selected characteristics, 2006 (continued)**

	Children who participated in...							
	Sports at least once a week				Cultural activities			
	Total	First Nations	Métis	Inuit	Total	First Nations	Métis	Inuit
	percentage							
<b>Contact with Elders</b>								
Less than once a week †	66	64	69	70	33	35	27	51
At least once a week	72*	71*	74	75	50*	54*	42*	63*
<b>Other extracurricular activities</b>								
<b>Screen time per day</b>								
Less than four hours †	73	70	76	72	40	44	34	57
Four or more hours	65*	63*	66*	73	39	41	32	54
<b>Sports</b>								
At least once a week	...	...	...	...	42*	37	35*	61*
Less than weekly †	...	...	...	...	34	46*	28	44
<b>Cultural activities</b>								
Participant	73*	71*	75*	78*	...	...	...	...
No cultural activities †	66	63	69	65	...	...	...	...
<b>Other activities<sup>3</sup></b>								
Weekly	76*	75*	77*	81*	46*	50*	40*	62*
No/few other activities †	57	53	61	61	29	31	22	45

† reference group

\* statistically significant difference from reference group in that population at  $p < 0.05$ , for example, a significantly higher percentage of all single-identity Aboriginal boys participated in sports weekly compared to all single-identity Aboriginal girls. Similarly, proportionally more Métis boys participated in sports than Métis girls.

1. Census metropolitan area and census agglomeration influenced zone.

2. Excludes any metropolitan influenced zone inside Inuit Nunangat.

3. Includes participating in art or music groups or lessons; in clubs or groups, such as youth groups, drum groups, or dance groups; and helping without pay in the community or at school.

Source: Statistics Canada, Aboriginal Peoples Survey, 2006.

families or communities where a holistic approach to child development is taken, emphasizing the role of cultural participation on children's health.<sup>22</sup>

In 2006, more than one-half (56%) of Inuit children engaged in cultural activities, as did 43% of First Nations children living off-reserve and 33% of Métis children. Generally speaking, boys were just as likely as girls to participate in cultural activities, 9- to 11-year-old tweens and 12- to 14-year-old teens had the same rates of participation as younger children, and children in good-to-poor health were just as likely to take part as those in excellent health.

In contrast, some family characteristics played a role in a child's involvement in cultural activities. Overall, children with more than three brothers and sisters had a higher participation rate—the gap was especially large for Inuit children at 65%, versus 45% for those with only one or no siblings. Even after other variables in the model were taken into account, children with four or more siblings had almost 30% higher odds of participating than those with fewer than two siblings.

Aboriginal children with a parent who had graduated from university were also more likely to participate

in cultural activities than if the parent had less than a high school education, at 46% versus 39%. This factor was still highly significant after controlling for other variables. Compared with children of a parent without high school, the odds of involvement in cultural activities were about 25% higher for children of high school graduates and over 100% higher for children of university graduates.

None of the other family characteristics in the model were significantly associated with children's participation in cultural activities.

**Table 2 Odds ratios for Aboriginal children aged 6 to 14 participating in sports and cultural activities by selected characteristics, 2006**

	Odds that children participated in...		Odds that children participated in...	
	Sports at least once a week	Cultural activities	Sports at least once a week	Cultural activities
	odds ratios		odds ratios	
<b>Child's characteristics</b>				
<b>Sex</b>				
Boy	1.76*	0.98		
Girl †	1.00	1.00		
<b>Age group</b>				
6 to 8 years †	1.00	1.00		
9 to 11 years	1.30*	0.98		
12 to 14 years	1.02	1.04		
<b>Self-rated health status</b>				
Good, fair or poor †	1.00	1.00		
Very good	1.38*	1.05		
Excellent	1.81*	1.00		
<b>Family characteristics</b>				
<b>Number of parents in household</b>				
One †	1.00	1.00		
Two	1.13	0.97		
<b>Number of siblings in household</b>				
None or one †	1.00	1.00		
Two or three	0.94	1.08		
Four or more	0.88	1.28*		
<b>Education of respondent parent</b>				
Less than high school †	1.00	1.00		
High school diploma	1.24*	1.24*		
Some postsecondary	1.17	1.45*		
College diploma	1.44*	1.42*		
University degree	1.73*	2.08*		
<b>Household income</b>				
Less than \$30,000 †	1.00	1.00		
\$30,000 to \$49,999	1.16	0.95		
\$50,000 to \$79,999	1.32*	0.99		
\$80,000 or more	1.72*	0.98		
<b>Place of residence</b>				
MIZ <sup>1,2</sup> †			1.00	1.00
Census metropolitan area/census agglomeration			0.94	0.94
Inuit Nunangat			0.89	1.30
<b>Cultural factors</b>				
<b>Aboriginal identity (single origin)</b>				
First Nations			0.91	1.18*
Métis †			1.00	1.00
Inuit			1.34	0.96
<b>Knowledge of Aboriginal language</b>				
Speaks and understands			0.98	4.18*
Understands			0.91	2.77*
Neither †			1.00	1.00
<b>Contact with Elders</b>				
Less than once a week †			1.00	1.00
At least once a week			1.21*	1.76*
<b>Other extracurricular activities</b>				
<b>Screen time per day</b>				
Less than four hours †			1.00	1.00
Four or more hours			0.75*	0.92
<b>Sports</b>				
At least once a week			...	1.22*
Less than weekly †			...	1.00
<b>Cultural activities</b>				
Participant			1.21*	...
No cultural activities †			1.00	...
<b>Other activities<sup>3</sup></b>				
Weekly			2.26*	1.99*
No/few other activities †			1.00	1.00

† reference group

\* statistically significant difference from reference group at  $p < 0.05$

1. Census metropolitan area and census agglomeration influenced zone.

2. Excludes any metropolitan influenced zone inside Inuit Nunangat.

3. Includes participating in art or music groups or lessons; in clubs or groups such as youth groups, drum groups, or dance groups; and helping without pay in the community or at school.

Source: Statistics Canada, Aboriginal Peoples Survey, 2006.

## Using an Aboriginal language and spending time with Elders key indicators of participation in cultural activities

As one would expect, children who spoke an Aboriginal language or spent time with Elders were more likely to participate in cultural activities outside regular school hours. Almost two-thirds (63%) of children who spoke an Aboriginal language took part in cultural activities; even those who understood but did not speak an Aboriginal language were about twice as likely to participate as children with no knowledge (51% versus 27%). These proportions were similar for all three Aboriginal groups (Table 1). After all other variables were taken into account, Aboriginal language speakers were found to have over four times higher odds than children with no Aboriginal language knowledge of being involved in culturally related activities, while children who understood but did not speak had more than two and one-half times higher odds (Table 2).

Spending time with Elders is also associated with participation in cultural activities. One-half (50%) of children who spent time with Elders at least once a week took part in cultural activities, compared with one-third (33%) of those who did not. After controlling for other factors in the model, children with weekly interaction with Elders had 76% higher odds of cultural engagement than those with less frequent contact.

Overall, children who also took part in additional extracurricular activities had much higher rates of participation in cultural activities. More than four in ten (42%) children involved in sports were also engaged in cultural activities, as were almost one-half (46%) of children who had other weekly pastimes such as arts and music, clubs or groups, and volunteering. After controlling for other factors, both sports and other activities remained

significantly associated with cultural participation—the odds of being engaged in cultural activities were about 20% higher for children involved in sports, and almost 100% higher for children involved in other activities. This large difference in the strength of association may be due to the nature of “other activities” as defined in the survey, many of which (e.g., music, art, clubs) may be culturally related.<sup>23</sup>

### Summary

According to the 2006 Aboriginal Peoples Survey, over two-thirds of Inuit, Métis and off-reserve First Nations children participated in sports at least once a week and about four in ten participated in cultural activities. While causal attributions cannot be made, regression models that controlled for the confounding effects of different factors identified three significant associations common to participation in both sports and cultural activities. These common factors were a higher level of parental education, weekly contact with Elders, and involvement in additional extracurricular activities.

Other characteristics associated with sports participation included being a boy, being between 9 and 11 years of age, having very good to excellent health, living in a higher-income family, and spending less than four hours per day watching TV or playing computer and video games.

The other characteristics strongly associated with participation in cultural activities were quite different. Having four or more siblings and having knowledge of an Aboriginal language were important factors influencing children’s involvement in cultural activities.

  
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