

## PEDAGOGY

# Should the Curricular Time Allocated to School Physical Education Be Increased? Insights From Participants in a Follow-Up of the Trois-Rivières Study

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### Abstract

*In this study, we explored the effects of exposure to an experimental program of daily physical education (PE) during primary school on adult attitudes toward school PE. In 2008, 86 original participants in the Trois-Rivières study (44 women and 42 men aged  $44.0 \pm 1.2$  years) underwent a semistructured interview in which their attitudes toward PE, the amount of curricular time that should be allocated to PE, and participants' recollections of their primary school PE program were examined. From 1970 to 1977, these indi-*

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*viduals had been assigned to either an experimental program (5 hr of PE per week from Grade 1 to 6) or the standard curriculum (40 min of PE per week). Participants advocated increasing the time currently allocated to school PE, to an average of 3 hr 25 min/week ( $\pm 1$  hr 9 min). Justifications for such an increase included the lack of other opportunities for physical activity (PA), enhanced academic achievement in active individuals, and the potential contribution of such initiatives to reduce sedentary behavior and childhood obesity. Participants from the experimental group recommended an average of 38 min/week more PE than the controls. The proportion of participants who expressed mostly positive recollections of their PE program was greater in the experimental group (94.9% vs. 82.1%). These findings are suggestive of a consensus for increasing the time allocated to PE, and participants' justifications were mostly consistent with current evidence. Moreover, participation in daily PE may foster the development of more favorable attitudes toward PE.*

Data from the 2007–2009 Canadian Health Measures Survey (CHMS) revealed that only 7% of children and adolescents met current Canadian physical activity (PA) guidelines, which recommend at least 60 min of daily moderate to vigorous PA (Colley et al., 2011; Tremblay, Warburton, et al., 2011). Moreover, a comparison of the CHMS data with findings from the 1981 Canada Fitness Survey shows that over this period almost all aspects of physical fitness have declined (Tremblay et al., 2010). These adverse trends are consistent with a meta-analysis of 20-m shuttle run scores in 55 studies across 11 countries (Tomkinson, Léger, Olds, & Cazorla, 2003). Overall, performance on this test decreased by 0.43% per year between 1980 and 2000.

For many young people, physical education (PE) is a major source of moderate to vigorous PA (Trudeau & Shephard, 2005; U.S. Department of Health Services, 1996). Although some researchers have disclosed low PA levels during PE classes taught by regular classroom teachers (Nettlefold et al., 2011; Simons-Morton, Taylor, Snider, Huang, & Fulton, 1994), quality PE programs taught by a specialist can be successful in maximizing the class time spent in moderate to vigorous PA (Lavallée et al., 1982; Luepker et al., 1996). Moreover, classroom PE seems to supplement rather than replace spontaneous leisure activity. Thus, Lavallée et al. (1982) demon-

strated that students who received 5 hr of weekly physical education taught by a specialist did not compensate for this intervention by reducing their leisure activity. Likewise, Dale, Corbin, and Dale (2000) reported that most adolescents did not compensate for the cessation of compulsory PE in the upper grades of high school by increasing their level of spontaneous leisure-time PA.

Nevertheless, one of the key objectives of PE is to encourage the development of an active lifestyle that will be carried over into adulthood (McKenzie & Lounsbury, 2009; Telama et al., 2005; Trudeau & Shephard, 2005). This goal is particularly important because previous studies have shown that as adolescents mature, physical inactivity tracks more consistently than PA (Hirvensalo & Lintunen, 2011). It is therefore surprising that few researchers have assessed the long-term effects of PE interventions on PA and health-related outcomes (Pate, O'Neill, & McIver, 2011; Trudeau & Shephard, 2005). Of these, only Trudeau and Shephard (2005) in the Trois-Rivières Growth and Development Study included follow-ups greater than 5 years.

Another key objective of PE is to foster the development of a positive attitude toward PA (Trudeau & Shephard, 2005). Several well-supported theories state that attitudes are strongly associated with behavior, including the theory of planned behavior (Ajzen, 1991) and the theory of reasoned action (Fishbein & Ajzen, 1975). Although attitudinal models have been shown to be effective in predicting PA engagement (Godin & Shephard, 1990), few researchers have examined attitudes toward PE as a predictor of PA later in life (Trudeau & Shephard, 2005). Notably, longitudinal data from the Norwegian Longitudinal Health Behaviour Study indicated that attitudes toward PE in adolescence predicted greater PA at 23 years of age in girls, but not in boys (Kjønniksen, Fjørtoft, & Wold, 2009). It is also unclear if the nature of school PE curricula can affect adults' attitudes toward PE classes offered in primary and secondary schools.

The Trois-Rivières study provides a unique opportunity to examine this issue. Therefore, the purpose of this study was to explore the effect of exposure to a quality program of daily PE during primary school (Grades 1 to 6) versus the standard curriculum on participants' attitudes toward PE in adulthood. A secondary objective was to investigate the participants' recollections of their primary school PE program.

## Method

### Participants

In 2008, research assistants from the Université du Québec à Trois-Rivières contacted 253 participants from the 1995–1998 follow-up of the Trois-Rivières study; 86 individuals were recruited from this group (44 women and 42 men aged  $44.0 \pm 1.2$  years). The decision to include 86 participants was primarily based on cost-related issues and challenges in contacting participants (i.e., contact information no longer up to date). Each participant gave informed consent to the present follow-up investigation, as approved by the institutional ethics committee. When they were children, they had been assigned, from 1970 to 1977, to either an experimental program (5 hr of specialist-taught PE per week from Grades 1 to 6) or the standard curriculum of that era for the Province of Québec (40 min of PE per week, taught by the classroom teacher). Briefly, the program was adapted to the students' age, with the first two years being focused on motor skills learning, the second two years on developing cardiorespiratory function and muscular strength (with heart rates in the “training zone” throughout much of the class), and the final two years on covering a variety of sports that may be carried over into adult life (Lavallée et al., 1982). The original study design included two cohorts of participants: one drawn from an urban area (Trois-Rivières) and one from a rural area (Pont-Rouge). Both PE programs were offered in Trois-Rivières and Pont-Rouge. The experimental program was successful in enhancing psychomotor skills, physical performance, aerobic power, and muscle strength relative to control students (Shephard & Trudeau, 2005).

During their high school years, students undertook the standard provincial curriculum (5 years of required PE with a minimum of 1 hr/week), and those continuing to the CEGEP (e.g., college) level of instruction received a further 2 years of required PE (3 hr/week).

### Procedures

Three graduate students performed individual, semistructured interviews to examine, among other topics, participants' attitudes toward PE and the amount of curricular time that should be allocated to PE in primary and secondary schools. The interviews were

also focused retrospectively on participants' PA levels from childhood to adulthood and barriers toward PA (Larouche, Laurencelle, Shephard, & Trudeau, 2012). The interviews lasted between 15 and 35 min; they consisted mainly of open-ended questions and were conducted in person in either Trois-Rivières or Pont-Rouge. The questions that are most relevant for this study are provided in the Appendix.

Semistructured interviews enable the researcher to explore more in depth certain themes and still ensure that all important topics are covered in the interview (Patton, 2002). However, one potential limitation of semistructured interviews is that the flexibility in the formulation of questions may lead participants to respond in different perspectives that may be difficult to compare for analysis purposes (Patton, 2002). Because the aim of the Trois-Rivières study was also to verify a priori hypotheses, some questions were asked in a structured fashion, which is amenable to quantitative analyses. Therefore, in this study, we used a mixed methods approach, which underlies that rather than being mutually exclusive, qualitative and quantitative methods and analyses can be used in a complementary fashion (Casebeer & Verhoef, 1997; Morgan, 2007). Specifically, in this study, quantitative data allowed us to examine differences between groups with respect to the amount of PE time recommended by participants. The aim of qualitative data analysis was to provide a deeper understanding of the reasons underlying the participants' attitudes toward an eventual increase of the time allocated to PE as well as their retrospective attitudes regarding their primary school PE program.

## **Analysis**

The interviews were tape-recorded and transcribed verbatim by a clerk-typist. A code was assigned to each participant to maintain anonymity. Because of recording problems, responses were available for only 78 of the 86 participants. Interview data were assessed according to the Framework Analysis strategy (Ritchie & Spencer, 1994), which allows inductive and deductive testing. This process comprises five steps: (1) familiarization with the data, (2) identification of a thematic framework, (3) indexing of the interview transcripts (e.g., coding), (4) charting, and (5) mapping and interpretation. Three researchers (RL, LL, FT) constructed the thematic framework on

a consensus basis, seeking emergent and a priori themes. Two researchers (RL and a research professional) independently coded the interview transcripts using this framework. Subsequent discussion allowed the researchers to reach a consensus on extracts for which an interobserver difference in coding was observed.

The coded extracts were then systematically compiled in a Microsoft Excel worksheet; each passage was associated with the page number of the corresponding transcript. A summary of the qualitative data was provided in this worksheet, and the worksheet facilitated retrieval of relevant quotations from the participants. This strategy has been shown to be as efficient as more sophisticated qualitative data analysis tools (Swallow, Newton, & Van Lottum, 2003).

The amounts of PE recommended between groups, genders, and milieus (e.g., Trois-Rivières vs. Pont-Rouge) were compared using *t* tests. Mann-Whitney tests were used to examine differences in the proportion of participants reporting mostly positive, neutral, and mostly negative recollections of their primary school PE program. Chi-square tests were used to assess differences in the reasons mentioned for increasing the time allocated to PE and in the positive and negative aspects that participants recalled with respect to their PE program. Content analysis was applied to the qualitative interview data to examine the reasons advocated for increasing the time allocated to PE and participants' recollections of their PE program. Statistical analyses were performed using SPSS 12.0 for Windows.

## Results

**Time allocated to physical education.** Participants, whether drawn from the control or the experimental group, advocated for increasing the current PE curricular time. The average time recommended was 3 hr 25 min  $\pm$  1 hr 9 min per week (Table 1). As revealed in *t* tests, on average, participants from the experimental group recommended 38 min/week more PE than the controls ( $p = 0.015$ ). Nevertheless, many participants from the experimental group (25 of 39) advocated less than the 5 hr/week that they had received when they were children. In contrast, participants from the control group recommended at least twice the amount of PE that they had received in primary school. No significant differences were found in recommendations between men and women, nor between those taught in Trois-Rivières and those taught in Pont-Rouge.

**Table 1**  
*Amount of Curricular Time That Should Be Allocated to PE as Recommended by Participants From Experimental and Control Groups ( $M \pm SD$ )*

Group	Total	Experimental	Control	Women	Men	Trois-Rivières	Pont-Rouge
Participants	78	39	39	38	40	26	52
Hours of PE							
recommended	3 hr 25 ± 1 hr 09	3 hr 44* ± 1 hr 09	3 hr 06 ± 1 hr 03	3 hr 26 ± 1 hr 03	3 hr 24 ± 1 hr 14	3 hr 28 ± 1 hr 15	3 hr 23 ± 1 hr 06
Range	1 hr 30 – 6 hr 15	2 hr 00 – 6 hr 15	1 hr 30 – 5 hr 00	2 hr 00 – 5 hr 00	1 hr 30 – 6 hr 15	2 hr 00 – 6 hr 15	1 hr 30 – 5 hr 00

\*Significant difference between groups at the 0.05 threshold.

**Reasons for increasing the time allocated to physical education.** When participants were questioned why the time allocated to PE should be increased over current provincial norms, the most frequent arguments were the lack of alternative opportunities for children to engage in PA, the possibility of enhancing academic achievement (or enhancing concentration in class), the ubiquity of sedentary behavior, and concerns related to the current high prevalence of childhood obesity. An overview of the main themes that were mentioned by the participants in the interviews and a comparison of the occurrence of these themes across group, gender, and milieu are presented in Table 2.

Forty-two participants argued that children have a lack of opportunities to become involved in PA and/or that participation in a quality PE program could augment a child's PA level. For example, one participant in the experimental program said, "Five hours per week, it's a minimum we should give to children to give them the desire to be active." Another participant said, "I think that in the school system, it's the only way, in the 10 months of the school year, to do it [physical activity]. There are no constraints."

Sixteen participants mentioned that increasing the allocation of curricular time to PE could lead to greater academic achievement and/or concentration in class. For example, one participant argued, "It's good for studying. It's been proven that there's a correlation between grades and the level of physical activity." Another participant said, "Listen, in Finland, they have the highest academic achievement; they have almost no dropouts. I think that they go to school in the morning and, in the afternoon, they play sports. It shows that a healthy mind in a healthy body is priceless!"

In addition, 14 participants mentioned concerns about the amount of time that children devote to sedentary behaviors (particularly watching television, playing video games, and other forms of computer usage). One participant argued, "When we were young, we were always playing outside; nowadays, kids are on the Nintendo." Another said, "Personally, with everything that kids can have at home, computers and everything, it would be a good idea if, during school time, they exercised more."

**Table 2***Reasons Why Participants Advocated Increasing the Curricular Time Allocated to PE*

Reasons	Occurrences	Experimental ( <i>n</i> = 26)	Control ( <i>n</i> = 35)	Women ( <i>n</i> = 30)	Men ( <i>n</i> = 31)	Trois-Rivières ( <i>n</i> = 23)	Pont-Rouge ( <i>n</i> = 38)
To provide more opportunities for youth to be physically active	42	19	23	21	21	19	23
To favor academic achievement/increase concentration	16	7	9	5	11	3	13
Because children spend a lot of time in sedentary behavior (especially TV, video games, and computers)	14	6	8	7	7	5	9
To prevent (or reduce) childhood obesity	11	5	6	5	6	3	8
PE should be fun and allow children to discover a wide range of physical activities	11	5	6	7	4	4	7
Because physical education allows to dissipate stress	11	3	8	7	4	1*	10
Because physical education can increase fitness	8	3	5	4	4	2	6
Others	16	12*	4	7	9	7	9

*Note.* Reasons for increasing the time allocated to PE were provided by 61 participants, and many of them gave more than one reason. Occurrences of each reason were compared between groups using chi-square tests. Reasons classified as “others” were mentioned by fewer than two participants.

\*Significant difference between groups at the 0.05 threshold.

Eleven participants expressed concerns related to the increasing prevalence of childhood obesity. Such concerns are evident in this participant's words:

You know, it's important because they keep talking of good food and junk food and, at the end of the day, the kids don't have physical education. Even if you put salad on every table, if the kids are not active, they'll get fat anyway!

Eleven participants insisted that PE classes should be centered on pleasure (e.g., not on competition), and a wide range of activities should be offered so children can explore new activities that they might enjoy. For example, one participant argued, "We absolutely need to make young children understand that it's not about winning; it's about participating." Another individual said, "It [PE] opens the mind to sports that you would not necessarily have heard of otherwise."

Eleven participants also argued that PE enables children and youth to dissipate stress or "burn extra energy." One participant said, "It [e.g., increasing time allocated to PE] would really help children to release tensions mentally and, sometimes, physically." Finally, eight participants mentioned that PE could enhance physical fitness in children and youth. For example, one declared, "Well, there could be more physical education because our children are not fit."

Other reasons for increasing the time allocated to PE were mentioned by 46.2% of participants from the experimental group compared to only 11.4% of their control counterparts ( $\chi^2 = 9.30$ ,  $p = 0.002$ ). Otherwise, reasons were not different by group or gender. However, reasons mentioned tended to be different between milieus. Of participants from Trois-Rivières, 82.6% argued that children have a lack of opportunities to become involved in PA compared with 60.5% of their Pont-Rouge counterparts, although the difference was not statistically significant ( $\chi^2 = 3.26$ ,  $p = 0.071$ ). In contrast, greater proportions of Pont-Rouge participants advocated that increasing the time allocated to PE could help to dissipate stress (26.3% vs. 4.3%,  $\chi^2 = 4.68$ ,  $p = 0.031$ ) and to favor academic achievement (34.2% vs. 13.0%,  $\chi^2 = 3.32$ ,  $p = 0.069$ ).

**Participants' recollections of their PE program.** Sixty-nine participants had mostly positive perceptions of their primary school PE program, four had mostly negative perceptions, and five had neither positive nor negative perceptions. Recollections were significantly more positive among participants from the experimental group ( $U = 653, p = 0.037$ ), from which 94.9% had mostly positive recollections compared to 82.1% in the control group. However, males' and females' attitudes toward their PE classes were not significantly different.

The most frequently mentioned positive aspect was the frequency of PE classes ( $n = 22$ ), particularly among participants from the experimental group ( $\chi^2 = 12.56, p < 0.001$ ). Many participants also emphasized the diversity of activities that they had experienced during PE ( $n = 17$ ) and the annual medical and physiological evaluation that was part of the original Trois-Rivières study ( $n = 15$ ). One participant from the experimental group argued, "I loved that program! I mean we were lucky to have an hour of PE per day. It's an interest that developed with this program, to be active every day." Seven participants from the experimental group emphasized the quality of the PE instruction that they had received ( $\chi^2 = 6.90, p = 0.009$ ). For example, one participant from Pont-Rouge recalled, "He [the PE teacher] was super kind; he was a devoted teacher who loved children. He was passionate!" In contrast, seven participants from the control group argued that they had not received sufficient PE ( $\chi^2 = 5.50, p = 0.019$ ). One of these participants clearly expressed his jealousy of the experimental group: "I was a bit jealous of the other group that did PE 5 times a week. I was a sporty guy, so I would've liked to be at their place!" No differences were found between men and women with respect to the positive and negative aspects mentioned. The majority of participants (55.7%) said that there was nothing in particular that they disliked about their primary school PE program.

## Discussion

In this study, we examined the effect of a quality daily PE program throughout primary school on attitudes toward PE in adulthood among program participants and other students who had received the standard curriculum taught by the homeroom teacher. The main findings were (1) participants from experimental and control groups advocated increasing the time currently allocated to PE

and (2) those from the experimental group on average recommended allocating 38 min per week more time to PE than did the control participants. Nevertheless, many participants from the experimental group (25 of 39) recommended a lesser time allocation than the 5 hr/week that they had received while attending primary school. Most of those who were questioned suggested that the experimental program developed during the Trois-Rivières study would be suitable for today's generation of children. Finally, participants from the experimental group had more favorable recollections of their primary school PE program than did the controls.

The reasons why participants advocated for increasing the time allocated to PE are generally in agreement with the published literature. For example, current guidelines recommend that schoolchildren engage in a minimum of 60 min of daily PA (e.g., Tremblay, Warburton, et al., 2011), and an increased allocation of curricular time to PE represents one potential strategy to increase the proportion of children who meet the PA guidelines. In 2006, the American Heart Association (AHA) issued a call to action for schools to assume a leadership role in promoting PA (Pate et al., 2006). One key policy recommendation of the AHA specified that "schools should deliver evidence-based health-related PE programs that meet national standards to students at all school levels. These programs should provide substantial amounts of moderate-to-vigorous physical activity (i.e. 50% of class time)" (Pate et al., 2006, p. 1220). If this objective was achieved, 5 hr of weekly PE would translate into 30 min of moderate to vigorous PA on every school day.

Several of the participants suggested that increasing the allocation of curricular time to PE could enhance academic achievement. Probably because they lived in relatively small communities (metropolitan Trois-Rivières, current population about 130,000, Pont-Rouge about 8,500), participants seemed familiar with earlier findings from the Trois-Rivières study. These earlier observations indicated that despite a 14% reduction in academic class time for experimental subjects, this group had slightly better academic results than the control participants (Shephard et al., 1984). It is unlikely that dissemination of information about the benefits of primary school PE would be as great if observations were to be repeated in a larger city; however, the Trois-Rivières study researchers had not

yet directly informed the participants about the results of the study. Nevertheless, in a systematic review of other quasi-experimental studies, Trudeau and Shephard (2008) confirmed that allocating up to 1 additional hour per day of curricular time to PE does not compromise and may even enhance academic achievement.

The concerns that participants expressed relative to the current epidemic of childhood obesity, sedentary behavior, and low levels of physical fitness again reflect at least a passing familiarity with the scientific literature on these topics (Colley et al., 2011; Lobstein, Baur, & Uauy, 2004; Tremblay et al., 2010). Having a high BMI during adolescence is strongly associated with future risk of diabetes and cardiovascular diseases (Tirosh et al., 2011). It has recently been recommended that children should not accumulate more than 2 hr of discretionary sedentary time per day (Tremblay, Leblanc, et al., 2011), but Canadian children currently engage in sedentary behavior for an average of 8.6 hr/day (Colley et al., 2011). Although the evidence on the effects of school-based PA interventions on a child's BMI and body fat content remains inconclusive (Harris, Kuramoto, Schulzer, & Retallack, 2009), longitudinal data from the Canadian National Longitudinal Survey of Children and Youth indicate that normal weight and overweight youth who receive more PE classes are more likely to increase their PA levels (Pérez, 2003).

Other participants in this study argued that PE classes should include a variety of physical activities, thus allowing children to discover and learn new skills. This is in line with the aim of the Trois-Rivières study to expose children in the experimental group to activities not normally practiced during PE classes, such as cross-country skiing and skating (Lavallée et al., 1982). Moreover, other authors have underlined that PE curricula should include a variety of activities, with a focus on so-called lifetime physical activities that may be more likely to carry over into adulthood (Kjønniksen et al., 2009; Rikard & Banville, 2006; Telama et al., 2005).

In contrast, adults' adverse recollections of school PE programs have been reported in at least one U.S study (Taylor, Blair, Cummings, Wun, & Malina, 1999). Individuals' recollections of PE probably depend on program content, and at the time of this U.S. report, many American schools placed a strong emphasis on high performance sport and athletic "success." Such an approach may

lead less skilled children to feel excluded. On average, the participants from our experimental group advocated allocating more time to PE than did the controls, and this appears to reflect retrospective enjoyment rather than dislike of their PE class. In confirmation of this view, the first follow-up results from the Trois-Rivières study (1995–1998) indicated that 39% of experimental participants were very satisfied with their primary school PE classes compared to only 12% of their control counterparts (Shephard & Trudeau, 2005). Furthermore, in line with our results, other surveys of parents have noted strong support for increasing the curricular time allocated to PE (National Association for Sport and Physical Education, 2003; Physical and Health Education Canada, 2013).

The main limitation of our study is the nonrepresentativeness of the sample (observations were limited to two schools: one in urban and one in rural Québec), which limits the generalizability of the findings. Second, participants may have had a social desirability bias in their recollections of their PE program and the amount of PE curricular time that they recommended for today's children and youth. Nevertheless, the proportion of participants declaring positive attitudes toward their PE program is comparable to that reported by Kjønnsen et al. (2009). Third, a selection bias may also have affected our most recent results because a proportion of participants from the original cohort could not be questioned because of either migration out of the region or unwillingness to participate in the follow-up examinations. Thus, it is possible that participants in the follow-up enjoyed PE to a greater extent than those who declined participation. Fourth, we acknowledge that the development of attitudes is a complex psychological process that evolves with individual experience (Kjønnsen et al., 2009); thus, it is likely that participants' attitudes toward PE have been affected by other sources than the PE curriculum to which they were assigned. This may have minimized differences between groups, especially given that in small communities such as Trois-Rivières and Pont-Rouge participants from the control group were inevitably aware of the existence of the experimental program.

In contrast, strengths of our investigation include the quasi-experimental design of the original study, a relatively large sample size for an investigation involving qualitative methods, the

consensus-based process employed for coding interview transcripts, and the uncommon length of follow-up. Furthermore, the Trois-Rivières study remains, to our knowledge, the only investigation in which the long-term effects of a quasi-experimental enhanced PE program have been evaluated in any detail (Trudeau & Shephard, 2005).

## Conclusion

Our study highlights a strong consensus among participants that the current time allocated to school PE should be increased. Moreover, adults who experienced daily PE during their years in primary school expressed more positive attitudes toward PE than those who had participated in the control program. Participants' justifications for allocating more curricular time to PE indicate some familiarity with current empirical evidence on these issues, including recognition of population trends toward low PA, increased obesity, and a decreased level of physical fitness. Demonstration of such a consensus among those who are now parents has relevance for policy makers, particularly in the health and education sectors.

A clear need remains for more quasi-experimental studies of PE interventions during childhood and adolescence. It would be particularly interesting to see how far the introduction of daily PE throughout high school could prevent the strong decline in PA that is currently typical in adolescence (Dumith, Gigante, Domingues, & Kohl, 2011). Future longitudinal studies should also be focused on factors causing individuals to develop positive or negative attitudes toward PA and how such attitudes affect the tracking of PA levels into adult life (Hirvensalo & Lintunen, 2011). Along with other data (National Association for Sport and Physical Education, 2003), our results indicate a strong support for physical education as a school matter and therefore have implications for educational policies.

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## Appendix

Open-ended questions used to probe key issues pertaining to this article (original French language version in brackets)

**Question 1.** In general, how did you like the physical education program that you followed during primary school? What did you like the most? What did you like the least? [En général, comment aimiez-vous le programme d'éducation physique que vous avez suivi durant l'école primaire? Qu'est-ce que vous aimiez le plus? Qu'est-ce que vous aimiez le moins?]

**Question 18.** Considering the life habits of today's children and youth and your experience as a participant in the Trois-Rivières study, would you be favorable to an increase in time allocated to physical education in primary and secondary schools in Québec? [Considérant les habitudes de vie des jeunes et votre expérience comme participant(e) dans l'étude de Trois-Rivières, seriez-vous en faveur d'augmenter le temps alloué à l'éducation physique dans les écoles primaires et secondaires du Québec?]

**Question 19.** Currently, children and youth typically receive one hour of physical education per week. According to you, how many hours should be mandatory in primary and secondary school? Why? [Actuellement, les élèves bénéficient d'une heure d'éducation physique par semaine. Selon vous, combien d'heures devraient être allouées l'école primaire et secondaire? Pour quelles raisons? ]