

# At My Best 4-5-6: Users' Observations of a Health Education Curriculum-Support Resource

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*Background and context:* At My Best 4-5-6 is a curriculum-support resource intended primarily for elementary generalist or physical and health education specialist teachers in Canada. Created by Physical and Health Education Canada and AstraZeneca, At My Best 4-5-6 aims to educate students about—and encourage healthy behaviours related to—physical activity, healthy eating, and emotional wellness. *Objective:* At My Best 4-5-6 is a relatively new program that is now being subject to a pilot-revision-pilot process. Given the lack of research literature focused upon the first iteration's implementation, the objective was to complete an investigation of teachers' observations related to the resource. *Method:* A cross-sectional survey design utilized both quantitative and qualitative data collected through on-line surveys. The data gleaned from 66 survey questions were analysed to explore program implementation and effectiveness, as well as overall teacher opinions regarding At My Best 4-5-6. *Results and conclusion:* We share results focused upon the following: 1) demographics: users, locations, schools, and usage, 2) need for and suitability of At My Best 4-5-6, 3) implementation, and 4) cultural relevance. Given these results, we offer some discussion and concluding observations related to present and future versions of At My Best 4-5-6. Moreover, we suggest such concluding observations might be of particular interest to others engaged in the creation, dissemination, and/or research of similar health education curriculum-support resources.

*Historique et contexte:* À mon meilleur 4-5-6 est une ressource conçue comme soutien au programme d'études à l'élémentaire et visant surtout les enseignants généralistes ou les enseignants spécialistes en éducation physique ou en éducation à la santé au Canada. Créé par Éducation physique et santé Canada et AstraZeneca, À mon meilleur 4-5-6 a pour objectif de conscientiser les élèves quant à l'activité physique, une saine alimentation et le bien-être émotionnel. *Objectif :* À mon meilleur 4-5-6 est un programme relativement récent qui fait maintenant l'objet d'un processus d'essai de modification. Compte tenu du manque de documents de recherche portant sur la mise en œuvre de la première version du programme, notre objectif était d'enquêter sur les observations des enseignants relatives à la ressource. *Méthode:* Une étude transversale a porté sur des données quantitatives et qualitatives provenant d'enquêtes en ligne. Les données tirées de 66 questions d'enquête ont servi dans l'analyse de la mise en œuvre et l'efficacité du programme, ainsi que les opinions globales qu'ont les enseignants de cette ressource. *Résultats et conclusion :* Nos conclusions portent sur les quatre points suivants : 1) des données démographiques : usagers, emplacements, écoles et usage, 2) la nécessité et la pertinence de À mon meilleur 4-5-6, 3) la mise en œuvre, et 4) la pertinence culturelle. En nous appuyant sur ces résultats, nous offrons des éléments de

*discussion et des observations finales en lien avec les versions actuelle et future de À mon meilleur 4-5-6. Nous proposons, de plus, que de telles observations finales pourraient intéresser tout particulièrement les personnes impliquées dans la création, la diffusion ou la recherche de telles ressources conçues comme soutien au programme d'éducation à la santé.*

Canadian teachers have, at their immediate disposal, several health-related curriculum-support resources available to help them teach. Partly due to Canada's unique educational system—whereby education falls under provincial/territorial jurisdiction—many different health education curricula and curriculum-support resources exist across the nation. With so many health education curriculum-support resources available to Canadian teachers, it is understandably difficult for teachers to discern between those that are useful from those that are not. Indeed, without a sense of these many resources' age- or cultural-appropriateness, ease of use, curriculum alignment, or ability to engage students, teachers might easily be expected to try them all and 'figure it out' for themselves.

### **Canada's Health Education and Health-related Curriculum-support Resources**

Health education takes on multiple forms within Canadian school communities. More specifically, health education is often either taught by an elementary generalist teacher (who teaches health education in addition to most-or-all other subjects) or by a physical and health education specialist (who specialises in teaching physical and health education). While we recognize that some may view physical education and health education as two distinct disciplines and subjects, within some provinces/territories they are taught as one. That is, although some provinces/territories offer physical education classes (often labelled as PE) and health education classes, others offer physical and health education classes (often labelled as PHE). The generalist-as-teacher model (with two separate subjects—physical education and health education) is more common across the nation, though one of the largest provinces, Ontario, has PHE taught by both generalists and specialists.

Canada's health education curriculum-support resources come from many sectors. Some corporate associations and corporations have developed health education resources to support teachers. For example, the Dairy Farmers of Ontario has developed *Milk on the Moove* and Coca Cola Canada has developed *SOGO Active*. Additionally, not-for-profit organizations have developed similar resources; consider the Ontario Physical and Health Education Association's (OPHEA) *Learn to Move, Fundamental Movement Skills and Strategies* and the Centre for Addiction and Mental Health's (CAMH) *Growing Up Resilient: Ways to Build Resilience in Children and Youth*. In some instances, these different sorts of institutions have worked together to create, distribute, and/or endorse curriculum-support resources. Materializations of such partnerships include *Learn to Play Project* (developed by ParticipACTION and the Royal Bank of Canada [RBC]) and *Bullying: What You Should Know ... What You Can Do* (developed by the Boys and Girls Clubs of Canada and Sears Canada).

Currently, Canada has a national physical and health organization, Physical and Health Education Canada (PHE Canada), that creates, distributes, and/or endorses such health education resources (Robinson & Randall, 2016). PHE Canada's endorsement process includes a resource review committee comprised of content experts who analyse resources' suitability and applicability for schools and teachers across Canada. Resources that 'pass' through this process

receive an endorsement from PHE Canada and, subsequently, are recognized and publicised through PHE Canada's networks. National in scope, scale, and influence, PHE Canada has a long history (since 1933) of informing Canada's health education teachers (PHE Canada, 2014). While many of PHE Canada's curriculum-support resources have been created independently by the organization itself, others have come about only as a result of partnerships with National Sport Organizations (NSOs) or corporations. Some of PHE Canada's most recent resources include *Passport for Life*, *Tennis in Schools*, *Guide to Ride*, and *At My Best*.

Although such resources may offer meaningful contributions to the teaching and learning of health education, with the exception of conceptual critiques (e.g., see Robinson, Gleddie & Schaefer, 2016), next-to-no published research literature exists related to them. Consequently, teachers—who already have incredibly hectic work lives—are functionally forced to choose teaching resources without any peer-reviewed evidence and information related to their efficacy and usability. While we recognize that teachers may not have the time to read research before choosing a resource, having the research available allows us, and others, the opportunity to engage in knowledge translation and dissemination in a much more informed manner. For example, teachers' conventions, professional conferences, and the PHE Canada website itself all present suitable avenues for knowledge translation and dissemination. It is clear to us that user-generated data is missing and needed. We believe that it is needed if such knowledge translation and dissemination activities are to be trustworthy and applicable to the day-to-day lives of those who teach within elementary schools. Attending to such data sources also honours and privileges the knowledge and experiences of those at the grassroots level.

### ***At My Best 4-5-6***

*At My Best 4-5-6* is a 'follow-up' program, created after the implementation of *At My Best*, a similar educational resource intended for a younger audience (grades K-3). Comparable to the original *At My Best* program, *At My Best 4-5-6* is free to teachers, curriculum-aligned, and meant to promote and develop a somewhat holistic notion of children's health. More specifically, *At My Best 4-5-6* includes ten lessons focused upon three defined elements of wellness: physical activity, healthy eating, and emotional wellness. Though similar to the original *At My Best* in these respects, *At My Best 4-5-6* differs in others. For example, it targets an older age group (grades 4-6) and has only ever been available online (*At My Best* was first available as a 'hard' material resource). The resource is shared via a specific website that includes lesson plans, videos, games, and supplementary materials. It is important to note that *At My Best 4-5-6* includes a framework of *I-We-Us* (progressing from the K-3 model of *Ability, Belonging, Caring*) and is consistent, in many ways, with a social-ecological model (Bronfrenbrenner, 1977).

### **Researching a Curriculum-support Resource: *At My Best 4-5-6***

Focusing upon *At My Best 4-5-6* at this time is especially appropriate for a number of reasons. Notwithstanding the 'stamp of approval' offered by PHE Canada, teachers who have used this new resource have not yet had an opportunity to share their experiences with it. As a result, others have not yet had an opportunity to consider such feedback as they contemplate also using *At My Best 4-5-6*. As well, the uptake of *At My Best 4-5-6* has been less than ideal. More specifically, only 850 individuals within Canada have subscribed to the program. This is out of

the approximately 271, 200 elementary school teachers that teach within the nation (Statistics Canada, 2011). PHE Canada has, as a result, begun a pilot-revision-pilot process (including this study) to improve upon the resource. Moreover, and as already suggested, there exists no research data related to this resource or its implementation.

Data from this investigation might find value in its ability to inform the resource revision process while also informing teachers and teacher educators about the suitability and usability of the resource. Additionally, our findings may be of value to those organizations or individuals seeking to develop a health education resource for teachers. Although not completely generalizable, we are hopeful that our investigation of teachers' observations related to the resource has the potential to contribute to the uptake and quality of newly developed resources in this area.

### **Research Related to Users and Usage of Programs Similar to *At My Best 4-5-6***

Implementing comprehensive school-based programs is one way of helping children lead active, healthy lives (Berg, Hickson, & Card, 2013). Since these types of programs are comprehensive in nature, they can focus on making changes on multiple facets. Moreover, because children spend a considerable amount of time during their formative years in school environments, in-school programs present, to many, ideal opportunities to engage many youngsters in the development of healthy behaviours. Such development can help children lead fulfilling lives while giving them the knowledge and skills to make the right decisions that will continue to promote good health. These early approaches can assist children in avoiding health issues that result from, for example, poor nutrition, lack of exercise, abuse of drugs and alcohol, and other unsafe behaviours. Comprehensive approaches have shown tremendous promise in schools (Murray, Low, Hollis, Cross, & Davis, 2007) and research has shown that implementing comprehensive health programs provide students with positive outcomes (Harrell, Davy, Stewart, & King, 2005; Mahar et al., 2006; Nemet, Geva, & Eliakim, 2011; Verstraete Cardo, De Clercq, & de Bourdeaudhuij, 2007). Similar programs have been researched in recent years. Some of them are detailed below.

Many physical activity and healthy eating in-school interventions are top-down and teacher-led (Gutuskey, McCaughy, Shen, Centeio, & Garn, 2016). Examples of these intervention programs include the Coordinated Approach to Child Health (CATCH; Franks et al., 2007) and SPARK (Mckenzie, Alcaraz, Sallis, & Faucette, 1998). Like *At My Best 4-5-6*, CATCH calls upon teachers to implement a health resource that focuses upon both physical activity and healthy eating. Unlike *At My Best 4-5-6*, CATCH also includes additional whole school elements related to the school environment and physical education teacher responsibilities. SPARK physical education (Mckenzie et al., 1998) is a health-related program that also has some parallels to *At My Best 4-5-6*. It was designed to support both specialist and generalist teachers with curriculum. Research results (based on survey data) indicated that SPARK had long-term uptake (i.e., 80% over four years) with users reporting more frequent physical education classes compared to non-users (Dowda, Sallis, Mckenzie, Rosengard, & Kohl, 2005). Researchers also reinforced the importance of research-based evidence for programs such as these—both for ongoing improvement of the program and for implementation efficacy.

Other programs similar to *At My Best 4-5-6* have considered the perception of stakeholders (e.g., teachers, parents, students). For example, LEAP (Lifestyle Education for Activity Program) uses a social-ecological model as its organizational framework (Ward et al., 2006). LEAP is

designed to provide training, support, and instructional capacity building to support local needs. Twelve intervention schools were involved in LEAP over a two-year period. Survey results indicated that teachers supported the LEAP program and believed that it can be a sustainable program. Barr-Anderson et al. (2012) implemented peer-leadership and the use of DVDs to increase the physical activity levels of 87 students in two schools. A majority of students (87%) reported that they would recommend the program to peers and all teachers reported that the DVDs were well-received by the students. Another program researched classroom-based self-management lessons promoting physical activity that were taught by a physical education specialist in eight elementary schools (Cardon, Haerens, Verstraete, & de Bourdeaudhuij, 2009). Questionnaires were used to gather the perceptions of the program from children and oral surveys gathered parent and teacher perceptions. Overall, the students were enthusiastic about the program, while teachers and parents perceived the lessons as useful. Similarly, Clarke, Sixsmith, and Barry (2015) investigated students' experiences related to the introduction of an emotional wellness program. Results from that experimental inquiry suggested that students who were within an intervention group developed a broader range of vocabulary and understanding related to emotions and problem solving.

Hodges, Hodges-Kulinna, and Kloeppel (2014) studied teacher, student, and parent perceptions of the Fitness for Life Elementary (FFLE) program. FFLE is a comprehensive primary curricular program which aims to deliver physical activity and teach concepts that promote active, healthy lifestyles. Overall, teachers who participated in FFLE had positive reflections regarding the program.

Finally, elementary school teachers who taught WAVES—an obesity prevention program—were surveyed about their experiences delivering the program (Griffin et al., 2015). Some of the most prohibitive barriers were related to time limitations. Additionally, some teachers did not 'buy in' to the program, believing that it did not present a positive contribution to their students' education.

## **Research Methodology**

Previous research that has focused upon teachers' implementation of curriculum-support resources has utilized observations, questionnaires or surveys, and individual or focus group interviews (e.g., see Ransford, Greenberg, Domitrovich, Small, & Jacobson, 2009; Remillard, 2000; Young et al., 2008). We have followed a similar research design seeking perceptions related to teachers' implementation of *At My Best 4-5-6*. With this intent, and the wide geographical region separating teachers across the nation, we have taken a cross-sectional survey approach to address our research intentions. Cross-sectional survey research is used to collect data at one point in time regarding attitudes, beliefs, and/or practices (Creswell, 2015). Mills and Gay (2016) also note that utilizing a cross-sectional survey approach is effective for providing a glimpse of attitudes and beliefs of individuals.

## **Research Methods**

The cross-sectional survey research design utilized both quantitative and qualitative data collected through on-line surveys. The data were analysed to explore program implementation, its effectiveness, and overall teacher opinions regarding *At My Best 4-5-6*.

## Survey

Focusing upon unknown information related to users' experiences implementing *At My Best 4-5-6* (especially their perceptions about the resource's usefulness and appropriateness for both their students and their provincial health curricula), a team of three researchers drafted an initial survey. Subsequently, the survey was piloted and reviewed by an external advisory team of four elementary generalist teachers, two physical and health education specialist teachers, and five university researchers. Pilot results and reviewers' feedback shaped the draft survey so that the advisory team's feedback and suggestions were captured in the finalized version of the survey. The online survey for this research was hosted by FluidSurveys™. The survey included 66 questions with the majority requiring Likert-type responses (a smaller number of questions invited open responses).

In addition to basic demographic information and resource implementation questions, more specific questions related to *At My Best 4-5-6*'s target areas (i.e., physical activity, healthy eating, emotional wellness) were posed on the survey. Finally, participants were given a number of opportunities to reply to questions related to specific resource elements (e.g., cultural relevance to minority groups, supplemental materials, etc.).

## Participants

Given that *At My Best 4-5-6* is an online resource (and its requirement for users<sup>1</sup> to first register online), it is especially straightforward to determine how many users have accessed the resource. A total of 850 different users have registered online and gained access to *At My Best 4-5-6*.

A letter of invitation was emailed to all 850 of these users inviting them to participate in the research. A total of 185 users agreed to participate; 149 were English and 36 were French. It is also important to recognize that although 185 participants completed the survey, only 113 (97 English, 16 French) indicated that they actually used the resource. Therefore, all data within this article are restricted to those who used the resource, unless otherwise indicated.

## Data Analysis

All quantitative survey data were stored, recoded, and analyzed using Microsoft Excel software. Using the recoded data, basic descriptive and analytical statistics (i.e., means, frequencies, correlations) were calculated. All qualitative survey data were originally analyzed by an initial researcher who searched for key issues, similarities, differences, recurring ideas, clustering, patterns, and relationships in the responses to the guiding open-ended questions. By categorizing this verbatim data according to methods outlined by Creswell (2015) and Miles and Huberman (1994), dominant themes emerged, allowing for analysis and interpretation. Initially, all qualitative responses were read several times by the primary investigator until themes began to emerge from the data. Once confident with the themes, codes were created to reflect these themes. In an effort to ensure credibility and confirmability, all statements were coded by another researcher to determine the degree of agreement. The researchers engaged in a number of discussions about different coding results until a 100% agreement was achieved on all coded statements. This process required a small number of coded statements to be discarded or combined.

## Survey Results and Discussion

The overall purpose of this study was to engage in an investigation of participant users' observations related to the *At My Best 4-5-6* resource. The following provides a summary of the survey results as well as a discussion of the thematic analysis.

### Demographics: Users, Locations, Schools, and Usage

Although 185 participants completed the survey, only 113 (61%) indicated that they had actually used the *At My Best 4-5-6* resource. The other 72 (39%) participants had registered for the program, but had yet to implement it with students. This information is telling. That is, the observation that 850 people registered for the *At My Best 4-5-6* online is no indication that 850 people implemented the program. The best estimate (and we believe this is overly optimistic), given the survey results, is that approximately 60% of these 850 registrants (i.e., approximately 500) may have actually implemented the program with students.

*At My Best 4-5-6* was found to be in use in some provinces/territories more than others. Moreover, though the relationship between provincial/territorial usage and population was very strongly correlated ( $r = .89$ ,  $p \leq .001$ ,  $R^2 = .79$ ), some provinces/territories were very clearly underutilizing the resource. For example, although Ontario users made up the largest group of users (Ontario also has the highest population), usage within Quebec (which has the second highest population) was relatively poor, and usage within Alberta was more than double the usage within British Columbia (despite having a much smaller population). See Figure 1 for *At My Best 4-5-6* relative usage by province/territory.

The demographic results certainly provide some data for consideration. Although overall usage is not extremely high, some provinces (e.g., Alberta) are using the resource more

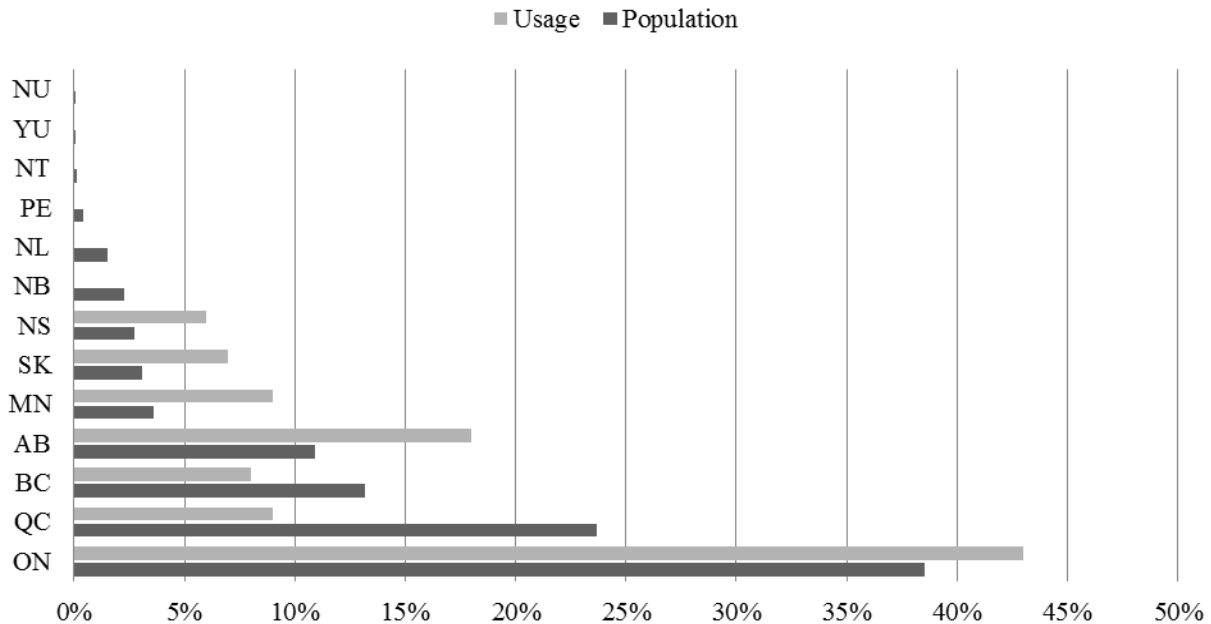


Figure 1. Provincial/territorial usage and population (by percentage).

frequently despite a relatively smaller population. This may be one of the ‘problems’ with having a national association (based in the nation’s capital, Ottawa) providing a resource for schools across the nation. Reaching teachers in all 13 provinces/territories is quite obviously not happening as idealized. PHE Canada might benefit from forging stronger relationships with provincial/territorial associations and/or governments if they want their nationally-endorsed resources within more provincially/territorially regulated schools.

Users were also asked to characterize the location of their school as well as any observable minority populations within their school (i.e., with a minimum of 30% of the total school population). Thirty four percent of users were from urban schools, 22% were from suburban schools, 40% were from rural schools, and 4% were from band-operated on-reserve schools. Sixteen percent of users taught in schools with notable First Nations populations, 25% taught in schools with notable immigrant newcomer populations, and 59% taught in schools with notable low-socioeconomic status (SES) populations. A full 25% of participants identified other notable populations within their school. These included “behaviourally challenged,” “Hutterite,” “special education,” and “high socioeconomic status.” Given the high number of schools that serve low-income, Aboriginal, and new immigrant populations, the resource ought to have a purposeful focus upon cultural relevance and appropriateness. Moreover, the resource itself might undergo a systematic review of its cultural relevance or appropriateness to for these marginalized and minoritized groups (see Gay, 2010).

The teachers themselves were predominately elementary school (46%) or middle school (8%) generalist teachers. Only a third (33%) were actually physical and health education specialists, while 13% identified as “other” (e.g., guidance counsellors, community health nurses, administrators, etc.). The largest group of these “other” users was administrators (mostly principals) followed by nurses and nurse educators. It is difficult for a health education curriculum-support resource to be used by anyone, or everyone. PHE Canada’s attempt to create a resource that could be used by those who teach health education has invited many individuals to use *At My Best 4-5-6*. It may, therefore, be advantageous to focus the target audience for this resource upon a more select group—perhaps upon teachers. As has been found here, elementary generalist teachers make up 46% of the user group for *At My Best 4-5-6*. Still, and notwithstanding the abovementioned suggestion for a focused target audience, it is also encouraging to see 13% of users come from the “other” category as this could be an indication of increasing interest in physical activity, healthy eating, and emotional wellness.

For those who used the resource, timeframes for completing an *At My Best 4-5-6* unit ranged from one week to over six months (see Figure 2). Most participants indicated that they taught a unit for two to four weeks, followed closely by one to two months. It is also noteworthy that 20% of participants indicated that they were uncertain about a teaching timeframe as they “did not complete a unit.”

Recognizing that the *At My Best 4-5-6* unit (for all three grade levels) is meant to be a 10-lesson unit, participants were also asked how many of the ten lessons they had taught (see Figure 3). Only 6% of all participants had taught the entire unit (i.e., all 10 lessons) and very few had completed eight or more lessons (15%). That is, a full 85% taught no more than 70% of the intended lessons. Perhaps most noteworthy, the majority of the participants had completed between two and six lessons (with six lessons being the most common response at 19%).

Because a large number of users are only accessing between 4-6 of the available 10 lessons, it may be worth examining a “stand-alone” format where users can pick and choose from lessons based on content as opposed to a contiguous unit. Or, this may be indicative that 10 lessons are



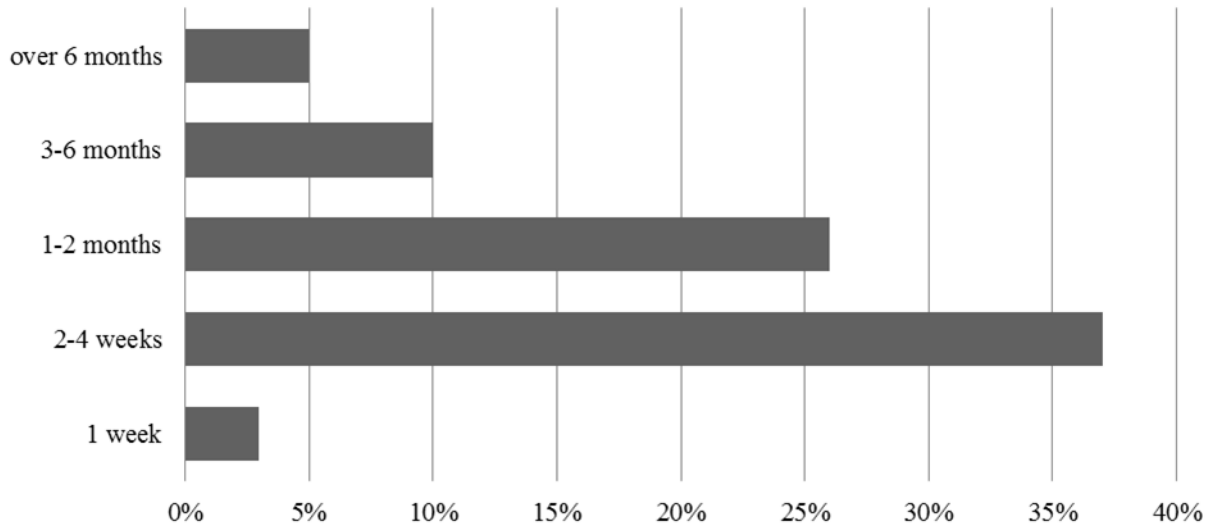


Figure 2. Time taken to complete unit.

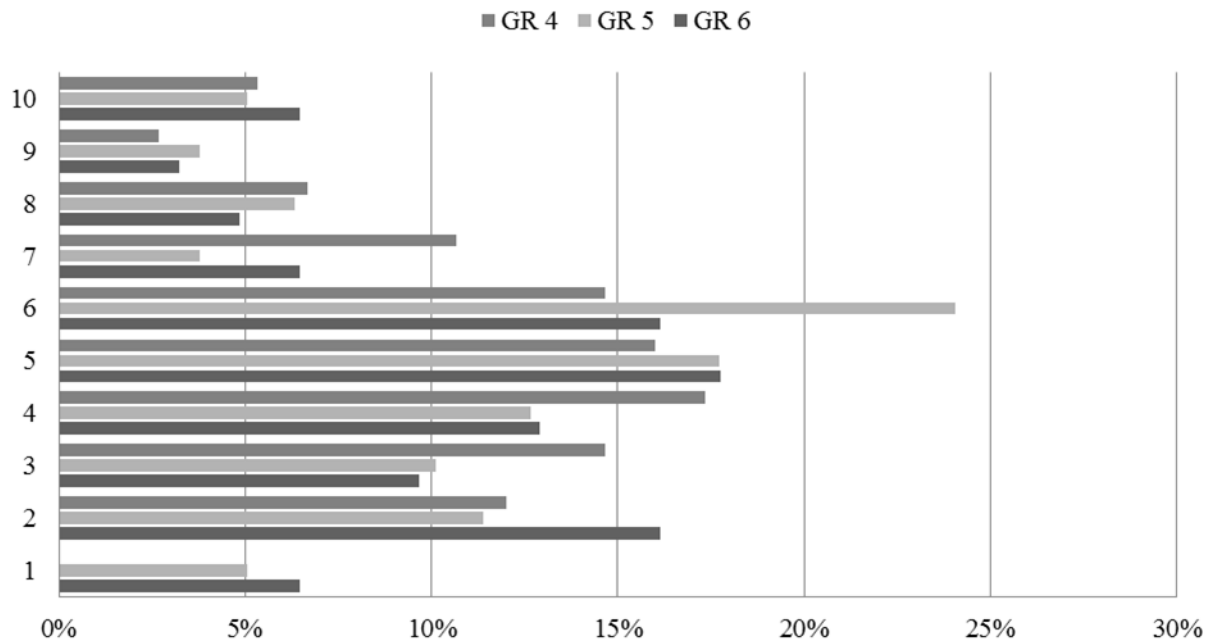


Figure 3. Number of lessons (of ten) taught, by grade level.

simply too many. Follow-up research with users might reveal reasons for this decision. Certainly, 10 lessons with a 'normal' Canadian health education curriculum may seem like too many for some. Consider, for example, that many schools offer a health education class only one time per week. A 10-lesson *At My Best 4-5-6* unit would take a full quarter of a school year.

### Need for and Suitability of *At My Best 4-5-6*

Participants were also asked about the appropriateness and need for a resource such as *At My Best 4-5-6*, especially as it relates to physical activity, healthy eating, and emotional wellness. Survey data revealed that participants generally strongly agreed or agreed that: 1) there is a need for quality resources that are related to physical activity, healthy eating, and emotional wellness, and 2) *At My Best 4-5-6* is a suitable resource to improve learning and behaviour intentions in those areas (see Table 1). Evidently, users found all three areas equally important and equally addressed by the *At My Best 4-5-6* resource; there was no significant difference between their responses for these three domains.

Given the current health status (or lack thereof) of Canadian children, it is encouraging to note that teachers see a clear need for quality resources such as this one. Currently, only 14% of Canadian children aged 5-11, and only 5% of those aged 12-17 meet the physical activity guidelines of 60 minutes of moderate to vigorous activity per day (ParticipACTION, 2015). With respect to healthy eating, REAL-Kids Alberta (2014) surveyed almost 4000 grade five students and found that only 30% of them met Canada's Food Guide guidelines of six servings of fruit and vegetables per day. Only 15% met the guidelines of six servings of grain products, and 48% consume two or more servings of non-nutritious foods and drinks per day. Perhaps most alarming is the 17% of students who consume at least one serving of caffeinated beverages per day. Given that survey results showed that teachers believed *At My Best 4-5-6* supported students to eat healthy, resources such as *At My Best 4-5-6* could help alleviate the challenges students face in eating healthy and to learn more about healthy eating habits.

When prompted to provide feedback about the content of *At My Best 4-5-6*, a small number of participants suggested that some improvements were needed related to the lesson ideas (e.g., "need to be creative ... the kits came with limited ideas, activity instructions or guides") and length of lessons (e.g., "I just found the lessons too long for my teaching time and a lot of work to find places to stop so it could be continued the next class"). However, most responses to this

Table 1

#### *Need for and Suitability of Content Related to Physical Activity, Healthy Eating, and Emotional Wellness*

Survey Response	Mean Score (1-5)
There is a need for quality resources, like <i>At My Best 4-5-6</i> , related to physical activity.	$M = 4.59$
Content within <i>At My Best 4-5-6</i> related to physical activity is appropriate for increasing knowledge and intentions about being physically active.	$M = 4.36$
There is a need for quality resources, like <i>At My Best 4-5-6</i> , related to healthy eating.	$M = 4.50$
Content within <i>At My Best 4-5-6</i> related to physical activity is appropriate for increasing knowledge and intentions about eating healthy.	$M = 4.39$
There is a need for quality resources, like <i>At My Best 4-5-6</i> , related to emotional wellness.	$M = 4.59$
Content within <i>At My Best 4-5-6</i> related to physical activity is appropriate for increasing knowledge and intentions emotional wellness.	$M = 4.24$

Note. 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree.

prompt were entirely positive (e.g., “Very easy to implement. A great help for teachers,” “Facile d'utilisation et le matériels est super ...”).

Participants were also invited to share their positions about the importance of curricular links to *At My Best 4-5-6*. They suggested that having cross-curricular links was important; this was especially true for cross-curricular links with physical and/or health education (see Table 2). Moreover, they generally agreed that the cross-curricular possibilities offered in *At My Best 4-5-6* were appropriate (though 26% indicated “neutral” for this question) and that these ideas assisted them in teaching curricular outcomes. These two questions, however, had the lowest mean scores. Assisting teachers with curricular outcomes is an important consideration, especially with some provincial ministries of education focusing on subject integration for larger concepts and competencies for students (e.g., Government of British Columbia, 2016). Given that cross-curricular instruction (sometimes also labelled interdisciplinary teaching) is becoming an increasingly normalized practice within elementary schools, attending to this when creating and disseminating resources like *At My Best 4-5-6* would make good sense (Kerry, 2015).

Although supporting the teaching of curricular outcomes scored low, overall, teachers responded favourably to *At My Best 4-5-6* supporting their students to be physically active, to eat healthy, and to be emotionally well (see Table 3).

As well, teachers were asked to consider the effects of *At My Best 4-5-6* on physical activity, healthy eating, and emotional wellness. Overall, teachers considered the resource as effective for their students in these areas. Given the statistics shared earlier about the health of Canadian children, this is encouraging. It does seem, however, that more work needs to be done to ensure the viability of the curricular links.

Table 2  
*Curricular Links and At My Best 4-5-6*

Survey Response	Mean Score (1-5)
Having curricular links to Health and Physical Education outcomes is important.	<i>M</i> = 4.61
Having curricular links to other subjects' outcomes is important.	<i>M</i> = 4.21
The cross-curricular possibilities offered in <i>At My Best 4-5-6</i> are appropriate.	<i>M</i> = 4.06
<i>At My Best 4-5-6</i> supported my teaching of curricular outcomes.	<i>M</i> = 3.95

*Note.* 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree.

Table 3  
*Perceived effects of Resource Related to Physical Activity, Healthy Eating, and Emotional Wellbeing*

Survey Response	Mean Score (1-5)
<i>At My Best 4-5-6</i> supported students to be physically active.	<i>M</i> = 4.30
<i>At My Best 4-5-6</i> supported students to eat healthy.	<i>M</i> = 4.31
<i>At My Best 4-5-6</i> supported students to be emotionally well.	<i>M</i> = 4.20

*Note.* 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree.

## Implementation

Users were also asked to respond to questions pertaining to the overall usefulness of various aspects of *At My Best 4-5-6* (see Table 4). Many open responses related to resource implementation were neutral or positive. Positive comments were sometimes unrelated to the previous prompts (e.g., “It is a great resource for multi graded classrooms”), while others were much more closely related to them (e.g., “Very easy to integrate into my daily teaching. It is of great help”). Some participants pointed out a seemingly obvious problem with having individual lesson plans posted on an online portal (e.g., “Also, having individual lesson plans posted made printing them very time consuming,” “I don’t like that you have to print out individual lessons to print them off, I wish I could download the entire unit at once. It made printing the lessons out very time consuming”). Others shared similar frustrations with access via an online portal: “We have limited access to the internet in the remote communities, difficult downloading resources”, “I am excited to read that there are lessons, and activities and videos, etc. but frustrated I cannot find them”, “limited internet”, and “I had a hard time accessing the program.” Participants responded favourably to the overall ease of implementing the resource, information on its website, materials, and lesson plans. There were areas where teachers did not find some resources useful and were less used than others. Video games, the introductory video for *At My Best 4-5-6*, and the activities related to community projects scored low. With the use of technology increasing in classroom environments, it would appear that the video portions of *At My Best 4-5-6* need attention. As well, enhancing the resource to better support community projects also requires consideration.

Table 4

### *Unit and Lesson Components, Usefulness and Use*

Survey Response	Mean Score (1-5)
<i>At My Best 4-5-6</i> was easy to implement.	$M = 4.28$
Using <i>At My Best 4-5-6</i> did not significantly add to my workload.	$M = 4.03$
The <i>At My Best 4-5-6</i> website includes useful information.	$M = 4.19$
The <i>At My Best 4-5-6</i> website is easy to navigate.	$M = 4.01$
The <i>At My Best 4-5-6</i> material resources (e.g., cards) were useful.	$M = 4.24$
The <i>At My Best 4-5-6</i> material resources (e.g., cards) were easy to use.	$M = 4.27$
The <i>At My Best 4-5-6</i> lesson plans were useful.	$M = 4.27$
The <i>At My Best 4-5-6</i> lesson plans were easy to use.	$M = 4.18$
The <i>At My Best 4-5-6</i> introductory video engaged students.	$M = 3.80$
The <i>At My Best 4-5-6</i> introductory video included useful information.	$M = 3.84$
The <i>At My Best 4-5-6</i> black-line masters were useful.	$M = 4.10$
The <i>At My Best 4-5-6</i> black-line masters were easy to use.	$M = 4.18$
The <i>At My Best 4-5-6</i> video games/activities engaged students.	$M = 3.81$
The <i>At My Best 4-5-6</i> video games/activities included useful information.	$M = 3.82$
The <i>At My Best 4-5-6</i> activities (e.g., community project) were useful.	$M = 3.56$

Note. 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree.

Clearly, *At My Best 4-5-6* is perceived as being useful and easy to implement. The material resources (e.g., activity cards) are well received, as are the lesson plans. The aspects of the program that scored the lowest were mostly related to technology: videos, games, and activities. Technology tends to change much faster than resources, so applications get out-of-date very quickly. It may be best to focus on solid curriculum and lesson plan materials for the teachers supported by easily updateable technology such as YouTube videos and PowerPoint presentations. Technology applications were some of the lowest scoring lesson elements. The only lesson element with a lower score was a community-implementation project. Further research into the best types of student activities that engage the community would be helpful.

## Cultural Relevance

When asked about how *At My Best 4-5-6* could become more culturally relevant, participants suggested, “Perhaps the use of Aboriginal names to allow students to identify with characters would help,” and the inclusion of Aboriginal “language” might be suitable. Similarly, others suggested the inclusion of “pictures of a variety of foods that can be considered ‘immigrant food’ can be used to allow the students to make connections.” Finally, and directly related to students from low-SES families, some participants suggested offering “low-cost, healthy eating ideas,” and making “reference to some families who live in a low socio-economic area would help students.” As one participant summarized, “students need to feel that they are represented in their books and materials.” The overall scores for cultural relevance were low (see Table 5), particularly for relevance with Aboriginal and immigrant students. Due to Canada’s diverse cultural population, it would seem necessary for such school programs to pay special adherence to this diversity.

These scores are important for both the revision of the resource as well as the target populations suggested by PHE Canada for a revised *At My Best 4-5-6*. According to the Canadian Community Health Survey (2011-2012), the proportion of the population that reports being physically active or moderately active during leisure time increases with household income adequacy and sedentary behaviour is generally less prominent amongst high-income groups. Furthermore, healthy eating behaviours have been reported to increase with household income, where the proportion of individuals that report healthy eating is lowest amongst low-

Table 5

### *Cultural Relevance*

Survey Response	Mean Score (1-5)
As it is, <i>At My Best 4-5-6</i> is culturally relevant for Aboriginal students.	$M = 3.43$
<i>At My Best 4-5-6</i> can be easily adapted to be culturally relevant for Aboriginal students.	$M = 3.49$
As it is, <i>At My Best 4-5-6</i> is culturally relevant for immigrant students.	$M = 3.62$
<i>At My Best 4-5-6</i> can be easily adapted to be culturally relevant for immigrant students.	$M = 3.68$
As it is, <i>At My Best 4-5-6</i> is culturally relevant for low socio-economic groups.	$M = 3.87$
<i>At My Best 4-5-6</i> can be easily adapted to be culturally relevant for low socio-economic groups.	$M = 3.87$

Note. 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree.

income groups. Within the low-income category, two populations have experienced a significant increase in Type 2 Diabetes prevalence: Aboriginal populations and newcomer immigrant populations. Aboriginal people continue to experience lower health outcomes than non-Aboriginal Canadians (Adelson, 2005; Reading and Wien, 2009), and, according to the Canadian Community Health Survey, only 39.2% of individuals who have immigrated in the last 10 years report being physically active or moderately active during leisure time. Given these trends, it seems that the desire to revise this resource to better meet target populations is well-founded. Clearly, work needs to be done on the resource to ensure cultural translation and relevance.

### **Conclusions and Suggestions for Practice, Upcoming Iterations of *At My Best 4-5-6*, and Future Inquiry**

Based on our consideration of users' responses, we offer a number of recommendations. Firstly, given the complex and comprehensive nature of schools and health behaviours, it would be wise to frame resources such as this solidly within a comprehensive school health (CSH) framework (Stewart-Brown, 2006). This would allow for easy integration with other supports from PHE Canada and align with the Joint Consortium for School Health's (2015) mandate to coordinate CSH frameworks and support across the country. Furthermore, the program can become embedded within the key tenets of healthy school communities and can truly include home, school, and community aspects (Joint Consortium for School Health, 2015). Resources such as *At My Best 4-5-6* ought to not 'stand alone.' Rather, including them within an established healthy school community context (i.e., with a CSH framework; Bassett-Gunter et al., 2016) might enable important connections amongst multiple spheres of influence.

Secondly, it is imperative that before releasing a resource such as *At My Best 4-5-6*, writers and organizations should engage in a comprehensive review of cultural appropriateness and adaptability - perhaps with an advisory team or other experts. This process would help to ensure that the resource is well-suited to meet the unique needs of populations like low-income communities, Aboriginal peoples, and newcomer immigrant populations. Relatedly, a review of the program for inclusive language and activities would also be critical. Inclusive physical and/or health education, for example, is different from adapted physical education. Too often, some look upon these as being synonymous. Inclusivity requires more than what adapted physical education can offer. An inclusive approach looks to meet the needs of all children and recognizes the many diversities and intersecting identities in our school classrooms.

Thirdly, a program such as *At My Best 4-5-6* must meet the needs of teachers. Comprehensive needs analysis and surveying will help determine the best approaches, materials, and supports. As stated earlier, teachers are busy people and a resource is supposed to help, not hinder. It should result in less work, not more. Listening to those who are 'in the trenches' will help to ensure the program is used, and has the intended effect.

Finally, infusing technology that is relevant and up-to-date for the current generation is necessary. Technology is embedded into curriculum and spans across subject areas. Difficulties, such as limited Internet access, do have an effect when trying to implement lessons that have technology-based content. However, with the use of technology increasing in schools, attention needs to be placed on ensuring that content remains up-to-date and relevant for the intended audience. As well, any program that uses technology needs to ensure that it is easy to navigate for teachers and that there are places where teachers can access for any troubleshooting.

We also wish to add here that findings from a scoping review completed prior to this research (Robinson, Berg, & Gleddie, in press) include some suggestions for improvement based on what is known about similar interventions. Those suggestions include providing professional development sessions for teachers on the interventions, focusing on a small number of appropriate curricular outcomes, and requiring/involving support from home and the community with activities for students to work on outside of the school environment. Based on the findings from this study, *At My Best 4-5-6* appears to be meeting the expectations of most teachers surveyed. However, findings also revealed that improvements should be made to the resource, so that it can be a valuable program to help students lead active, healthy lives.

Though we have offered a number of suggestions for *At My Best 4-5-6*, we also still wonder about the actual need for this particular resource. We appreciate that users suggested that a resource like *At My Best 4-5-6* is needed in school communities. We also recognize that users found an observable need for resources such as *At My Best 4-5-6* to focus upon physical activity and healthy eating, with fewer finding the same need for a focus upon emotional wellness. Yet, we also know that there are many other (and oftentimes similar) resources that might also be adopted for use within schools—resources that may do the ‘same thing.’ Given the availability of these other resources, is this resource really needed by Canada’s health education teachers? Is it just another resource to be filed, rather than used, with the many others? To sort this out, it would be helpful if researchers had teachers compare and contrast some of these resources so that they could identify the best ones (for whatever contexts). Perhaps, also, *At My Best 4-5-6*’s 10 lessons try to accomplish too much. Can three lessons focused upon physical activity, three lessons focused upon healthy eating, and three lessons focused upon emotional wellness adequately address all three of these topics? On this we are uncertain. We would certainly encourage future researchers to consider this as a possible focus of inquiry as well.

As we mentioned at the onset, inquiries such as this are infrequently done. Indeed, for many within the academy, research meant to inform practitioners in practical and pragmatic ways is often undervalued. However, we are hopeful others who share an interest in listening to teachers and researching with teachers so that their teaching (including their adoption of health education curriculum-support resources) might be better informed. Moreover, we are hopeful that these results will be of particular interest to others engaged in the creation, dissemination, and/or research of similar curriculum-support resources.

## References

- Adelson, N. (2005). The embodiment of inequity: Health disparities in Aboriginal Canada. *Canadian Journal of Public Health, 96*(S2), S45–S61. Retrieved from <http://www.jstor.org/stable/41994459>
- Berg, S., Hickson, C., & Card, A. (2013). Health literacy. In D. Robinson, & L. Randall (Eds.), *Teaching physical education in Canadian schools* (pp. 243–258). Toronto, Canada: Thompson Educational Publishing.
- Barr-Anderson, D., Laska, M. N., Veblen-Mortenson S., Farbakhsh, K., Dudovitz, B., & Story, M. (2012). A school-based, peer leadership physical activity intervention for 6th graders: Feasibility and results of a pilot study. *Journal of Physical Activity & Health, 9*(4), 492–499. Retrieved from <https://doi.org/10.1123/jpah.9.4.492>
- Bassett-Gunter, R., Yessis, J., Manske, S., Gleddie, D. (2016). Healthy school communities in Canada. *Health Education Journal, 75*(2), 235–248. doi:10.1177/0017896915570397
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32*, 513–531. Retrieved from <http://dx.doi.org/10.1037/0003-066X.32.7.513>

- Cardon, G. M., Haerens, L. L., Verstraete, S., & de Bourdeaudhuij, I. (2009). Perceptions of a school-based self-management program promoting an active lifestyle among elementary schoolchildren, teachers, and parents. *Journal of Teaching in Physical Education, 28*(2), 141–154. Retrieved from <https://doi.org/10.1123/jtpe.28.2.141>
- Clarke, A. M., Sixsmith, J., & Barry, M. M. (2015). Evaluating the implementation of an emotional wellbeing programme for primary school children using participatory approaches. *Health Education Journal, 74*(5), 578–593. doi:10.1177/0017896914553133
- Cohen, J. F., Kraak, V. I., Choumenkovitch, S. F., Hyatt, R. R., & Economos, C. D. (2014). The CHANGE study: A healthy-lifestyles intervention to improve rural children's diet Quality. *Journal of the Academy of Nutrition and Dietetics, 114*(1), 48–53. Retrieved from <https://doi.org/10.1016/j.jand.2013.08.014>
- Creswell, J. W. (2015). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (5th ed.). Upper Saddle River, NJ: Pearson Education.
- Dowda, M., Sallis, J. F., McKenzie, T. L., Rosengard, P., & Kohl, H. W. (2005). Evaluating the sustainability of SPARK physical education: A case study of translating research into practice. *Research Quarterly for Exercise and Sport, 76*(1), 11–19. Retrieved from <http://dx.doi.org/10.1080/02701367.2005.10599257>
- Franks, A., Kelder, S., Dino, G., Horn, K. A., Gortmaker, S. L., Wiecha, J. L., & Simoes, E. J. (2007). School-based programs: Lessons learned from CATCH: Planet Health and Not-On-Tobacco. *Preventing Chronic Disease, 4*(2), 1–9. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1893131/>
- Gay, G. (2010). *Culturally responsive teaching: Theory, research, and practice*. New York, NY: Teachers College press.
- Government of British Columbia. (2016). *BC's new curriculum*. Retrieved from <http://www.curriculum.gov.bc.ca>
- Griffin, T. L., Clarke, J. L., Lancashire, E. R., Pallan, M. J., Passmore, S., & Adab, P. (2015). Teacher experiences of delivering an obesity prevention programme (The WAVES study intervention) in a primary school setting. *Health Education Journal, 74*(6), 655–667. doi: 10.1177/0017896914556907
- Gutuskey, L., McCaughtry, N., Shen, B., Centeio, E., & Garn, A. (2014). The role and impact of student leadership on participants in a healthy eating and physical activity programme. *Health Education Journal, 75*(1), 27–37. doi:10.1177/0017896914561878
- Harrell, T. K., Davy, B. M., Stewart, J. L., & King, D. S. (2005). Effectiveness of a school-based intervention to increase health knowledge of cardiovascular disease risk factors among rural Mississippi middle school children. *Southern Medicine Journal, 98*(12), 1173–1180. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=19585944&site=eds-live&scope=site>
- Hodges, M. G., Hodges-Kulinna, P., & Kloeppel, T. A. (2015). Fitness for life primary: Stakeholders' perceptions. *Physical Education and Sport Pedagogy, 20*(3), 299–313. Retrieved from <http://dx.doi.org/10.1080/17408989.2014.893287>
- Joint Consortium for School Health. (2015). *Pan-Canadian Joint Consortium for School Health annual report*. Summerside, Canada: Joint Consortium for School Health. Retrieved from <http://www.jcsh-cces.ca/index.php/partnerships/about-cross-sector-collaboration>
- Kerry, Y. (2015). *Cross-curricular teaching in the primary school: Planning and facilitating imaginative lessons*. London, England: Routledge.
- Mahar, M. T., Murphy, S. K., Rowe, D. A., Golden, J., Shields, A. T., & Raedeke, T. D. (2006). Effects of a classroom-based program on physical activity and on-task behavior. *Medicine and Science in Sports and Exercise, 38*(12), 2086–2094. doi:10.1249/01.mss.0000235359.16685.a3
- Mckenzie, T. L., Alcaraz, J. E., Sallis, J. F., & Faucette, F. N. (1998). Effects of a physical education program on children's manipulative skills. *Journal of Teaching in Physical Education, 17*, 327–341.



- Retrieved from <https://doi.org/10.1123/jtpe.17.3.327>
- Miles, M., & Huberman, M. (1994). *Qualitative data analysis: An expanded sourcebook*. Thousand Oaks, CA: Sage.
- Mills, G. E., & Gay, L. R. (2016). *Educational research: Competencies for analysis and applications* (11th ed.). Toronto, Canada: Pearson.
- Murray, N. D., Low, B. J., Hollis, C., Cross, A. W., & Davis, S. M. (2007). Coordinated school health programs and academic achievement: A systematic review of the literature. *Journal of School Health, 77*(9), 589–599. doi:10.1111/j.1746-1561.2007.00238.x
- Nemet, D., Geva, D., & Eliakim, A. (2011). Health promotion intervention in low socioeconomic kindergarten children. *The Journal of Pediatrics, 158*(5), 796–801. Retrieved from <https://doi.org/10.1016/j.jpeds.2010.10.040>
- ParticipACTION (2015). *Report card on physical activity for children and youth*. Retrieved from <http://www.participaction.com/en-ca/thought-leadership/report-card>
- Physical and Health Education Canada. (2014). *About us*. Retrieved from <http://www.phecanada.ca/about-us>
- Ransford, C. R., Greenberg, M. T., Domitrovich, C. E., Small, M., & Jacobson, L. (2009). The role of teachers' psychological experiences and perceptions of curriculum supports on the implementation of a social and emotional learning curriculum. *School Psychology Review, 38*(4), 510–532. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=https://search.proquest.com/docview/219656424?accountid=14474>
- Reading, C. L., & Wien, F. (2009). *Health inequalities and social determinants of Aboriginal peoples' health*. Prince George, Canada: National Collaborating Centre for Aboriginal Health.
- Remillard, J. T. (2000). Can curriculum materials support teachers' learning? Two fourth-grade teachers' use of a new mathematics text. *The Elementary School Journal, 100*(4), 331–350. Retrieved from <https://doi.org/10.1086/499645>
- Robinson, D. B., Berg, S., & Gleddie, D. L. (2017). *A scoping review of school-based physical activity and healthy eating/nutrition interventions*. Manuscript submitted for publication.
- Robinson, D. B., Gleddie, D., & Schaefer, L. (2016). Telling and selling: A consideration of the pedagogical work done by nationally-endorsed corporate-sponsored educational resources. *Asia-Pacific Journal of Health, Sport and Physical Education, 7*(1), 37–54. Retrieved from <http://dx.doi.org/10.1080/18377122.2016.1145430>
- Robinson, D. B., & Randall, L. (2016). Smooth sailing or stormy seas? Atlantic Canadian physical educators on the state and future of physical education. *Canadian Journal of Education, 39*(1), 1–31. Retrieved from <http://login.ezproxy.library.ualberta.ca/login?url=https://search.proquest.com/docview/1781322817?accountid=14474>
- Statistics Canada. (2014). *2011 national household survey*. Retrieved from [http://www.statcan.gc.ca/eng/dai/smro8/2014/smro8\\_190\\_2014](http://www.statcan.gc.ca/eng/dai/smro8/2014/smro8_190_2014)
- Verstraete, S. J., Cardo, G. M., De Clercq, D. L., & de Bourdeaudhuij, I. M. (2007). A comprehensive physical activity promotion programme at elementary: the effects on physical activity, physical fitness and psychosocial correlates of physical activity. *Public Health Nutrition, 10*(5), 477–484. Retrieved from <https://doi.org/10.1017/S1368980007223900>
- Ward, D. S., Saunders, R., Felton, G. M., Williams, E., Epping, J. N., & Pate, R. R. (2006). Implementation of a school environment intervention to increase physical activity in high school girls. *Health Education Research, 21*(6), 896–910. Retrieved from <https://doi.org/10.1093/her/cyl134>
- Young, D. R., Steckler, A., Cohen, S., Pratt, C., Felton, G., Moe, S.G., Pickrel, J., Johnson, C. C., Grieser, M., Lytle, L. A., Lee, J.-S., & Raburn, B. (2008). Process evaluation results from a school- and

community-linked intervention: The Trial of Activity for Adolescent Girls (TAAG). *Health Education Research*, 23(6), 976–986. Retrieved from <https://doi.org/10.1093/her/cyn029>

### **Notes**

1“Users” is used instead of “teachers” from this point onwards. This research showed that only 87% of users were actually teachers.

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