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Evaluation of a Professional Development Conference to Enhance the Promotion of Physical Literacy

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Abstract

This study evaluated knowledge transfer and mobilization among educators and community programmers attending a strategies-based professional development day focused on physical literacy (PL). Delegates (n=97) were invited to complete surveys before, immediately after, and 8-months post-conference. Post-conference, participants (N = 53) reported greater perceived knowledge of PL, $t(42) = -5.71$, $p<.001$ and greater perceived skill and knowledge to develop, implement, and evaluate activities that promote PL, $t(45) = -4.72$, $p<.001$. While post-summit intentions to implement PL activities were not significantly correlated with follow-up implementation behaviour, implementation behaviour was significantly correlated with follow-up intentions to continue implementing PL activities ($r = .610$, $p<.05$). Most respondents of both the post-summit (92%) and follow-up (88%) surveys expressed increased confidence and were highly motivated (88-94%) to implement activities that promote PL. A strategies-based professional development day was beneficial for increasing perceived knowledge, skill, and self-efficacy for implementing strategies promoting PL.

Key Words: Physical activity; knowledge transfer; health promotion; physical education; teaching; training; children

Résumé

Cette étude a examiné le transfert et la mobilisation des connaissances parmi des éducateurs et des responsables de programmes communautaires qui ont pris part à une journée de perfectionnement professionnel axé sur les stratégies dans le contexte particulier de la littératie physique (LP). Les délégués (n=97) ont été invités à passer un sondage avant, immédiatement après, et 8 mois après l'activité de perfectionnement professionnel. Après l'activité, les participants (N = 53) ont fait état d'une augmentation perçue des connaissances en matière de LP, $t(42) = -5,71$, $p<.001$ et d'une augmentation des compétences et des connaissances pour élaborer, mettre en œuvre et évaluer des activités pour promouvoir la LP, $t(45) = -4,72$, $p<.001$. Tandis qu'il n'y a pas eu de corrélation étroite entre les intentions d'instaurer des activités de PL et les comportements de mise en œuvre d'activités dans le sillage de l'activité de PP, on a trouvé une corrélation étroite entre les comportements de mise en œuvre et les intentions exprimées dans le sondage de suivi en ce qui concerne la disposition continue à instaurer des activités de LP ($r = .610$, $p<.05$). La plupart des participants au sondage immédiatement après l'activité de PP (92%) et au sondage de suivi (88%) ont fait état d'un niveau de confiance accru et d'une forte motivation (88-94%) à instaurer des activités pour promouvoir la LP. Une journée de perfectionnement professionnel axé sur les stratégies a été bénéfique pour l'amélioration perçue des connaissances, des compétences et du sentiment d'efficacité personnel pour instaurer des stratégies de promotion de la LP.

Mots-clés: Activité physique; transfert des connaissances; promotion de la santé; éducation physique; enseignement; formation; enfants

Introduction

One aim of the World Health Organization is: "To ensure that all people have access to safe and enabling environments and to diverse opportunities to be physically active in their daily lives, as a means of improving individual and community health…" (WHO, 2018). However, we are not in a position for everyone to be able to enjoy the highest standards of health and have physical activity as part of everyday life (Green, 2020). Over the last 50 years, noticeable trends have developed, including: (1) fewer people are continuing with physical activity after leaving school; (2) sedentary leisure pursuits are on the rise; (3) cases of obesity and stress related conditions are increasing; and (4) in many schools and other physical activity settings there was, and is, a subtle move towards high level performance being the principal focus of physical education (ICSSPE, 2020).

Relevant to this study, most Canadian children and youth are sitting too much and moving too little, preventing them from being able to reach their optimal health (ParticipACTION, 2020). Only 35% of Canadian children aged 5 to 17-years-old are achieving the recommended physical activity levels for their age group (Roberts et al., 2017). Canadian data suggests that enhanced cardiovascular endurance, strength, and motor skill abilities (i.e., physical competence) among children and youth are related to meeting physical activity guidelines (Belanger et al., 2018). Physical competence is one of four domains within the larger concept of physical literacy which is defined as "the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life" (Whitehead, 2014). However, less than half of Canadian children are meeting the recommended levels of physical literacy (Tremblay et al., 2018). The specific domains where children are failing to meet the minimum level include: (1) physical competence, (2) daily physical behaviour, (3) motivation and confidence, and (4) knowledge and understanding of physical literacy (Tremblay et al., 2018). Improving children's physical literacy levels is essential as children with low physical literacy may not engage in sufficient physical activity to receive health benefits (e.g., reduced risk of cardiovascular disease, improved muscular skeletal health; Ahmed et al., 2012; Carson et al., 2017; Janssen & Leblanc, 2015; Tan et al., 2014).

The awareness of and emphasis on fostering physical literacy and its importance for increasing physical activity and lifelong participation have become important areas of research over the years (Corbin, 2016). Beyond research, physical literacy has also become a focus of physical education, physical activity, and sports promotion (Giblin et al., 2014). It is important to note that physical literacy is not an alternative to physical education or physical activity but is an outcome of promoting and supporting confidence, competence, and intrinsic value of physical activity (ICSSPE, 2020). Although fostering the development of physical literacy in physical education curriculum and recreation programs is increasingly expected (ICSSPE, 2020), not all educators or recreation providers have the knowledge, skills, and confidence to implement activities that promote physical literacy (People for Education, 2016; Stoddart & Humbert, 2017). For example, more than half of the elementary schools in Ontario, Canada do not have physical education specialists (People for Education, 2016); yet specialists report higher levels of confidence, knowledge, and enjoyment when teaching physical education (Mandigo et al., 2004). Further, certification programs and courses for youth sport coaches or instructors often cover technical skills with some interpersonal training (Evans et al., 2015), but it is unclear if physical literacy is included in coaching curriculum. One avenue to help increase teacher and recreation provider knowledge, skills, and improve self-efficacy in education outcomes (e.g., physical literacy) is through professional development (Martin et al., 2008).

Professional development is structured learning that results in changes in teaching practices and improvements in learning outcomes (Darling-Hammond et al., 2017). Despite the support for professional development in helping improve children's learning, there is a lack of evidence supporting the effectiveness of professional development (Guskey, 2002). Few studies evaluate the impact of professional development activities for improving knowledge (Avalos, 2011; Cordingley et al., 2005; Guskey & Yoon, 2009; Vescio et al., 2008). However, research does suggest that effective professional development involves people as both teachers and learners, are needs-supportive (Darling-Hammond & McLaughlin, 1995), are integrated into practice (Armour & Yelling, 2007), and promote transformative practice, rather than accountability (Kennedy, 2005).

Research indicates professional development is an essential component of knowledge translation and promoting physical literacy (Durden-Myers & Keegan, 2019; Wright et al., 2020). However, there is limited research examining the influence of professional development focused specifically on physical literacy (Wright et al., 2020) and the uptake and use of that knowledge. Therefore, the purpose of this study was to evaluate the perceptions of knowledge transfer (i.e., increased knowledge and skill) and planned mobilization (i.e., use of knowledge) among educators and community programmers attending a strategies-based physical literacy professional development day.

Study Context

The creation of this professional development day came about from observing the data collection process of a larger project assessing children's physical literacy. Between 2014 and 2017, Canadian children aged 8–12 years were invited to participate in the Royal Bank of Canada–Learn to Play CAPL study (Tremblay et al., 2018). This cross-sectional, national surveillance study assessed the physical literacy levels of 10,034 children across 11 Canadian cities (Tremblay et al., 2018). Researchers at the local university in one of the communities and community health promoters from the local public health unit worked collaboratively to collect data with children within the catchment area of the health unit. During data collection, community health promotors from the local public health unit, who are assigned to various school boards, recognized that time and resources were needed to better support teachers to enhance the physical literacy of students. Due to this recognition, the community health promoters approached the researchers at the university and other community partners (i.e., members from the YMCA, local college, community living, and school boards) to co-create a physical literacy-focused professional development opportunity targeting individuals from different sectors who work with children. This community-based collaboration led to the development of a one-day physical literacy conference. As a partnership, it was important to offer an opportunity that was feasible to attend, which included being low in cost, required only same-day travel, offered in languages of program delivery (i.e., English, and French), and that put relatively little stress on facilities to cover staffing (i.e., one-day event).

The main objective of the conference was to offer a strategies-based professional development opportunity for teachers, early childhood educators (ECEs), recreation providers, and health experts (e.g., health promoters, physical therapists) to increase their knowledge and skill for application and implementation of physical literacy programming. This professional development conference also aimed to provide attendees an opportunity to network with colleagues and increase their capability for fostering healthy active living for children and youth in schools, families, and the community.

The Active Body Active Mind Physical Literacy Summit

The physical literacy professional development conference was held at the end of August, just prior to the beginning of the school year in a mid-sized community (population approximately 54,000) in northeastern Ontario, Canada, and was targeted towards teachers, early childhood educators, recreation providers, and health experts. Funding for the event was provided through in-kind contributions (e.g., space, items for participant resource bags) from the partner organizations, financial support from the local public health unit and participating post-secondary institutions to compensate presenters and provide refreshments, and a nominal participant fee ($30 CAD). Members of the organizing committee promoted the event through their professional networks and through social media.

An overview of the physical literacy professional development conference schedule and topics of sessions included can be found in Table 1. To start, an internationally renowned expert in children's physical activity delivered a keynote talk to all participants. The instructors of each workshop session (i.e., physical literacy consultants, health promoters, health and physical education teachers, kinesiology students) were specifically invited based on their expertise related to diverse workshop topics relevant to the target audience. Each session resembled a mini workshop on the topic and included an educational component paired with experiential learning (i.e., hands-on, and active). Session topics were deliberately chosen to expose participants to a range of ways physical literacy can be encouraged (e.g., in the classroom, outdoors, related to teaching fundamental motor skills, developing strength and fitness). All sessions focused on specific techniques that could be used (i.e., strategies) to encourage physical literacy development (e.g., embed physical activity across the curriculum) and were interactive. Sessions were offered in both official languages (English and French) and participants could choose sessions based on the area they wanted to learn more about.

Table 1

Physical Literacy Professional Development Conference Schedule

8:00am	**Registration**
8:30am	Welcome
8:45am	Opening Keynote
10:00am	**BREAK**
10:15 - 11:00am **Breakout Session 1**	Integrating Physical Literacy Across the Curriculum
	Teaching Games for Understanding
	Fun, Fitness, Fundamentals
	Fundamental Movement Skills (grade 1-6)

11:10 - 11:55am **Breakout Session 2**	Mental Wellness with Physical Literacy
	Fundamental Movement Skills for Early Years
	Cross-Curricular Approach to Daily Physical Activity
	Littératie Physique au Primaire
11:55am - 1:00pm	**LUNCH**
1:00 - 1:45pm **Breakout Session 3**	Integrating Physical Literacy Across the Curriculum
	Physical Literacy on the Move
	Fun, Fitness, Fundamentals
	Littératie physique inclusive
1:55 - 2:40pm **Breakout Session 4**	Mental Wellness with Physical literacy
	Outdoor Environmental Inquiry (K-Gr8)
	Cross-Curricular Approach to DPA
2:40pm	**BREAK**
2:55pm	Closing Keynote

As one of the goals of the professional development conference was active learning, all attendees were asked to be up, moving, and participating in activities alongside the instructors, rather than passive learning by sitting and listening. Some sessions were offered in both the morning and afternoon to accommodate individuals who would not be able to attend the full day, and to allow flexibility for people who may have wanted to attend two sessions scheduled at the same time.

Methods

Attendees were asked to complete self-assessment surveys before, immediately after (i.e., end of the day), and 8-months after the professional development conference (see Table 2 for sample items at each time point). Institutional ethics approval from the host university was obtained prior to the conference. The pre-conference survey was completed immediately prior to the opening keynote presentation. Items on the survey included demographics (e.g., job title, years of experience, type of position, education), reasons for attendance, knowledge of physical literacy (3 items; $\alpha = .879$), and items adapted (Latimer et al., 2009) to assess perceived skill to develop, implement, and evaluate physical literacy programs or initiatives (3 items; $\alpha = .9$), and open-ended questions asking for participants' definition of physical literacy.

Table 2

Survey Items Measured at Each Timepoint

	Timepoint		
Measure	Baseline	Immediate post-conference	8 months post-conference
Reasons for attending	x		
Knowledge of physical literacy (PL)* (e.g., *I am knowledgeable about promising practices to promote PL through physical activity*)	x	x	x
Perceived skill and knowledge to develop/implement/evaluate PL program/initiative * (e.g., *I possess the skills and knowledge to evaluate activities that promote PL*)	x	x	x
Intentions to develop/implement/ evaluate PL programs/initiatives* (e.g., *I intend to develop activities that promote PL in the next 6 months*)		x	x
Implementation Behaviours (e.g., *I have implemented activities that promote PL in the last 6 months*)			x
Enabling and reinforcing influences (e.g. time support, resources, authority to act)*		x	x
Barriers (open-ended question)		x	x
Usefulness of conference^		x	
Self-efficacy*		x	x
Use of Knowledge			x

Note. *5-point scale: Strongly agree – strongly disagree; ^5-point scale: Not useful – Too soon to tell.

At the end of the conference sessions and prior to departing for the day, a post-conference survey was distributed to all attendees to evaluate perceptions of the conference and to re-assess baseline items. The immediate post-conference survey items included: knowledge of physical activity and physical literacy (3 items; α = .738), perceived skill (3 items; α = .748), intentions to adopt and implement programs (3 items; α = .820), and barriers and facilitators. Open-ended questions asked about barriers to implementing physical literacy knowledge from the conference; most valuable takeaway from the conference; and practices learned from the conference that will be implemented in the future.

Participants who were interested in taking part in a subsequent follow-up survey were asked to provide their contact information (i.e., email address). The 8-month follow-up survey was sent via e-mail to all participants who consented to the follow-up, to evaluate perceptions of the usefulness of the conference and assess knowledge (3 items; α = .898), skill (3 items; α = .904), intentions (3 items; α = .872), predisposing, enabling and reinforcing influences again, and to report behaviours carried out that were motivated by attending the conference (4 items; α = .864).

Data Analysis

Descriptive statistics were used to analyze motives and physical literacy implementation. Paired t-tests were used to assess change in knowledge and skill. Correlations were used to explore relationships between intentions and implementation behaviours. Open-ended question responses were coded and grouped into categories to identify patterns, then discussed among the research team to ensure the themes were an accurate reflection of the findings.

Results

A total of 97 people attended the physical literacy professional development conference (M_{age} = 36.87±9.98; 91% female) of which 57.7% (*n* = 55) completed the pre-conference survey and 54.6% (*n* = 53) the immediate post-conference survey. Of those who consented to receive the 8-month post-conference survey (n = 46), 60.9% (*n* = 28) were returned. Demographic information of conference attendees is presented in Table 3.

Table 3

Participant Demographic Information

Demographics	N (%)
Current Workplace (N = 57)	-
Elementary School	20 (35.1)
Day Care	11 (19.3)
Recreation Facility	3 (5.3)
Other*	23 (40.4)

Nature of Job Position (N = 57)	-
Casual	5 (8.8)
Contract	6 (10.5)
Part-Time	1 (1.8)
Full-Time	45 (78.9)
Time Spent in Current Job Position (N = 55)	-
Less Than 1 Year	10 (18.2)
1-2 Years	10 (18.2)
3-5 Years	9 (16.4)
5-9 Years	3 (5.5)
10+ Years	23 (41.8)
Time Spent Promoting Physical Activity (N = 56)	-
Not at All	2 (3.6)
1 Day/Week	6 (10.7)
2-3 Days/Week	10 (17.9)
3-4 Days/Week	10 (17.9)
5 Days/Week	28 (50)
Years in Job Field (N = 57)	-
Less than 2 Years	8 (14)
2-5 Years	13 (22.8)
6-10 Years	6 (10.5)
11-15 Years	10 (17.5)
15+ Years	20 (35.1)

Highest Education completed (N = 56)	-
High School Diploma	1 (1.8)
College Diploma	22 (39.3)
Bachelor's Degree	26 (46.4)
Master's Degree	5 (8.9)
Doctorate	1 (1.8)
Other	1 (1.8)

Note: *Participants indicated that other workplaces were the community college, health unit, children's treatment centre, early years centres, city hall, government, community living, community administration.

The majority of participants (73%) reported attending the conference to gain new knowledge to promote physical literacy.

Table 4
Reasons for Taking Part in the Physical Literacy Conference.

Reasons for Participation (N = 57)	N (%)
To gain knowledge and skills	42 (73.7)
To learn from other physical activity practitioners	28 (49.1)
To develop recommendations for physical activity programs that promotes physical literacy	27 (47.4)
To help implement physical activity programs that promote physical literacy	27 (47.4)
General Interest	24 (42.1)
To help evaluate physical activity programs that promote physical literacy	20 (35.1)

Note. Participants were asked to select "all that apply"

Participants were asked to define the term physical literacy as they understood it. The majority (80%, n=45) of participants provided an answer and their responses were grouped into five categories: (1) Literacy and Movement, (2) Teaching Approach/Priorities, (3) Core Fundamental Movement Skills, (4) Health, Movement, and Physical Activity Knowledge, and (5) Movement Confidence. The responses below suggest that prior to the conference, not all participants had a comprehensive understanding of physical literacy, suggesting a need to further support knowledge development.

Table 5
Pre-Conference Physical Literacy Definition Responses

Category	Quotes
Literacy and Movement	• Being active while learning • For kids to understand physical activities when asked to do them. Also reading. • Incorporating literacy into everyday activities. Getting the children moving and learning while having fun. • Movement and music. Movement and stories • Moving and learning through music/story • Moving and speaking • Physical literacy to me means being active while learning by using language/music
Teaching Approach/Priorities	• Being active and healthy and incorporating physical activity in all aspects of programming. • Find ways to get moving • Incorporating literacy into everyday activities. Getting the children moving and learning while having fun. • Learning while being active • Movement, teaching children about concepts that involved how to move, sport, physical health. • Provide differentiated instruction to all learners to meet all learning styles • Providing and promoting physical activity within my work/personal environment • Steps to improve/mature physical activity/sports • Teaching all areas of development in a physical way
Core Fundamental Movement Skills & Knowledge	• Being able to understand movement terms and execute those moves • Body skills and development which make for enjoyment of physical activities and better health • Developing and using fundamental gross motor movements and physical activity skills • Feeling competent and confident in various fundamental movement skills (i.e., running, jumping, hopping, catching)

	• Having basic fundamental skills needed for everyday life • Knowledge of and competency in the fundamental movement skills that allow a person to participate fully in various physical activities. • Learning basics and improving • Moving and speaking • The development of physical skills (throw a ball, run here to there). How someone can develop their physical skill (balance, accuracy, confidence, etc.) (ability) and competency of these skills in physical activity. • The function/capacity to engage in "core" movement/coordination/training/balance, etc. • To be comfortable with the basic fundamental movement skills • Understanding basic movement skills for life. • Understanding of body and how it works
General Health, Movement, and Physical Activity Knowledge	• An understanding of physical activities and a lifestyle that promotes well being • Development of an understanding of body movements and healthy active living • Having knowledge of physical fitness and being active • The ability to and level of understanding regarding physical activity and what physical activity is most beneficial for you. Ability to understand advantages/benefits linked to PA. • The understanding and ability to perform physical activity in a lifestyle • To have a clear understanding of what it means and the importance of regular physical activity • A fluent understanding in the practice of exercise and health • To understand the importance and the need for daily physical activity for all children (especially) but everyone everywhere • Understanding how to implement physical activity • Understanding of body and how it works • Understanding the importance and how to be physically active • Understanding the importance of physical activity • Understanding the language and skills for various forms of physical activity from crawling to soccer drills.

	• Children have confidence, desire to be active and take forward into life
Movement Confidence	• Competence and confidence • Giving skills and confidence to people by simplifying physical skills and learning how to confidently move and participate in activities throughout their lives.

T-tests (comparing pre- and immediately-post) revealed that immediately post-conference, participants reported greater knowledge of the concept of physical literacy, ($t(42) = -5.71$ $p < .001$), greater skill and knowledge to develop, implement, and evaluate activities that promote physical literacy ($t(45) = -5.72$, $p < .001$), and 92% of participants immediately post-conference reported increased self-efficacy to implement activities that promote physical literacy. This number remained high as 88% of participants who completed the 8-month follow-up survey also expressed increased confidence to implement activities that promote physical literacy. Similarly, immediately post-conference and at 8-months post-conference, participants reported being highly motivated (88% and 94%, respectively) to implement activities that promote physical literacy.

Bivariate correlations showed that immediate post-conference intentions to implement physical literacy activities were not significantly associated with follow-up implementation behaviours ($r = .034$, $p > .05$). However, intentions to implement physical literacy activities reported at the 8-month follow-up were significantly associated with both immediate post-conference intentions ($r = .664$, $p < .05$) and 8-month follow-up implementation behaviours ($r = .610$, $p < .05$). This finding suggests that those with high intentions maintained those intentions even if they were unable to implement specific physical literacy initiatives, and that those who had engaged in implementation behaviours intended to continue doing so in the future. Of the participants who completed both post-conference surveys (n=26), 75% indicated having implemented activities that promote physical literacy. However, lack of support and insufficient resources were still cited as the most common barriers associated with implementing physical literacy initiatives.

Table 6

Barriers to Implementing Information from the Professional Development Conference in Practice

Identified Barriers (N = 23)	N (%)
Lack of Support	11 (47.8)
- For creating change	
- From co-workers	
- Lack of meeting time	
- From parents	

Lack of Resources	10 (43.5)
- Lack of space	
- Inconsistent workspace	
- Limited time	
Curriculum Restrictions	1 (4.3)
Limited Opportunities	1 (4.3)

Lastly, participants indicated that the most valuable elements of the conference were the strategies they gained (83%), the overall general content covered (66%), and the resources (32%), support (19%), and curriculum content provided (15%).

Discussion

This study aimed to evaluate the knowledge transfer (i.e., perceived increased knowledge and skill) of a physical literacy-focused, strategies-based professional development conference among educators and community programmers who work with children. Based on the open-ended responses prior to the conference, most participants captured some element(s) of the definition of physical literacy, but very few had a comprehensive understanding of this multi-dimensional construct. This aligns with the majority of participants stating their primary reason for attending the conference was to gain knowledge and skill. Importantly, post-conference results suggested improved knowledge of the concept of physical literacy, and perceived knowledge, skill, and self-efficacy to develop and implement physical literacy promoting activities. Based on the results, a one-day, strategies-based professional development conference focused on physical literacy can be beneficial for increasing knowledge, skill, and self-efficacy for implementing strategies promoting physical literacy among educators and other professional who provide programming to children in the community. These findings are important as knowledge and skill are prerequisites for behaviour to happen. In Michie et al's (2011) COM-B framework for understanding behaviour, capability, defined as the individual's psychological and physical capacity to engage in the behaviour, is one of three influencing factors that must be present for a behaviour to occur (i.e., confidently implement programming to foster children's improved physical literacy). As identified in this study, lack of support, lack of resource, curriculum restrictions, and limited opportunities are important barriers to address in future work. Future professional development and/or interventions may be warranted to help address the barriers and facilitators related to opportunity and motivation (for those who did not participate) to support the implementation of activities that promote physical literacy.

Further, increased self-efficacy is an important finding as research has found that elementary school students taught by a generalist (e.g., educator or instructor without training in physical education or physical literacy) are less likely to be motivated and confident in their ability to be physically active in multiple environments (Law et al., 2018; Tremblay et al., 2018). However, with the right support, generalists can also teach effective physical education that provides rich movement experiences to develop physical literacy (Stoddart & Humbert, 2017; Wright et al., 2020). Further, research has also found providing professional development opportunities to elementary school teachers results in improved outcomes for children (Sallis et al. 1997) such as increased time being active (McKenzie et al., 200l; Powell et al., 2016). Similarly,

physical literacy education for early childhood educators can improve their confidence to provide effective physical literacy development activities (Hall & Gregg, 2023). Therefore, the success found with this one-day professional development conference for teachers, early childhood educators, recreation providers, and health experts, offers a promising opportunity for those who often experience a lack of access to professional development opportunities based on their location (i.e. rural and remote areas), to address the call for supports to ensure instructors and educators are trained in promoting physical literacy (ParticipACTION, 2020).

There are many potential contributing factors to the success of this physical literacy professional development conference, which are considered elements of effective professional development (Bates & Morgan, 2018). First, the conference was co-developed with community partners to ensure content, presenters, and the experience were helpful to the target audience and would resonate with attendees. Workshops were delivered by credible experts in their field and many of them were relatable role models (i.e., other teachers in the school board(s) who found solutions that worked within the same context). Also, the content was delivered through an experiential learning approach, so participants were shown examples and given time to practice what they were learning, rather than simply telling them what to do in the future. Finally, the conference was specifically designed to be feasible as it was a low-cost, a one-day event and therefore did not present large barriers for participants to overcome in order to be involved.

Despite the reported improvements in knowledge, skills, self-efficacy, and high intentions to implement what was learned at the professional development conference, participants still indicated the barriers of support and resources. This is consistent with the finding that immediately post-conference intentions were not significantly correlated with 8-month implementation behaviours and aligns with other research emphasizing the need to remove economic, social, and other barriers to implementing physical literacy activities and initiatives (Cragg et al., 2016). There also remains a critical call for increasing availability of professional development opportunities that are meaningful and relevant to the individuals to help overcome barriers to effective implementation of physical literacy (Durden-Myers & Keegan, 2019). Research suggests that when designing programs or policies about physical literacy, to include those who will be using or implementing these programs (within and outside the school system) to better support adoption and remove real and perceived barriers (Cragg et al., 2016). Next steps include more evaluation of efforts to increase physical literacy to help identify the key correlates that affect an educator or instructor's ability to translate and promote physical literacy (Dudley et al., 2019; Durden-Myers & Keegan, 2019), and what ultimately affects a child's physical literacy over time (ParticipACTION, 2018).

Strengths and Limitations

It is important to acknowledge the strengths and limitations of this project. First, a strength is the professional development conference was a one-day event and therefore did not place a large burden of time on participants. Indeed, the literature related to parents as an important role in children's physical activity and physical literacy development (Lane et al., 2022) supports that short workshops with interactive activities and physical literacy education can help improve parents' physical literacy knowledge and confidence to enhance play with their children (Lane et al., 2022). Although our findings produced promising results, future research should investigate the potential effectiveness of ongoing professional development programs dedicated to physical literacy. Second, the strength of collaboratively planning the conference helped to mitigate the challenge of conflicting events. On the day that the conference was held, a technology symposium was also being sponsored by one of the school boards which potentially hindered the number of

attendees and participants in the evaluation. Despite the competing professional development opportunities, we still managed to attract 97 participants from diverse sectors to attend either the whole or part of the day. Further, the physical literacy professional development conference was offered prior to the start of the school year, near the end of the summer holiday, so it is possible those that did attend already understood the value of physical literacy. It may be that those who chose to attend the technology symposium either felt relatively less comfortable implementing technology, were already confident in their physical literacy knowledge, or did not see physical literacy as relevant to their specific teaching practice. Next steps are needed to continue to advocate for and provide physical literacy-focused professional development opportunities for those who are possibly less aware of the importance of physical literacy for increasing physical activity. It is important to provide on-going evaluation on the effectiveness of professional development initiatives to identify how best to reach and support educators and other professionals who may benefit most from additional training.

An important strength of this project was the new and continued partnerships that emerged from this community-focused conference. New partners included a community-based rehabilitation and support service centre for children and youth, and the local social services administration board whose work targets the low-income population in different capacities (e.g., childcare). Continued partnerships that were strengthened from this project included the local YMCA, local university, college, public health unit, school boards, and Community Living. These new and continued partnerships are critical as research highlights the importance of community-based physical literacy programs being inclusive, collaborative, welcoming, and responsive to the community served (ParticipACTION, 2020; Yi et al., 2019). Partnerships are instrumental for continuing to conduct relevant research and implement meaningful findings (Bowen & Graham, 2015; Drahota et al., 2016; Jagosh et al., 2012) that will ultimately have the potential to lead to positive change for children and improve the overall health of the community. Finally, the study includes all self-report data and relies on the honesty of participants' responses. Future work is needed to objectively capture behaviour change as a result of professional development, and in particular, a one-day conference.

Conclusion and Implications

While longer-term professional development programs may be ideal, this study demonstrates that short duration, strategy-based opportunities can engage and equip educators and other professionals with the knowledge and self-belief to integrate physical literacy into their programs. This is particularly important in the context of professionals working outside the school system, with limited access to on-going professional development (e.g., rural regions, higher costs to travel, lack funding). The current findings suggest that strategies-based professional development opportunities are beneficial and needed as participants who attended this professional development day left with an increased capability to incorporate activities that can contribute to children meeting daily physical activity guidelines. Further, more advocacy (e.g., policy) is needed to ensure adequate time and resources are provided and not seen as barriers for teachers and practitioners to adopting and implementing effective physical literacy programs.

Disclosure Statement

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