Changing Minds, Changing Lives from the top down: An investigation of the dissemination and adoption of a Canada-wide educational intervention to enhance health care professionals' intentions to prescribe physical activity

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Abstract

Purpose. The purposes of the current study were to (1) describe the restructuring and dissemination of a Canada-wide intervention curriculum designed to enhance health care professionals' prescription of physical activity to patients with physical disabilities, and (2) examine interventionists' social cognitions for, and their acceptance and adoption of, the new curriculum.

Methods. A participatory curriculum development process was utilized, resulting in a theory- and evidence-based curriculum. Interventionists ($N=28$) were trained in curriculum delivery and most ($n=22$) completed measures of Theory of Planned Behavior (TPB) constructs assessing their cognitions for delivering the new curriculum at pre- and post-training and at 6-month follow-up. Interventionists also completed a Diffusion of Innovation (DOI) measure assessing their opinion of whether the new curriculum met characteristics that would facilitate its adoption and use.

Results. Interventionists reported strong TPB cognitions for curriculum use before training. Significant increases emerged for some TPB constructs ($ps \leq .025$) from pre- to post-training, and significant decreases were seen in some TPB constructs ($ps \leq .024$) between post-training and 6-month follow-up. The interventionists rated the new curriculum as high on all the DOI characteristics.

Conclusion. The theory-driven, participatory development process facilitated interventionists' social cognitions towards and adoption of the new curriculum. Positive increases in TPB cognitions from pre- to post-training were not maintained at follow-up. Further research is needed to determine if these changes in cognitions are indicative of a curriculum "reinvention" process that facilitates long-term curriculum use. Understanding curriculum adoption and

implementation is a crucial step to determining the potential population impact of the intervention.

Keywords: Theory of Planned Behavior; Diffusion of Innovations; curriculum development; health care professionals; leisure-time physical activity; physical disability.

Of the 4.4 million Canadians that have a physical disability [1], only 3% engage in leisure-time physical activity (LTPA) [2] of sufficient duration to yield health and quality of life benefits [3-7]. Accordingly, there have been significant efforts to develop resources aimed at increasing LTPA in people with disabilities (e.g., physical activity guidelines; [8,9]). Further, while health care professionals (HCPs¹) have been identified as vital conduits for delivering LTPA information to people with disabilities [10], very few HCPs discuss and prescribe LTPA [11] as they often lack the knowledge, confidence, and resources to do so [12,13]. Strategies to enhance HCP knowledge, skills, and resources necessary to adopt and implement national LTPA promotion initiatives may result in more LTPA prescriptions to patients, and consequently greater LTPA participation and overall health among people with a physical disability.

The Canadian Paralympic Committee (CPC²)'s nationwide, presentation-based *Changing Minds, Changing Lives* (CMCL) intervention addresses the knowledge-to-practice gap related to LTPA among HCPs who work with people with a physical disability [14]. In 2011, the CPC and SCI (Spinal Cord Injury) Action Canada [15] collaborated to restructure the CMCL curriculum to reflect evidence-based best practices for behavior change interventions, such as including up-to-date research regarding rates and consequences of LTPA participation among this population and framing the curriculum within a behavior change theory [16]. Now an evidence- and theory-based intervention, CMCL has the potential to indirectly impact LTPA among people with a physical disability in Canada by changing HCPs' cognitions and behaviors for discussing and prescribing LTPA. However, the dissemination of the CMCL curriculum is dependent on the

¹ For the purposes of this paper, the term HCPs includes physicians, nurses, rehabilitation therapists, kinesiologists, and any other professional who provides LTPA advice to patients.

² The CPC is a non-profit, private organization dedicated to the development and promotion of a sustainable Paralympic sport system in Canada. The CPC aims to promote the success of athletes with a physical disability at all levels of *parasport* (i.e., parallel sport opportunities for people with a physical disability).

behavior of the intervention delivery agents. As such, the purposes of this paper are to (1) describe the restructuring and dissemination of the new evidence- and theory-based CMCL curriculum, and (2) examine the interventionists' social cognitions for, and their acceptance and adoption of, the new CMCL curriculum. Due to the descriptive nature of the first purpose, no hypotheses were made. For the second purpose, we hypothesized that interventionists would report significant increases in social cognitions to use the new CMCL curriculum immediately following their training, and that these increases would be sustained over a 6-month period, reflecting interventionists' acceptance and adoption of the new curriculum.

Methods

This study includes a report of the: (1) participatory curriculum development process; (2) training of the Provincial Coordinators – who schedule, deliver, and train Presenters to deliver CMCL presentations across Canada; (3) training of the Presenters to use the new curriculum for CMCL presentations in their province, and (4) interventionists' (i.e., Provincial Coordinators and Presenters) cognitions for, and adoption of, the new CMCL curriculum. An institutional research ethics board approved the study protocol, and informed consent was obtained from participants in the study after the procedure had been fully explained to them.

Participatory Curriculum Development

After an initial five years of implementation in five Canadian provinces, the CPC established an Advisory Committee to review the CMCL intervention and engage in a participatory curriculum development process. This type of process was utilized as it has been shown to lead to increased acceptability and use of an intervention when it is put into real-world practice [17-19]. The Advisory Committee was comprised of five experienced and two newly-hired CMCL Provincial Coordinators, HCPs who work with individuals with physical

disabilities, opinion leaders in parasport development and LTPA participation among people with a physical disability in Canada, and behavior-change and knowledge-translation researchers from SCI Action Canada. Following two days of meetings in December 2010, it was decided that the CMCL curriculum required an up-to-date evidence base and a foundation in behavior-change principles so as to maximize the impact of the CMCL intervention among HCPs. A researcher from SCI Action Canada with expertise in behavior-change theories, knowledge mobilization principles, and the Canadian health care structure was engaged to lead the curriculum restructuring process.

Using the existing version of the CMCL curriculum as a foundation and with support from the CPC's Manager of Sport Development, the curriculum was restructured and expanded with a foundation in the Theory of Planned Behavior (TPB), which has been suggested to be an ideal framework for understanding and promoting knowledge mobilization among HCPs [20, 21]. The TPB posits that an individual's intention (or motivation) to perform a target behavior (e.g., prescribing LTPA) is influenced by his/her attitudes, subjective norms, and perceived behavioral control (PBC) for the behavior [22]. In turn, intention and PBC are direct predictors of behavior. By including up-to-date statistics and research evidence about Canadian LTPA participation among both the able-bodied and physically disabled populations, the curriculum was designed to raise awareness of the benefits of LTPA with the goal of strengthening HCPs' *attitudes* towards prescribing LTPA. Information demonstrating that HCPs are key influencers in the lives of their patients, and are expected to play a role in promoting LTPA, was included to enhance *subjective norms*. Strategies that HCPs can use for discussing LTPA (e.g., asking a few key questions during routine patient appointments and providing referrals to, and information on, LTPA resources) were featured to emphasize to HCPs that they currently have the skills and the

control to encourage their patients to become active (i.e., to enhance their *PBC*). The curriculum was restructured and updated using a participatory model that included research and practice professionals. Importantly, this included all members of the CMCL Advisory Committee who were responsible for assessing and establishing solutions to barriers of both knowledge use among HCPs and presentation delivery among interventionists. This process focused on ensuring that the curriculum addressed Diffusion of Innovations (DOI) characteristics that would maximize the interventionists' decision to adopt the new curriculum (i.e., relative advantage over previous curriculum, minimal complexity, compatibility, trialability, and observability; [23]).

The final curriculum consisted of a 30-slide PowerPoint presentation and a corresponding set of speakers' notes for each slide³. To facilitate intervention fidelity and ease of implementation, the speakers' notes included an approximate time allocation, key discussion points, as well as additional information and complete references for responding to attendees' questions. A Presenter Checklist was also created to help ensure consistent curriculum delivery, and to collect intervention implementation data (e.g., duration of session, number of HCPs present versus number invited to attend).

Training of the CMCL Provincial Coordinators

The updated curriculum was presented at a meeting with the seven Provincial Coordinators in April 2011. During this three-hour meeting, two areas were emphasized: (1) the specific content designed to impact HCPs' attitudes, subjective norms, PBC, and intentions to prescribe LTPA, and (2) how the curriculum and speakers' notes were designed to meet the five DOI characteristics. Discussion also focused on strategies that could be used to train Presenters

³ An overview of the content of the new 30-slide curriculum can be found in Cripps, Tomasone, and Staples (2013). See reference number [14].

to deliver the new curriculum. To ensure alignment with other organizational activities, the PowerPoint slides were corporate branded by the CPC prior to curriculum dissemination.

Training of the CMCL Presenters

Presenter recruitment criteria included being an active HCP and/or having an influential role in Canadian parasport. The number of CMCL Presenters recruited and trained by the Provincial Coordinators is representative of the number of presentations that are typically scheduled annually within a given province. Presenters were trained to use the new curriculum between November 2011 and April 2012. All Presenters were trained by their Provincial Coordinator in a face-to-face (56%) or telephone-delivered session (44%) ranging from 30 to 120 minutes duration ($M=69.4$, $SD=31.9$). The majority of training sessions (69%) occurred in a group. The Provincial Coordinators used a variety of training strategies, including a detailed discussion of: (1) revised content, (2) where adaptations can be made without losing the theory-base of the presentation, (3) how to relate the content to HCPs' practice, (4) the technical and ease-of-use features of the new curriculum. Some Presenters also observed a CMCL presentation delivered by a Provincial Coordinator, while other Presenters delivered a mock presentation to their Provincial Coordinator prior to their first CMCL presentation to HCPs. Overall, the training varied minimally between provinces in terms of content, delivery mode, and duration.

Assessing Interventionists' Cognitions for the New Curriculum

Demographic characteristics of interventionists were collected. Prior to, immediately after, and 6-months following their training, interventionists completed a TPB questionnaire to assess their attitudes towards using the new curriculum, perceptions of pressure from important others (subjective norms) for using the new curriculum in its entirety, PBC to deliver the new

curriculum, and intentions to use the new curriculum in its entirety. A measure of DOI characteristics was also administered immediately after training to assess interventionists' likelihood of adopting the new curriculum. Following the delivery of each CMCL presentation, interventionists completed a Presenter Checklist and collected Presentation Feedback (i.e., end-user evaluation) Forms from the presentation attendees. A description of the measures is presented next.

TPB questionnaire. *Attitudes* and *subjective norms* were assessed with items adapted from Ajzen [24], and *PBC* was assessed by items adapted from Rhodes and Courneya [25]. All social cognition items were rated on a seven point Likert scale. For TPB construct scales with more than two items, item scores were averaged to give an overall construct score. Table 1 lists the items, response scale, and the internal consistency or correlation of the items for each scale.⁴

DOI measure. A 7-item measure was included to assess the interventionists' opinion of whether the new CMCL curriculum met the DOI characteristics necessary for adoption. All items were scored on a 7-point scale (*1=Strongly disagree, 7=Strongly agree*). Table 2 lists the items, response scales and the internal consistency or correlation of the items for each DOI characteristic included in the measure⁴. Averages were computed for DOI characteristics assessed with more than one item, and a summative DOI score was calculated by averaging all items.

Assessing Use of the New Curriculum

Presenter checklists. Following the delivery of a CMCL session, interventionists reported presentation duration and number of attendees.

⁴ As an index of internal consistency of the measures, Cronbach alpha (α) values were calculated when the scales had three or more items, and Pearson correlations (r) were calculated when the scales had only two items. Internal consistency is considered adequate if $\alpha \geq .7$ [26].

Presentation feedback. As an indicator of end-user evaluation, data were collected from attendees at CMCL sessions. Attendees provided feedback about the CMCL presentation by responding to six items on a 7-point scale ($1=Strongly\ disagree$, $7=Strongly\ agree$). Example items include, “I learned a lot of new information at this presentation”, “The information in the presentation was easy to understand”, and “I would recommend this presentation to a colleague”.

Statistical Analyses

Descriptive statistics were calculated for each study measure. In order to maximize power (due to missing data) and given the a priori hypotheses for the TPB variables [27], separate repeated measures ANOVAs were computed to identify significant changes in the TPB variables between pre-post, post-follow-up, and pre-follow-up, with α set at .05 for each comparison. Cohen’s d was calculated as an index of effect size.

Results

Seven Provincial Coordinators were trained on the curriculum and they, in turn, trained 21 Presenters. Seven Provincial Coordinators and 15 Presenters completed study measures (see Table 3). Results for the TPB measures are shown in Tables 4 and 5. Both Provincial Coordinators and Presenters had positive attitudes, subjective norms, PBC, and intentions for using the new CMCL curriculum before training. Significant increases emerged for Provincial Coordinators’ attitudes ($F(1,6)=11.228$; $p=.015$; $d=1.38$) and PBC for delivering the new curriculum ($F(1,6)=8.854$; $p=.025$; $d=1.13$) between pre- and post-training. Between post-training and follow-up, significant decreases were seen in Provincial Coordinators’ attitudes for delivering the new curriculum ($F(1,6)=10.845$; $p=.017$; $d= -1.35$) and intentions to use the new curriculum in its entirety ($F(1,6)=12.789$; $p=.012$; $d= -1.91$) and in Presenters’ PBC for

delivering the new curriculum ($F(1,9)=7.364$; $p=.024$; $d=-0.75$). No significant changes were seen in any TPB cognitions between pre-training and follow-up.

Scores for the DOI characteristics are presented in Table 6. Overall, the CMCL interventionists felt the new curriculum was minimally complex, compatible with their needs, easy to adapt and use on a trial basis, and had a relative advantage over the old curriculum.

Presenter Checklists were collected from 34 presentations delivered between November 2011 and August 2012. These 34 presentations were attended by 787 individuals (997 were invited), with attendance ranging from 10 to 80 individuals per session. The presentations lasted an average of 96.0 ($SD=19.3$) minutes, with durations ranging from 60 to 150 minutes.

Presentation Feedback forms were collected from 598 of the 787 attendees. Overall, attendees rated the CMCL information as new, interesting, easy to understand, credible, and important to them (all $M_s \geq 6.2$ out of 7), and all attendees said they would recommend CMCL to a colleague.

Discussion

The CMCL Provincial Coordinators and Presenters had positive attitudes, subjective norms, PBC, and intentions to use the new curriculum prior to training. These findings suggest that adoption of the new curriculum by these interventionists was likely. Specifically, Rogers [23] reports that individuals move from simply being aware of an innovation, such as the new curriculum, to adopting it when positive attitudes, normative beliefs, perceptions of control, and intentions are developed [23]. Further, the interventionists felt the new CMCL curriculum had characteristics that were essential for adoption in that it was rated as: (1) having a relative advantage over the previous curriculum, (2) being compatible with the interventionists' values and needs, (3) not being overly complex, and (4) being easy to implement on a trial basis. In the

present study, the high scores on these indicators of adoption suggest that interventionists' may have decided to adopt the new CMCL curriculum prior to their training.

The high initial perceptions across TPB and DOI indicators may be the result of a self-selection bias (i.e., the interventionists would not have agreed to be trained and to deliver the new curriculum if they were not motivated to use it). However, it could also be the result of the participatory development process that was used for the new CMCL curriculum. First, involving interventionists (i.e., Provincial Coordinators) and potential intervention end users (i.e., HCPs on the Advisory Committee) in the intervention development process has been suggested to lead to increased acceptability and implementation of the intervention when it is put into practice [17-19]. Second, the new curriculum was designed with the DOI in mind. For example, the collaboration between researchers, intervention agents, and intervention end-users was instrumental for creating solutions to barriers to curriculum delivery among interventionists and to knowledge use among HCPs, making it more likely that the intervention would be adopted at all levels. Third, rooting the new CMCL curriculum in the TPB, which has been described as an ideal framework for HCP knowledge mobilization [20,21], provided structure to the curriculum content, and allowed the presentation to tell a story that is meaningful to both interventionists and end users.

Interestingly, there was a significant decrease in Provincial Coordinators' attitudes and intentions and in Presenters' PBC between post-training and follow-up. During this 6-month period, interventionists moved from making a decision to adopt to the reality of implementing the curriculum—a shift in stage across the decision-making process reflecting the overt use of innovation by the adopter [23]. It is likely that once the Provincial Coordinators trained the Presenters and both groups of interventionists experienced using the new curriculum in practice,

they may have become aware of additional barriers to adoption and/or implementation. The salience of these barriers at follow-up may have negatively impacted their cognitions regarding the use of the new curriculum in its entirety. Because the interventionists' felt the new CMCL curriculum met the characteristics necessary for adoption (i.e., compatibility, trialability), they may have subsequently adapted the curriculum during implementation. This explanation is in line with Rogers' DOI framework [23] which suggests a "reinvention" process can occur during implementation. This can be a positive outcome for intervention delivery but may also diminish interventionists' attitudes, perceptions of control, and intentions to deliver the curriculum in its entirety. The significant decreases in the indicators of adoption (i.e., attitudes, PBC, intention) at follow-up may be indicative of the reinvention process that often occurs during the early implementation stage, and not of adoption failure. In fact, as suggested by Rogers' [23], a reinvention process early in the implementation stage may lead to higher curriculum sustainability, and thus implementation, over time. The influence of this potential reinvention process on intervention effectiveness warrants further investigation.

Regardless of the interventionists' adaptations to the curriculum, the Presentation Feedback Forms suggest that the CMCL intervention was well-received by 787 HCPs across Canada during the 10-month study period. This reach is an improvement from the number of HCPs who received the CMCL intervention during the first five years of CMCL implementation (i.e., 600 HCPs per year; [14]). The implication of this increased reach is that more HCPs may discuss and prescribe LTPA to their patients with a physical disability. As part of national CMCL program monitoring, research is underway to examine (1) the impact of the new curriculum on HCPs' cognitions with respect to discussing and prescribing LTPA among their patients with a

physical disability, and (2) the key implementation variables leading to changes in HCPs' cognitions in order to develop a list of best-practices for CMCL curriculum delivery [28].

Study Strengths and Limitations

To our knowledge, this is the first study to describe the collaborative development and interventionist adoption of a theory- and evidence-based intervention aimed at increasing LTPA and parasport participation among Canadians with a physical disability. However, a limitation to the development and adoption process is that the new CMCL curriculum was designed for implementation in one context (i.e., professional development workshops for HCPs) without a formative evaluation of whether the curriculum addressed areas of importance and implementation barriers across various contexts [18]. Nevertheless, the new curriculum can act as a foundation for future iterations of the CMCL intervention.

A second limitation is the small sample size (22 interventionists completed study measures) relative to the number of analyses conducted, potentially making the analyses underpowered to detect significant changes and increasing susceptibility to Type II error. However, as noted above, CMCL is a real-world program that recruits interventionists based on the demand for presentations in each province. The results of the current study are a preliminary investigation of the adoption and dissemination of the CMCL curriculum among interventionists. With increasing expansion and reach of the CMCL program in Canada, additional Provincial Coordinators and Presenters will be recruited and the interventionist sample size will be increased; thus, future analyses examining the adoption and dissemination processes of the curriculum are expected to have greater statistical power.

Conclusion

The theory-driven, participatory CMCL curriculum development process likely facilitated the adoption and implementation of the new curriculum by the Provincial Coordinators and Presenters. Adoption and implementation of the curriculum among the interventionists are essential first steps to dissemination and subsequent evaluation of the impact of the CMCL intervention on HCPs' LTPA-prescribing cognitions and behavior.

Acknowledgements

The authors would like to acknowledge The Canadian Paralympic Committee for their assistance with the dissemination of the new curriculum and data collection from the interventionists, as well as Krystn Orr for her assistance with data collection. This study was partially supported by an Ontario Neurotrauma Foundation Mentor-Trainee Capacity Building Award awarded to the first and the second author (JRT and KAMG), and a Social Sciences and Humanities Research Council of Canada Community-University Research Alliance grant awarded to the second author (KAMG).

Conflict of Interest

JRT and KMG sat on the CMCL Advisory Committee when the intervention curriculum was being restructured. LD is the Manager of Sport Development at the Canadian Paralympic Committee. PAE has no conflicts of interest to report.

Informed Consent

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000. Informed consent was obtained from all patients before being included in the study.

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Table 1.

Questionnaire items assessing interventionists' social cognitions for using the new CMCL curriculum.

Theory of Planned Behaviour construct (# items)	Response scale	Internal consistency (α) or correlation (r)
Items included in scale		
Attitudes (6 items)		
<i>Instrumental attitudes</i>		$\alpha_s \geq .76$ for
The new CMCL curriculum will help me implement the CMCL information, strategies, and resources at my next CMCL presentation	1 = Strongly disagree, 7 = Strongly agree	Provincial Coordinators;
<i>Affective attitudes</i>		$\alpha_s \geq .88$ for
Complete the statement, "At my next CMCL presentation, the new CMCL curriculum would be _____ to use."		Presenters
a. harmful/beneficial b. worthless/valuable c. difficult/easy d. unpleasant/pleasant e. unenjoyable/enjoyable	Anchors represent extremes (1/7) on 7-point Likert scale	
Subjective norm (2 items [a,b] for Provincial Coordinators; 3 items [a-c] for Presenters)	1 = Strongly disagree, 7 = Strongly agree	$r_s \geq .54$ for Provincial Coordinators;
_____ want(s) me to use the new CMCL curriculum in its entirety at my next CMCL presentation.		$\alpha_s \geq .83$ for Presenters
a. The Canadian Paralympic Committee b. Provincial Coordinators c. Other Presenters in my province		
Perceived behavioural control (4 items [a-d] for Provincial Coordinators; 2 items [a,b] for Presenters)		
If you were really motivated and had all the resources that you needed, how confident are you in your ability to...	1 = Not at all confident, 7 = Completely confident	$\alpha_s \geq .83$ for Provincial Coordinators;
a. ...tell HCPs about CMCL information, strategies, and resources at		

- your next CMCL presentation?
- b. ...persuade HCPs to use CMCL information, strategies, and resources at your next CMCL presentation?
 - c. ...teach Presenters about CMCL information, strategies, and resources at their next CMCL presentation?
 - d. ...persuade Presenters to use CMCL information, strategies, and resources at their next CMCL presentation?

$r_s \geq .77$ for
Presenters

Intention (1 items)

1. What percentage of the new CMCL curriculum do you intend to use at your next CMCL presentation?

Specify a percentage of
the new curriculum out
of 100%

N/A

Note. CMCL, *Changing Minds, Changing Lives*; HCPs, health care professionals. The column indicating scale internal consistency (Cronbach alpha) scores for the items on the scale and Pearson correlations between the items on the scale represent the lowest value across the four time points (pre-CMCL, post-CMCL, and 6-month follow-up).

Table 2.

Questionnaire items assessing interventionists' opinion of whether the new curriculum met the Diffusion of Innovation characteristics.

Diffusion of Innovation characteristic (# items) Items included in scale	Response scale	Internal consistency (α) or correlation (r)
Complexity (3 items)		
The new CMCL curriculum...	1 = Strongly disagree, 7 = Strongly agree	$\alpha_s \geq .69$
a. ... is clear and easy to understand.		
b. ... is easy to use.		
c. ... does what we want it to – that is, increase HCPs' knowledge, attitudes, and behavior for prescribing physical activity and parasport to their patients with a disability.		
Compatibility (2 items)		
The new CMCL curriculum...	1 = Strongly disagree, 7 = Strongly agree	$r_s \geq .77$
a. ... is compatible with my values and norms.		
b. ... meets my needs as an interventionist.		
Trialability (1 item)		
The new CMCL curriculum can be easily adapted or modified to suit my own needs as a presenter.	1 = Strongly disagree, 7 = Strongly agree	N/A
Relative Advantage (1 item; completed by those who had previously served as CMCL interventionist)		
The new CMCL curriculum is more effective than the old curriculum in increasing HCPs' knowledge and confidence to discuss and prescribe physical activity and parasport to their patients with a disability.	1 = Strongly disagree, 7 = Strongly agree	N/A

Note. CMCL, *Changing Minds, Changing Lives*; HCPs, health care professionals. The column indicating scale internal consistency (Cronbach alpha) scores for the items on the scale and Pearson correlations between the items on the scale represent the lowest value across Provincial Coordinators and Presenters. Provincial Coordinators and Presenters who had not previously been a CMCL

interventionist did not complete the Relative Advantage item; thus, the summative DOI score was calculated by averaging six items (for new CMCL interventionists) or seven items (for experienced CMCL interventionists). The internal consistency scores for the summative DOI score (averaged across all six or seven items) were $\alpha \geq .81$.

Table 3.

Demographic characteristics of the CMCL interventionists in Canada.

Characteristic	Provincial Coordinators <i>n</i> =7	Presenters <i>n</i> =15
Sex	4 male, 3 female	9 male, 6 female
Ethnicity	100% Caucasian	100% Caucasian
Age (<i>M</i> ± <i>SD</i> in years)	47.9±8.5	36.1±11.1
LTPA (<i>M</i> ± <i>SD</i> in days/week)	4.7±1.3	4.4±1.3
Involved in parasport* (<i>n</i>)	6	13
Province		
British Columbia	1	2
Alberta	1	1
Saskatchewan	1	2
Ontario	1	6
Newfoundland/Labrador	1	1
New Brunswick	1	3
Prince Edward Island & Nova Scotia	1	0
Current career (<i>n</i>)		
HCP	3	7
Teacher/educator	2	1
Government or non-government organization	2	5
In HCP training	0	2
Frequency with which you work with people with physical disabilities	“Frequently”	“Frequently” to “All the time”

*Intervention agents were involved in parasport as an athlete, coach, program developer, classifier, volunteer, or had multiple roles.

Table 4.

CMCL Provincial Coordinators' TPB cognitions for adopting and delivering the new curriculum across Canada at pre- and post-training, and at 6-month follow-up.

Construct	Training		Follow-up 6-month	Repeated-measures ANOVA <i>F</i> -value (<i>p</i> -value)			Effect sizes		
	Pre	Post		Pre- Post	Post- 6mo	Pre- 6mo	<i>d</i> _{pre- post}	<i>d</i> _{post- 6mo}	<i>d</i> _{pre- 6mo}
Attitude	5.95±0.46	6.55±0.23	5.93±0.48	11.228 (.015)*	10.845 (.017)*	0.017 (.901)	1.38	-1.35	-0.04
Subjective norms	6.14±0.94	6.71±0.39	6.50±0.71	2.400 (.172)	.659 (.448)	.843 (.394)	0.65	-0.32	0.36
PBC	5.86±0.56	6.64±0.35	6.36±0.13	8.854 (.025)*	3.692 (.103)	5.600 (.056)	1.13	-0.77	0.98
Intention	97.86±3.93	100.00±0	93.57±4.76	2.077 (.200)	12.789 (.012)*	3.484 (.111)	0.55	-1.9	-0.71

Note. All seven Provincial Coordinators completed the measures of TPB constructs at the three time points. Pre-, post-, and follow-up values for attitude, subjective norm, PBC, and intention are $M \pm SD$. Attitudes, subjective norms and PBC means are out of 7. Intention means are a percentage of the new curriculum the Provincial Coordinator intended to use. * indicates statistically significant difference at $p < .05$.

Table 5.

CMCL Presenters' TPB cognitions for adopting and delivering the new curriculum across Canada at pre- and post-training, and at 6-month follow-up.

Construct	Training		Follow-up 6-month	Repeated-measures ANOVA <i>F</i> -value (<i>p</i> -value)			Effect sizes		
	Pre	Post		Pre- Post	Post- 6mo	Pre- 6mo	<i>d</i> _{pre- post}	<i>d</i> _{post- 6mo}	<i>d</i> _{pre- 6mo}
Attitude	5.89±0.89	5.97±0.87	5.38±0.92	0.533 (.481)	3.450 (.096)	1.059 (.333)	0.10	-0.62	-0.51
Subjective norms	6.40±0.81	6.08±1.25	6.00±0.65	0.184 (.678)	0.099 (.763)	0.222 (.654)	-0.62	-0.11	-0.84
PBC	6.17±0.78	6.20±0.65	5.65±0.63	0.169 (.689)	7.376 (.024)*	4.50 (.067)	0.04	-0.75	-0.77
Intention	91.25±10.69	92.33±10.83	90.00±13.54	1.960 (.189)	0.031 (.864)	.283 (.609)	0.14	-0.27	-0.11

Note. Measures of the TPB constructs were completed by 12, 15, and 10 Presenters at pre-training, post-training, and follow-up, respectively. Pre-, post-, and follow-up values for attitude, subjective norm, PBC, and intention are $M \pm SD$. Attitudes, subjective norms and PBC means are out of 7. Intention means are a percentage of the new curriculum the Presenter intended to use. * indicates statistically significant difference at $p < .05$.

Table 6.

CMCL interventionists' ratings of the new curriculum with respect to the DOI characteristics.

DOI characteristic ($M \pm SD$, out of 7)	Provincial Coordinators $n=7$	Presenters $n=15$
Complexity*	5.83 $\pm$ 0.62	5.79 $\pm$ 0.99
Compatibility	6.00 $\pm$ 0.71	5.94 $\pm$ 1.25
Trialability	6.17 $\pm$ 0.41	5.88 $\pm$ 0.72
Relative advantage	5.83 $\pm$ 0.75	5.70 $\pm$ 0.67
Summative DOI score	5.93 $\pm$ 0.50	5.84 $\pm$ 0.91

*Complexity is reversed scored, with higher scores indicating less complexity.