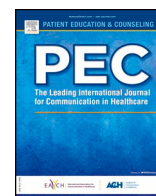




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Patient-centered innovation

Advancing social inclusion of people with disabilities through awareness and training activities: A collaborative process between community partners and researchers

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ABSTRACT

Objective: The main objectives were to 1) search and map current disability awareness and training activities in Quebec, Canada, 2) collectively reflect on these practices, and 3) develop a five-year strategic plan. **Methods:** We used an integrated knowledge translation approach whereby researchers and community partners were involved in all stages. This project consisted of two sequential phases: 1) an environmental scan (web review and interview) of current practices, and 2) a reflection process with an external expert-facilitator in social transformation. Outcome results and process data are reported.

Results: We identified 129 activities (71 training, 58 awareness) from 39 organizations (from 123 organizations initially invited). A wide range of characteristics were collected for each activity which allowed for the identification of gaps. The working group met seven times in one year to discuss results from phase 1 and co-create a five-year strategic plan. Main priorities are 1) the development of a methodology for measuring collective impact and 2) content synchronization of activities.

Conclusion: Involvement of partners and researchers enabled a concerted and efficient approach to the development of a five-year strategic plan.

Practice implications: A transition committee led by partners will ensure implementation and sustainability of the plan across the province.

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1. Introduction

Physical and social environments are determinants of disability [1–3]. Persons with a disability are broadly defined, but are not limited to, people across the lifespan with intellectual or physical disabilities or mental health issues. More than 20 years ago, the Human Development Model – Disability Creation Process [4–6] put forth a social understanding of disability, a perspective which was later endorsed by the International Classification of Functioning, Disability and Health [7]. Numerous research reviews outline the

Nomenclature

CRPD	Convention on the Rights of Persons with Disabilities
TIDieR	template for intervention description and replication checklist
SQUIRE 2.0	Standards for Quality Improvement Reporting Excellence

influence of the built (physical) environment on the experience of disability [8–10], but limited evidence documents the role of the social environment in the disability creation process. To this point, a better understanding of the importance of the social dimension of inclusive environments (as compared to the physical dimension) was recently highlighted through a process of critical reflections [11].

Awareness-raising and training activities are recognized by the World Health Organization and the World Bank as effective means to render the social and attitudinal environment more inclusive [12]. Here, we defined a *disability awareness-raising activity* as a structured activity (i.e., an organized activity that has an objective, a target audience and can be evaluated) that aims to raise general public awareness and understanding on the daily life and experience of a person with a disability. A *disability training activity* was defined as an activity that aims to transfer knowledge, skills or attitudes to individuals in the community who may directly interact with people with a disability. Specifically, Article 8 of the “Optional protocol” of the International Convention on the Rights of Persons with Disabilities (CRPD) [13] focuses on awareness-raising activities whereas Article 4.1. (i) aims “to promote the training of professionals and staff working with persons with disabilities in the rights recognized in this Convention so as to better provide the assistance and services guaranteed by those rights” [14]. The Convention was adopted by the United Nations in December 2006 and now counts 163 signatories in addition to the 94 signatories of the Optional Protocol [15]. Canada ratified the Convention on March 11th 2010 and its Optional Protocol on December 3rd 2018 (Accession).

In Quebec, a large Province in Canada, a research initiative entitled “Towards a More Inclusive Quebec Society” was launched in the Fall 2017 to create more inclusive physical and social environments for people with disabilities. As part of this initiative, our project addressed the social environment and, more specifically, awareness-raising and training activities offered in the community. Previous work by researchers in this group showed that a three-hour training, which included theory and experimentation of what it feels like to live with a disability, increased knowledge levels ($p = 0.009$) and perceived confidence ($p = 0.03$) of shopping mall employees in interacting with their clientele [16]. Still, community partners representing a variety of sectors (e.g. transportation, leisure, municipalities, work) related to disability, more recently expressed concerns about the widespread yet disparate offer of awareness-raising and training activities across the province of Quebec. The research initiative “Towards a More Inclusive Quebec Society” held, on a periodic basis, meetings bringing together community partners and researchers to discuss on a variety of themes relating to the topic of inclusion. At one of these meetings, community partners shared their concerns in current disability training and awareness activities such as poor supervision and coordination, inconsistent information offered and questionable use of research-based evidence in the content and structure of such activities. Moreover, for the most part, these activities are offered by community organizations with limited resources and similar activities may be offered by multiple organizations, leading to unnecessary duplication of efforts. This project aimed to leverage a provincial research initiative to harmonize disability awareness-raising and training initiatives with

the direct involvement of community partners seeking to defend the rights of people with disabilities. The project was conducted locally (within a Canadian province) for feasibility reasons. However, the approach and results may be relevant elsewhere.

1.1. Objective

The main objective of this research project was to review and reflect on current disability awareness and training practices in Quebec, through a collaboration between community partners and researchers. The specific objectives were to: 1) search and map the current service offer for awareness-raising and training activities related to the social environment for people with disabilities, 2) collaboratively reflect and discuss on current practices; and 3) co-develop a five-year strategic plan to improve consistency, delivery, and outcomes of such initiatives. We aimed to collect outcome results for these objectives as well as process data that support the integrated knowledge translation approach [17] and the engagement of participants.

2. Methods

This project consisted of two distinct sequential phases and was grounded in an integrated knowledge translation approach [18]. The principles of an integrated knowledge translation approach include collaborative research with knowledge users (i.e. community partners) and shared power among community partners and researchers [19]. Concretely, community partners were involved from project initiation and throughout the research process as part of the research team at a ratio of approximately 1:1 with researchers. The first phase of the study consisted of an environmental scan (web review and interviews) of disability awareness-raising and training activities (objective 1) currently offered in Quebec, Canada. The second phase consisted of reflecting on results of Phase 1 (objective 2) as well as the co-development of a five-year strategic plan (objective 3) using the *Theory of Change* as a guiding framework [20,21]. The *Theory of Change* is a process of social transformation proposed by the external experts in social transformation who have successfully used it for many years. We used the Standards for Quality Improvement Reporting Excellence (SQUIRE 2.0) as a reporting guideline [22].

The research team was comprised of a group of six researchers and seven community partners representing key disability-related organizations identified as social actors in funding, influencing and providing awareness raising or training activities. An individual representing each community partner organization was identified by the organization itself and could change throughout the project. We remained flexible and open to shifts in representatives to facilitate collaboration and participation of community partners. An executive committee was created, composed of the following individuals: two principal investigators (AR and PF), the main community partner (LR), the partnership broker agent from the Inclusive Society Initiative, a PhD student in charge of study coordination (JRD), a research assistant (MS) and the external expert-facilitator in social transformation for phase 2. Members of the executive committee are those leading the project, planning the different steps, preparing material for research activities, taking notes and creating summaries of the discussions.

The Research Ethics board of the Centre for Interdisciplinary Research in Rehabilitation in greater Montreal (CRIR) ruled that no formal ethics approval was required in this particular case, given the approach and the nature of the data collected. No personal data were collected on participating individuals.

Phase 1: Environmental scan of current awareness-raising and training activities.

An environmental scan of disability awareness-raising and training activities offered by organizations in the province of Quebec was conducted from June to October 2018. The activities could be offered by municipalities, community and government organizations, or any other key partners such as rehabilitation centers, health and educational organizations or universities.

To be included, the activities must have had a main purpose of creating an inclusive society for persons with disabilities through an intervention *targeting the social environment*, defined as societal actors who would assume their responsibilities in creating an inclusive society and been offered in 2017–2018. We excluded unstructured activities, activities offered directly to the person with a disability, or activities that trained professionals to use a specific technical aid or perform a specific intervention, and those that promoted a business product.

Organizations offering potential activities that fit our criteria were first identified from a list provided by the partnership broker agent from the Inclusive Society Initiative and were emailed an invitation to participate in our study. Organizations were solicited to identify a representative who would be knowledgeable about the disability awareness and training programs. The sampling was supplemented using the snowball method whereby participants recommended other potentially eligible organizations. A web-review on Google was conducted using variations of keywords such as “training”, “awareness”, “people with disabilities”, “Quebec” in English and in French to finalize sampling of other organizations aligning with our inclusion criteria.

The interview guide, developed iteratively by the research team, was piloted with one community partner and final adjustments in terms of clarity, relevance and flow were made as a result. The Human Development Model – Disability Creation Process [5,23] was also used to frame the terminology in the interview guide. The doctoral student (JRD) subsequently collected the data through 30-minute telephone interviews with a representative from 45 organizations. To guide the development of the interview guide, we used the Template for Intervention and Replication Checklist [24] to help ensure that each activity (why, what, who, how, where, when, etc.) was sufficiently described (see Table 1). The interview guide was thus mostly composed of close-ended questions with some short open-ended questions. As such, phone contacts were not audio-recorded, the interviewer recorded responses to the questions in real-time into a document.

Descriptive statistics (frequencies and percentages) were used to quantify the characteristics of activities (see Table 1). Responses to the short open-ended questions (e.g., target audience, activity objectives) were grouped under categories using an inductive thematic analysis [25].

Phase 2: Strategic planning – Theory of change.

All organizations identified in the environmental scan of phase 1 as offering awareness-raising or training activities were invited to volunteer to collaborate in meetings for phase 2. A working group, composed of a combination of volunteered community partners representatives ($n = 13$ of which 4 are also members of the research team) and researchers ($n = 4$) was created to reflect on the results from Phase 1 and to begin to co-create a five-year strategic plan addressing the gaps or shortcomings of the current provincial service offer for awareness and training activities. Travel expenses were reimbursed, and meals were provided for face-to-face meetings, but no additional monetary incentives were offered to participants (community partners and researchers).

The working group discussions were facilitated by two external experts in social transformation [26] who used the *Theory of Change* as the underlying framework to guide the process [21]. In agreement with principles of integrated knowledge translation, the participatory approach used by these external experts in social transformation for strategic planning was developed and validated by the

Bridgespan group [27] and has been used in over 60 Canadian organizations. The results of phase 1 were presented at the beginning of this second phase to inform the reflection process. Then, the facilitators presented the objectives and methodology of the participatory process in developing the *Theory of Change* model (see Fig. 1). The working group was guided in developing an impact statement which describes the vision of an ideal inclusive society [27]. Over a period of one year through face to face and online periodic meetings, the working group iteratively co-created the five-year strategic plan anchored around the *Theory of Change* model. The *Theory of Change* model summarizes the vision, impact statement, perceived conditions for success and potential barriers, direct and indirect targeted audience, actions and strategies, short, medium and long term expected outcomes as well as intended ultimate change (see Fig. 1).

The working group was then guided in developing an 18-month action plan which focused on a few priority objectives within the five-year strategic plan. The working group discussed the following parameters for feasibility of the action plan: governance, resources (human and material), logistics, public relations and communications, knowledge translation strategies, monitoring and evaluation, sustainability, and the development of partnerships. We descriptively analyzed the outputs (the finalized *Theory of Change* and strategic plan) and the characteristics of the process (number of meetings, topics discussed and attendance) which alludes to the engagement of community partners.

3. Results

Phase 1: Environmental scan of available awareness-raising and training activities.

One hundred and twenty-three (123) organizations were invited by email to participate in our study; 64 (52%) were from the initial list, 33 (27%) were from snowball sampling (where participants recommended other potential participants or organizations), and 26 (21%) were from a web search. From the 71 organizations (58%) that replied to our invitation, 11 were excluded as they did not offer activities corresponding to our criteria, five did not have the time to participate and 10 were lost to follow up for a total 45 phone interviews conducted. Six organizations were further excluded from analysis because they failed to meet the eligibility criteria: services offered to people with a disability (3), business outreach (1), unstructured activity - social media posts (1), and professional training on how to use a specific therapeutic modality (1).

From the 39 organizations included, our environmental scan identified 129 activities including 58 awareness-raising activities and 71 training activities (see Table 1); 14 (36%) organizations offered both types of activities, 14 (36%) only offered awareness activities, and 11 (28%) only offered training activities. The majority of activities (76.9%) were provided by community organizations while only one activity was reported to be offered by the private sector.

As shown in Table 1, a variety of audiences were targeted. In terms of topic areas, 40% of the 129 activities focused on people with disabilities in general, followed by 22% targeting intellectual disabilities and 18% targeting autism spectrum disorder. Awareness-raising activities targeted the general population (39.7%) more often than training activities (7.0%) which focused more often on the education (53.5%), community (50.7%) and private (42.3%) sectors. Awareness-raising activities tended to focus on theory, on living an experience or on the promotion of social inclusion, whereas training activities focused more on theory and communication, or interventions for a specific approach. A trainer or instructor with a disability was involved in 37.9% of awareness-raising and in 26.8% of training activities. Fees were charged for 13 of the 58 awareness-raising activities (22.4%) with a range per activity from 100 CAD to 500 CAD ($n = 5$) or per participant from 15 CAD to 90 CAD ($n = 7$). Similarly, 42 of the 71 training activities (59%) charged fees ranging from 169 CAD

Table 1

Description of awareness-raising (n = 58) and training (n = 71) activities using the Template for Intervention and Replication Checklist [n (%)] (Note: multiple answers were allowed; higher frequencies are bolded).

	Awareness-raising activity (n = 58)	Training activity (n = 71)	Total (n = 129)
Who is targeted (audience)^a			
- Education	16 (27.6)	38 (53.5)	54 (41.9)
- Community sector	6 (10.3)	36 (50.7)	42 (32.6)
- Health, social services	6 (10.3)	34 (33.8)	40 (31.0)
- Private	6 (10.3)	30 (42.3)	36 (27.9)
- Leisure, sports	8 (13.8)	26 (36.6)	34 (26.4)
- General population	23 (39.7)	5 (7.0)	28 (21.7)
- Customer service	1 (1.7)	24 (33.8)	25 (19.4)
- Cities	5 (8.6)	15 (21.1)	20 (15.5)
Why: main objective			
- Understand condition, disability and universal design principles: theory	16 (27.6)	45 (63.4)	61 (47.3)
- Learn to communicate	2 (3.4)	37 (52.1)	39 (30.2)
- Intervention on specific approach (including how to interact)	2 (3.4)	28 (39.4)	30 (23.3)
- Live an experience	14 (24.1)	0	14 (10.9)
- Promote social inclusion/participation	13 (22.4)	0	13 (10.1)
- Understand legislation	1 (1.7)	8 (11.3)	9 (7.0)
- Learn on tools, resources or evidence	8 (13.8)	0	8 (6.2)
What: Topic			
- Person with disabilities, unspecified (all)	17 (29.3)	35 (49.3)	52 (40.3)
- Intellectual abilities and disabilities	10 (17.2)	18 (25.4)	28 (21.7)
- Autism Spectrum Disorder	10 (17.2)	13 (18.3)	23 (17.8)
- Hearing abilities and disabilities	6 (10.3)	3 (4.2)	9 (7.0)
- Visual abilities and disabilities	7 (12.1)	1 (1.4)	8 (6.2)
- Motor abilities and disabilities	5 (8.6)	3 (4.2)	8 (6.2)
- Speech-language disorder	3 (5.2)	3 (4.2)	6 (4.7)
Who provided (organization)	58 activities offered by n = 27 organizations	71 activities offered by n = 24 organizations	129 activities offered by n = 39 organizations
- Community organizations	21 (77.8)	16 (66.7)	30 (76.9)
- Public, governmental organizations	4 (14.8)	5 (20.8)	6 (15.4)
- Municipal organizations	2 (7.4)	2 (8.3)	2 (5.1)
- Private sector	0	1 (4.2)	1 (2.6)
Who provided (characteristic)			
- Trainer with disability	22 (37.9)	19 (26.8)	41 (31.8)
- Experts (professionals or researchers)	23 (40.0)	17 (24.0)	40 (31.0)
How – pedagogical approach			
- Theory	13 (22.4)	66 (93.0)	79 (61.2)
- Case scenarios (case study)	0	43 (60.6)	43 (33.3)
- Experimentation (providing an experience, interactive workshops)	17 (29.3)	22 (31.0)	39 (30.2)
- Group discussion	8 (13.8)	22 (31.0)	30 (23.3)
- Testimonial (anecdotes, real life stories)	8 (13.8)	19 (26.8)	27 (20.9)
- Practical aspects (tools, guidelines)	0	26 (36.6)	26 (20.2)
- Exercises (individual or group)	0	17 (23.9)	17 (13.2)
How			
- Group	44 (75.9)	66 (93.0)	110 (85.3)
- Individual	2 (3.4)	4 (5.6)	6 (4.6)
- General audience	12 (20.7)	1 (1.4)	13 (10.1)
How			
- Face to face (vs on line/hybrid) ^b	52 (90.0)	47 (66.2)	99 (76.7)
Where			
- Province of Quebec	11 (19.0)	43 (60.6)	54 (41.9)
- Montreal area and/or Quebec City	40 (68.9)	15 (21.1)	55 (42.6)
- Other specific regions within the Province of Quebec	7 (12.1)	13 (18.3)	20 (15.5)
When and How much			
- Continuum (yes)	0	11 (15.5)	11 (8.5)
- Fees (yes)	13 (22.4)	42 (59.2)	55 (42.6)
- Duration of a session ≤ 3 h	45 (77.6)	52 (73.2)	97 (75.2)
Tailoring			
- In-house training of trainers (yes)	–	31 (43.7)	–
- Service offer: on request	18 (31.0)	46 (64.8)	64 (49.6)
- Testimonial-based content	19 (32.8)	41 (57.7)	60 (46.5)
Modifications: not applicable			
How well (planned and actual)			
- Number of participants ≤ 30	43 (74.1)	48 (67.6)	91 (70.5)
Assessment of immediate effects			
- Yes	0	53 (74.6)	53 (41.1)
Assessment of impacts on society			
- Yes	3 (5.2)	6 (8.5)	9 (7.0)

^a Only those reported in a greater proportion of more than 15% (20/129) are presented.

^b other response options besides face to face were either on line or hybrid (a mix of face to face and on line).

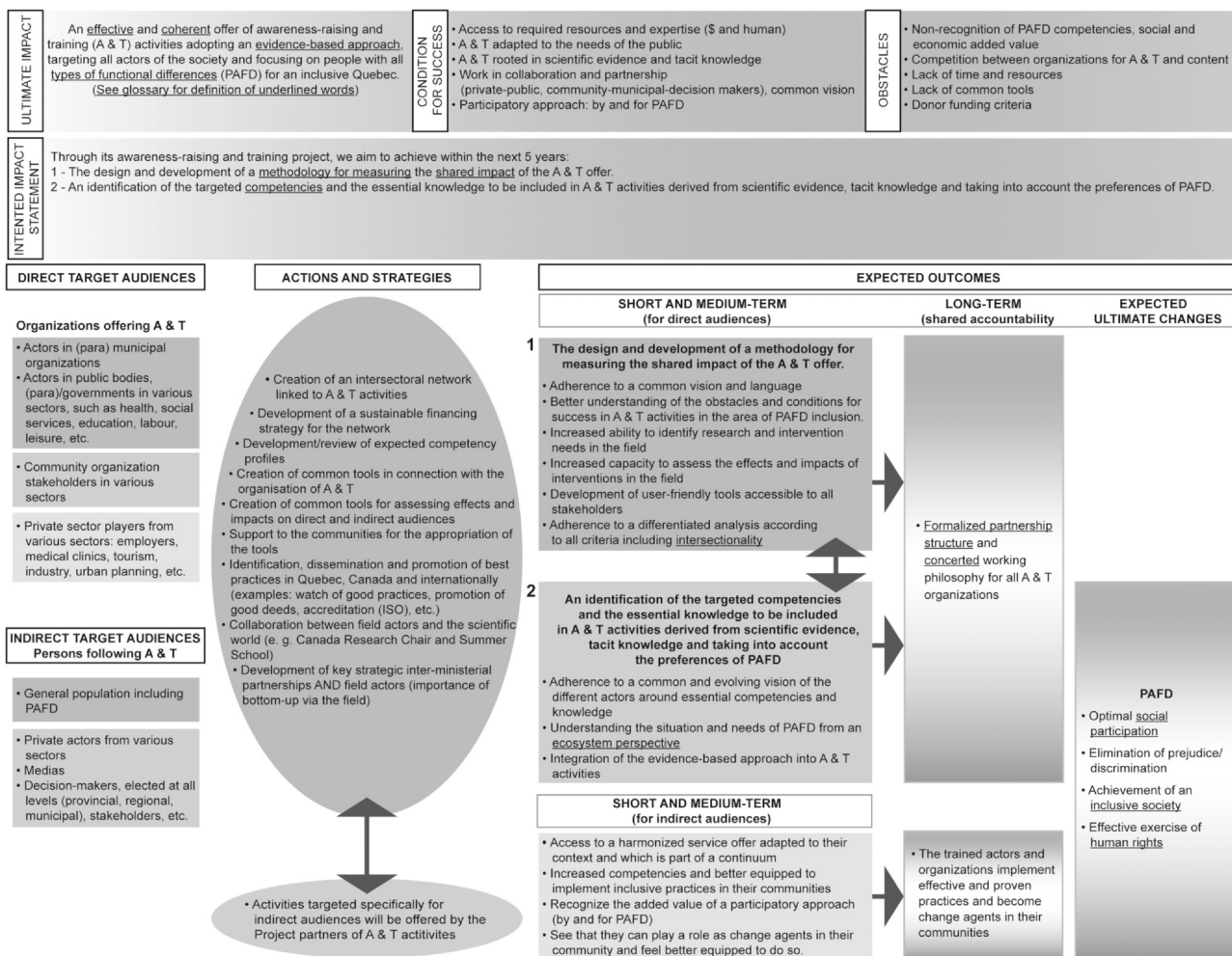


Fig. 1. Theory of change.

to 1200 CAD per activity ($n=28$) or from 10 CAD to 250 CAD per participant ($n=12$); information on the fees was missing for two. Other characteristics included a relatively short session duration (≤ 3 h) for the majority of both types of activities and a one-time activity offer (i.e., not a program of activities building on previous ones). For 74.6% of training activities, the immediate outcomes on the targeted audience were documented whereas no awareness-raising activity reported measuring immediate outcomes. The broader impact of the activity on society was assessed for 5.2% and 8.5% of awareness-raising and training activities respectively.

Phase 2: Strategic plan – Theory of Change.

The process data (including meeting schedule, attendance and topics discussed) for the *Theory of Change* and strategic plan co-creation are presented in Table 2. The working group met face to face four times (in Oct. 2018; Nov. 2018; April 2019 and Oct. 2019) and three times online (January, February and March 2019) with 12 parallel online meetings of the executive committee. Members of the research team who were not involved in the executive committee or the working group participated in four meetings. Attendance was generally above 60% with the exception of the January 23rd, 2019 meeting (52.3%) due to scheduling issues.

Fig. 1 presents the completed *Theory of Change*, Table 3 comprises an accompanying lexicon and Table 4 outlines the strategic objectives, expected outcomes and prioritized actions to implement the plan. The directions determined in the strategic plan were agreed upon by the working group committed to take the lead on and pursue building on this plan in the next 18 months to initiate its

implementation. A follow-up meeting was scheduled in early 2020 with the working group to organize next steps to optimize implementation of the strategic plan. All members of the working group reported being committed to pursuing their involvement with the action plan and a transitory committee was put in place to ensure governance moving forward. Members were invited to discuss with their organization potential monetary or in-kind contributions towards implementation of the strategic plan. The action plan also included a draft of ideas on the topics of governance and partnership, conditions for success, timeline and potential indicators for monitoring its implementation.

4. Discussion and conclusion

4.1. Discussion

The main objective of this integrated knowledge translation [17,19] study was to review and reflect on current practices seeking to optimize social inclusion of persons with disabilities through a collaborative approach between community partners and the researchers. The specific objectives were to search and map the current disability awareness-raising and training activities related to the social or attitudinal environment for people with disabilities, to reflect on current practices and co-develop a strategic plan. The environmental scan (web review and interviews) was an essential step in providing an overall portrait of existing awareness-raising and training activities and served to foster discussions between

Table 2
Summary of Phase 2 meetings' schedule, attendance and topic's discussed.

Date	Who is invited	How	Attendance	Main topic discussed
Feb. 23rd 2018	Executive committee (EC)	Online	Full	Kick off/planning meeting; grant awarded and feedback from reviewers
March 16th 2018	EC	Online	Full	Phase 1 planning
April 23rd 2018	EC	Online	Full	Feedback on Phase 1 interview guide and planning of first research team meeting
May 4th 2018	Research team (n = 13) and staff (n = 4)	Face to face (n = 10) and online (n = 4)	16/17 people	Project presentation with timeline; Feedback on Phase 1 interview guide; presentation of Phase 2 methods and criteria for working group composition
May 28th 2018	EC	Online	Full	Return on May 4th meeting; definitions of awareness and training activities; timeline, Phase 1 interview guide and recruitment strategies; planning of working group constitution.
June to October 2108 – Phase 1 data collection				
Sept. 10th 2018	EC	Online	Full	Discussion of Phase 1 preliminary results; planning of Phase 2 kickoff meeting
Oct. 19th 2018	EC	Online	Full	Finalization of agenda of first Phase 2 kickoff meeting
Oct. 26th 2018	Research team/working group (n = 21) and staff (n = 4)	Face to face (n = 15) and online (n = 5)	20/25 people	Presentation and feedback on results of Phase 1; presentation of Phase 2 methodology
Nov. 23rd 2018	Working group (n = 17) and staff (n = 4)	Face to face (n = 16) and online (n = 3)	19/21 people	Full day workshop facilitated by www.innoweave.ca to cocreate the draft of theory of change
Jan. 15th 2019	EC	Online	Full	Return on Nov. 23rd workshop; planning of next working group session
Jan. 23rd 2019	Working group (n = 17) and staff (n = 4)	Online	11/21 people	Discussion around the vision, the ultimate impact as well as short, medium and long term expected outcomes
Feb. 4th 2019	EC	Online	Full	Return on Jan. 23rd working session and planning of next working session; addition of a lexicon
Feb. 22nd 2019	Working group (n = 17) and staff (n = 4)	Online	14/21 people	Polishing the theory of change with a focus on targeted impact statement, direct and indirect targeted audience, actions and strategies; discussion around the lexicon
March 27th 2019	Working group (n = 17) and staff (n = 4)	Online	13/21 people	Polishing the theory of change with a focus on perceived condition of success and potential barriers and intended ultimate change
April 10th 2019	EC	Online	Full	Return on previous working group sessions and planning of April 17th half-day workshop
April 17th 2019	Research team/working group (n = 21) and staff (n = 4)	Face to face (n = 22) and online (n = 2)	24/25 people	Half-day workshop to validate theory of change and cocreate a feasible action plan
May 2nd 2019	EC	Online	Full	Return on half-day workshop
June 10th 2019	EC	Online	Full	Polishing action plan and decision to postpone final full group meeting initially planned in June to October to spare time to finalize cluster analysis of Phase 1
Oct. 2nd 2019	EC	Online	Full	Planning of agenda of final meeting
Oct. 11th 2019	Research team/working group (n = 21) and staff (n = 4)	Face to face (n = 15) and online (n = 3)	18/25 people	Presentation of Phase 1 results including cluster analysis; validation of action plan; discussion around organizations' commitment to engage into follow up of the project to ensure sustainability; identification of a leader to implement action plan

Table 3

Introductory note to theory of change (Fig. 1) and glossary including important definitions.

Introduction/background information: The main concern of this project is to ultimately contribute to an inclusive Quebec society for people with functional differences. In addition, we focus more precisely on the specific issues related to awareness-raising and training with a focus on co-creating a common vision. Moreover, since this project is circumscribed around a common vision, it goes without saying that the actions proposed by the action plan will have to be implemented later by the various actors involved in awareness/training, regardless of their level of contribution/active participation in this project. The innovative aspect of this project is multiple. The co-construction approach put forward is intended to be inclusive both in its process and its outcome. In this sense, we have included a lexicon below that is intended to be dynamic in order to take into consideration the distinct particularities without making the content cumbersome.	
Important definitions	
All types of functional differences (including the notion of diversity)	Refer to the abilities of the Human Development Model – Disability Creation Process (HDM-DCP) International Classification, of all ages, gender and sociocultural identity. Note: The analysis, if any, must be differentiated according to all relevant criteria, i.e. the HDM-DCP identity factors that refer to the notion of intersectionality.
Coherent	Includes harmonization of approaches <i>That is logical and easy to follow. That is composed of many complementary qualities and parts.</i>
Collaborative	<i>That relates to collaboration between two or more people or groups.</i>
Community organizations	Are typically declined in two sectors: Advocacy and Service.
Competencies	Complex actions based on the mobilization and effective use of a range of internal and external resources [35]
Concerted	<i>That is planned and carried out by more than one party.</i>
Ecosystem perspective	Mechanisms for producing exclusion or inclusion, interactions between facilitating factors and individual and environmental barriers.
Effect	<i>Result of a cause, consequence of an action, of something. Retroactive, immediate, direct, indirect, secondary, combined, optimum effect.</i> We agree that the effect occurs in the short term.
Effectiveness	<i>Having the intended result.</i> Impact measure involving an improvement.
Essential knowledge	Knowledge, know-how (skills) and attitudes considered essential to mobilize for the enactment of competencies.
Evidence-based approach	Complex approach integrating the best available research evidence, tacit knowledge/field experience and people's preferences (i.e. target audiences) [36]. Note: In addition to taking into consideration people's preferences, the collaborative approach also aims to invite them to participate as experts on their own condition (also inherent in tacit knowledge).
Formalized partnership structure	Organization with partners and well-defined operating procedures. Does not imply a legal structure.
Functional differences	The term functional differences is adopted to replace the term 'functional limitations' to promote the inclusion of all characteristics of the individual including neuro-atypical persons who were more likely not to recognize themselves by the term limitation.
Human rights	Refer to the Convention on the Rights of Persons with Disabilities (ONU, 2006)
Impact	<i>The powerful effect that (something) has on (something else).</i> We agree that achieving an impact takes at least 5 years. A psychological, social, economic or environmental consequence, often visible in the medium or long term, that is attributable to one or more actions, interventions or programs. Impact is the result of a set of results, effects or changes that generally occur in the short and medium term.
Inclusive society	A society that respects the diversity of its population, including functional differences
Inclusive transformation	<i>The act of transforming something. Which contains within itself. Two proposals that are mutually inclusive.</i>
Intersectionality	<i>The concept of how various social identities and oppressive structures are interrelated.</i>
Methodology of measures	In the sense of documenting impacts on the direct public and society; refers to effectiveness.
Righteous society	A fair society, which gives to everyone according to their needs
Shared impact	Refer to harmonization, to the concept of coherence. Note: Smaller-scale effects are included in the notion of impact.
Social participation	According to the HDM-DCP, refers to the accomplishment of life habits (daily activities and roles) that correspond to the person's choices and preferences or to society's expectations

Definitions in italics are from Antidote dictionary. Others (which are not referenced) are the results of iterative consensus building discussions within the working group.

community partners and researchers. This was the first mapping of disability-related activities in Quebec and will serve as a baseline with the aim of reproducing it in a few years, notably as an indicator of implementation success of the action plan. The development of the interview guide using the Template for Intervention Description and Replication (TIDieR) checklist [24] ensured comprehensive, structured and reproducible reporting on activities.

The participatory approach [28] to co-creating the strategic plan in phase 2 was an outcome in itself as it served as a powerful means of bringing together community partners invested in optimizing a socially inclusive environment for people with disabilities. The commitment and engagement of community partners, as demonstrated in their attendance, was high throughout the project, from developing the research question to determining next steps and creating a transitory committee. We did not witness competition or tension [29] among participating members and hypothesize that using the results from phase 1 as a basis for discussion contributed to avoid the sharing of individual interests and focus on a common vision and joint ways to attain shared objectives. Also, although we did not conduct a formal social network analysis [30], a posteriori, we consider that having an external expert-facilitator in social

transformation for phase 2 likely contributed to an equal contribution of participating individuals in decision-making (i.e., centrality).

The working group agreed upon two priorities (Intended Impact Statements of the Theory of Change): the development of a methodology for measuring shared impact and content harmonization of activities. The latter reiterates the determination and willingness to work in a cohesive and collaborative spirit. It is well recognized that providing personalized feedback [31] is an effective method to foster change. The presentation of results from phase 1 highlighted the important gap in evaluation of outcomes. While short term outcome assessment remains essential, the working group emphasized the importance of assessing the long term impact of activities on targeted audiences and society as a whole. Successful fulfillment of these prioritized objectives will be conditional on the ownership of the outputs of this research project by community partners. The transitory committee will need to ensure that network processes and supports are in place to ensure continual advancement of the co-created action plan and regular monitoring of strategic plan timelines [32].

More generally, findings from this project point to the value of research knowledge and integrated knowledge translation in

Table 4

Action plan including strategic objectives (n = 4), linkage to Theory of change and actions/strategies for its implementation.

Strategic objectives	Expected outcomes	Actions to implement
<i>What are the strategic priorities that will put your work into action?</i>	<i>(Fig. 1) What are the key results associated with this objective in our theory of change?</i>	<i>What actions do you want to prioritize to achieve this strategic objective?</i>
1. Establish the conditions that ensure the sustainability of the project: clarify governance, maintain mobilization in the medium term, ensure greater outreach and funding	Expected outcome 2.1	1. Creation of an intersectoral network in the field <ul style="list-style-type: none"> - Set up a transition monitoring committee to the project to ensure governance & leadership - Integrate a consultation table to bring together diverse partners - Linkage to consultation bodies
2. Strengthen the mobilization, openness and interest of key strategic partners in the project and its expected outcomes	Expected outcomes 1.1 and 1.2	2. Monitoring for financing opportunities 3. Develop a communication and knowledge transfer plan around the project 4. Creation of a position dedicated to the project: mobilization agent 2.1 Target and invite some key partners to participate in the implementation of the action plan 2.2 Develop a common analysis grid (transversal process) 2.3 Diversify target audiences (key partners: ministries, private sector, community organizations, municipalities) 2.4 Initiate and facilitate the implementation of consultation and validation sessions of the theory of change 2.5 Develop communication and consultation tools adapted to the different audiences 2.6 Setting up a website, concerted communication campaign, and use of social networks to disseminate theory of change, process and phase 1 results
3. Ensure the creation of common tools for evaluating the effects and impacts of awareness-raising and training activities with direct and indirect audiences	Intended impact statement 1; Expected outcomes 1.1 and 1.4	3.1 Identify common indicators: immediate (e.g. change in knowledge and attitudes) and intermediate (change in practice) indicators that measure the extent to which progress is being made towards a more comprehensive long-term impact to which others are contributing (e.g. social participation measured through population survey data) 3.2 Develop and test user-friendly measurement tools adapted to the needs of the target audiences 3.3 To assist the communities in the appropriation and use of the evaluation tools that will be shared 3.4 Analyze the content of the training activities identified through phase 1 to identify common points 3.5 Develop an analysis grid on best practices, report on a common language; Method that allows self-assessment of practices; Establish a means of quality assessment; Legitimate quality of training activities 3.6 Organize training of trainers
4. Ensure the identification, dissemination and promotion of best practices in the field of awareness-raising and training in Quebec, Canada and abroad	Intended impact statement 2	4.1 Literature review of the competencies and development of an expected competency model/framework for awareness-raising and training activities; Identify also current evaluation practices to build on what is already being done 4.2 Provide feedback to each organization (+ or -) based on the framework; Development of accreditations (e.g. ISO) 4.3 Conduct watches and be consistent with the watches already carried out in the field, which are based on best practices (particularly in the health network) 4.4 Ensure guidance for the appropriation of good practices through a needs assessment 4.5 Identify current practices in the field (update the environmental scan as a basis for comparison)

targeting multi-sectoral social transformation challenges such as the development of inclusive social environments for people with disabilities. Findings from business and economics studies on the sustainability of *Theory of Change* projects report that engaging key community partners is one of the key determinants of success as planning for sustainable development should be ‘process-based’ – rather than ‘fixed-goal’ – oriented [33]. As demonstrated in this project, a social learning process with full involvement of community partners, researchers and external facilitators would be the most compelling strategy for sustainable development [33]. Some unresolved questions raised by this process include: How to ensure sustainability of a plan based on a research project and geared towards social change? Is an integrated knowledge translation approach enough to engage and mobilize the agents of change?

An important limitation to social change is the lack of financial support for community organizations and other relevant actors (e.g., research, private sector) in the development, implementation and monitoring of awareness-raising and training activities. A systematic approach to measuring and monitoring indicators of social accessibility is necessary to affect the intended social change. Examples of social accessibility indicators include the attitudes and values of the population, the social representation of people with disabilities, and the competencies of community actors with notions of inclusivity [11]. Models for implementation monitoring exist on a macro scale, such as those proposed by the United Nations in the Convention of the rights of persons with disabilities (CRPD), as described in Article 33 [34]. One possible avenue for implementing this strategic plan would be to include the plans in the United Nations CRPD Canadian reporting process.

The involvement of a larger and well-recognized national organization would optimize the monitoring of indicators related to awareness and training activities and would align with CRPD article 4.1.

4.2. Strengths and limitations

A major strength of this study is the active involvement of community partners in the research team throughout the research process from inception to planning for next steps. Another strength of this study lies in the involvement of an external expert-facilitator in social transformation who had experience in facilitating inter-sectoral activities. The response rate to phase 1 was relatively high although we acknowledge an underrepresentation of the private and health sectors' organization partly because data were collected during the summer. Another challenge, especially in large healthcare organizations, was to identify the right contact person within each organization. We also recognize that, although we collected process data, our assessment of integrated knowledge translation outcomes is limited. Finally, another limitation resides in our inability to conduct a larger consultation on the *Theory of Change* and strategic plan by more organizations, given budgetary and time constraints. This step will have to be undertaken after this study to support the implementation of the results.

4.3. Conclusion

An intersectoral and integrated knowledge translation process led to the identification of disability awareness and training activities. The working group, comprised of community partners, researchers and experts in social transformation, met periodically over a one-year period to co-create a *Theory of Change* and a five-year strategic plan. Anticipated challenges to implementing the strategic plan include network leadership, funding constraints, and the complex, multi-sectorial approach required to truly promote social inclusion and transformation of society.

4.4. Practice implications

Community partners of this initiative are mainly from community organization sectors with minimal financial resources. Innovative thinking and leveraging the right, committed community partners will be essential to implement these transformative actions and foster a unified approach to awareness-raising and training activities for a more inclusive society. Although this research was realized locally in one Canadian province, the approach (methods and processes) and results may be applicable elsewhere and in other contexts when co-creating a strategic plan for social transformation.

Declarations

Ethics approval and consent to participate

The consent was waived by the Research Ethics board of the Centre for Interdisciplinary Research in Rehabilitation in greater Montreal (CRIR) who ruled that no formal ethics approval was required in this particular case, given the approach and the nature of the data collected.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

LR initiated the research question with AR and PF. All authors contributed to defining research objectives and methods under the leadership of AR, LR and PF. All authors were involved in the IKT research process. AR, JRD and PF drafted first version of the manuscript. All authors read and approved the final manuscript.

Data availability

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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