Type of paper: Research protocol

Title: Protocol for the development and pilot evaluation of a smartphone-delivered peer physical activity counselling program for individuals with spinal cord injury.

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Abstract

Background: Leisure-time physical activity (LTPA) is a critical component of a healthy lifestyle for individuals with spinal cord injury (SCI). However, most individuals are not sufficiently active to accrue health benefits. The Active Living Lifestyles program for individuals with SCI who use manual wheelchairs (ALLWheel) targets important psychological factors that are associated with LTPA uptake and adherence, while overcoming some barriers associated with participation restrictions.

Objective: To describe the protocol for the development and evaluation of the ALLWheel program for individuals with SCI who use manual wheelchairs.

Methods: Complete the first three stages of the Medical Research Council Framework for developing and evaluating complex interventions (i.e., pre-clinical, modeling, exploratory). The pre-clinical phase will consist of scoping and systematic reviews and review of theory. The intervention will be modelled by expert opinions and consensus through focus groups and Delphi surveys with individuals with SCI, clinicians, and community partners. Finally, the feasibility and potential influence of the ALLWheel program on LTPA and psychological outcomes will be evaluated.

Results: This project is funded by the Craig H Neilsen Foundation, the Fonds de Recherche du Québec – Santé, and the Canadian Disability Participation Project and is currently underway.

Discussion: Using peer trainers and smartphone technology may help to cultivate autonomy-supportive environments that also enhance self-efficacy. Following a framework for developing and evaluating a novel intervention, which includes input from stakeholder input at all stages, will ensure the final product (i.e., a replicable intervention)
is desirable for knowledge users and ready for evaluation in a RCT. If effective, the ALLWheel program has the potential to reach a large number of individuals with SCI to promote LTPA uptake and adherence.

Keywords: Smartphone; behaviour change; digital peer training; leisure-time physical activity; spinal cord injury; Medical Research Council framework.
The health benefits of leisure-time physical activity (LTPA) for individuals with spinal cord injury (SCI) are well documented. From a physiological perspective, evidence from two systematic reviews confirms that participation in LTPA improves physical capacity and muscular strength,\(^1\) and lowers risk factors for endocrine metabolic disease.\(^2\) LTPA also has a positive influence on psychosocial factors, including motivation, quality of life, and well-being, as documented in three systematic reviews.\(^3\)–\(^5\)

Participation in physical activity is critical for individuals with SCI, as prolonged periods of sedentariness (e.g., sitting in a wheelchair) can trigger a chain of negative physiological and psychological events that may exacerbate SCI sequelae.\(^6\) Although the health benefits of LTPA may be amplified for individuals with SCI who use manual wheelchairs (MWC),\(^5\)–\(^7\) individuals with SCI are generally not active enough to accrue the health benefits. In fact, in two separate surveys of 73 and 965 individuals with SCI, 45–50% of respondents reported no LTPA at all.\(^8\)–\(^9\) Even moderate amounts of LTPA may optimize functioning and slow the spiralling effects of deconditioning that are associated with disability.\(^10\) Therefore, the medical community is being encouraged to consider LTPA as a critical outcome that needs to monitored for individuals with SCI.\(^11\)

Although the majority of individuals with SCI are insufficiently active, many have high LTPA intentions.\(^8\) However, compared to the general population, individuals with SCI find it more difficult to start and adhere to a LTPA regime due to physical, environmental, and psychological barriers.\(^11\)–\(^14\) Telephone-delivered programs provide one potential approach to overcoming many of the barriers for individuals with physical disabilities.
99(including SCI), and have effectively increased LTPA,\textsuperscript{15–18} and assisted clients to maintain 100their LTPA intentions.\textsuperscript{15,16} Furthermore, telephones have been reported as the preferred 101method of intervention delivery among individuals with SCI.\textsuperscript{19} Although telephone 102counselling presents a promising strategy for promoting LTPA among adults with SCI, a 103systematic review evaluating the effect of LTPA interventions in the general population 104found that personal contact (e.g., face-to-face sessions) is important for enhancing 105effectiveness and adherence.\textsuperscript{20} This has also been observed among individuals with SCI, 106as achieving the LTPA recommendations\textsuperscript{21} was shown to be feasible with direct and 107continuous support.\textsuperscript{22} Therefore, LTPA programs for individuals with SCI should 108maintain the advantages of telephone delivery to overcome some of the barriers to LTPA, 109but should also integrate face-to-face contact.

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111There are other important psychological factors that influence LTPA uptake, adherence 112and retention that need to be considered, including autonomy support, motivation, and 113self-efficacy.\textsuperscript{23} Self-Determination Theory provides a framework for understanding the 114motivations that may influence change in LTPA behaviour,\textsuperscript{24} and has been effectively 115applied in the development of LTPA interventions.\textsuperscript{25} SDT posits that through the 116satisfaction of autonomy, competence, and relatedness,\textsuperscript{26} autonomous motivation (i.e., 117engaging in an activity for the value, importance or enjoyment of the behaviour) is 118increased and subsequently drives behaviour change and maintenance. \textsuperscript{27} Perceived 119competence, a similar construct to self-efficacy (i.e., an individual’s belief in his or her 120ability to accomplish a specific task,\textsuperscript{28}) has been shown to be a key determinant in
eliciting LTPA behaviour change. In fact, self-efficacy is one of the most salient factors predicting uptake and maintenance of LTPA.

Peers are particularly useful role models after SCI, as they can help to establish a meaningful social network through shared life experiences, relatedness, and management of similar conditions. Peers represent a valuable source of personal contact for individuals with SCI who can deliver LTPA interventions in a face-to-face context. Intervention delivery by peers can provide a source of personal contact (e.g., face-to-face contact), which has been shown to increase LTPA and satisfaction with participation among individuals with SCI. Although peers represent an influential approach to enhance self-efficacy and motivation for LTPA, existing programs have not fully incorporated the use of the power of SCI peers.

Smartphones are becoming ubiquitous and may afford greater accessibility and convenience for the SCI population to participate in LTPA interventions. Advancements and access to smartphone technology may also extend the reach and effectiveness of existing telephone-delivered interventions. For instance, social networking that is available through smartphones may offer increased methods for achieving personal contact (e.g., contact with peer groups) and may improve solutions to the timely delivery of LTPA interventions for individuals with SCI. Importantly, the use of smartphones to deliver LTPA interventions can allow for various methods of contact depending on participant preferences (e.g., voice and video calls, text messaging). Smartphones represent a novel approach using modern technology that may provide a useful medium
for integrating important psychological variables (supportive environment, motivation, self-efficacy), while providing remote access to a LTPA intervention that is designed specifically for individuals with SCI. Integrating peers to deliver the LTPA program adds an important social element that may further enhance motivation and self-efficacy.

The aim of this paper is to describe the protocol for the development and evaluation of a theory-informed Active Living Lifestyles program for individuals with SCI who use a manual wheelchair (ALLWheel). In its early conceptualization, the name of the program was originally based on the use of smartphones and peers – i.e., Smartphone-delivered Peer Physical Activity Counseling (SPPAC) program. The name ALLWheel will be used in all dissemination and future evaluation of the program.

METHODS

The Medical Research Council methodological framework was applied to design the protocol for the development and evaluation of the ALLWheel program. The Medical Research Council framework describes five distinct phases, including the preclinical or theoretical phase (phase I), the modeling phase (phase II), the exploratory phase (phase III), the randomized controlled trial (RCT) (phase IV), and long-term implementation (phase V). Figure 1 illustrates the Medical Research Council Framework, highlighting phases I to III.
Phase I - Pre-clinical and theory phase

a. Review of existing LTPA programs

A scoping review of existing LTPA programs in Canada will be conducted by three experts in SCI and LTPA. The review will consist of a systematic search of the scientific literature, as well as a Google search based on the reviewers’ knowledge and expertise. Findings will summarize existing programs and identify the current gaps in programming.

b. Review the scientific literature

A systematic review will be conducted through a search of online databases to gather evidence on facilitators and barriers to LTPA, use of peers and smartphones for delivering LTPA interventions, and application of self-determination and social cognitive theories for targeting LTPA behaviour change.

Two reviewers will independently conduct the literature search, rate the titles, abstracts and full-texts, and select articles for inclusion. If consensus is not reached regarding inclusion criteria, a third reviewer will be consulted. The same two reviewers will assess methodological quality of each study. Relevant data will be extracted and framed according to tenets from two theoretical frameworks (i.e., self-determination theory\textsuperscript{24,28} and social cognitive theory\textsuperscript{28}) that guide this research.

Phase II - Modelling

a. Gain expert input on a concept version of the intervention
Design: Focus groups

Subject recruitment: Purposive sampling will be used to recruit 10-15 experts (i.e., individuals with SCI, healthcare professionals, and community partners who specialize in SCI). Health care professionals will be kinesiologists, occupational therapists, and physiotherapists who have at least 5 years experience working with the SCI population, or with at least 5 years of experience with LTPA interventions for persons with SCI. Individuals with SCI will be eligible to participate if they are: ≥ 18 years of age, live in the community, have a SCI, use a manual wheelchair as their primary means of mobility, and are ≥ 1 year post SCI. Institutional ethics and informed consent will be obtained.

Procedure: Based on the findings of the scoping and systematic reviews, a concept version of the ALLWheel program, including intervention content, smartphone applications (e.g., voice calls, text messaging, videoconference, social media) will be provided to participants before the focus groups. Participants will also receive an open-ended questionnaire to complete prior to attending the focus group where they will be asked to provide descriptive information about appropriateness of the ALLWheel intervention, suggestions for changes to content or delivery method, missing content, and potential concerns. Information from these questionnaires will be used to guide the discussion during the focus groups. The focus group guide will be developed according to the Interview Protocol Refinement Framework, such that questions will align with the study’s research questions, the questions will be organized to create an inquiry-based
A moderator and a research assistant will open the discussion with a brief description of results from the questionnaire, and then facilitate a brainstorming activity to determine potential modifications to the ALLWheel intervention protocol. Two focus groups will be conducted (each with 6 to 8 knowledge users who will be individuals with SCI, members of community groups, and clinicians) over 90 minutes and will be audio recorded.

Data analysis: Summary statistics will be used to describe the sample. Audio-recordings from the focus groups will be transcribed verbatim and analyzed using NVivo qualitative data analysis Software (QSR International Pty Ltd. Version 10, 2014). Content analysis will be done to identify recommendations for modifications to intervention delivery method or content, additional content to be included, appropriateness of outcome measurement, and to determine if other general changes are necessary. Two to three individuals will perform content analysis by repeatedly reviewing and organizing the data, and then extracting meaningful units into major themes and sub-themes. Themes and sub-themes will be discussed and agreed upon by the research team, and then findings will be presented to the subjects in the form of Delphi surveys to obtain consensus.

b. Achieve consensus from experts on the intervention

Design: Delphi survey

Participant recruitment: The same individuals who comprised the expert panel for the focus groups will be recruited.
Procedure: Using an iterative process, participants will be asked to complete written questionnaires in multiple rounds to achieve consensus on the ALLWheel intervention structure and content. In the first Delphi round, the ALLWheel intervention will be presented and experts will be asked to provide anonymous feedback. Details of the ALLWheel intervention will be described (e.g., components to be included, useful motivational strategies, preferred program delivery methods, critical considerations) and closed-ended questions will be used to obtain feedback about each item. Participants will then be asked for suggestions for improvement using open-ended questions. Subsequent Delphi rounds will be administered until 70% consensus is achieved. The final step will consist of an expert meeting to integrate findings from the Delphi survey (e.g., components to include/exclude, delivery methods preferred, critical motivation strategies) to generate a concept version of the ALLWheel program.

Phase III – Exploratory trial

Design: Three-site, pre-post feasibility study

Participants: A total of 12 community-dwelling individuals living with SCI will be recruited. Participants will be between 18 and 65 years of age; live in the community; have had a SCI for ≥ 1 year; use a manual wheelchair as their primary means of mobility; be able to self-propel a manual wheelchair for at least 100 m; are not currently meeting the physical activity recommendations; and be cognitively able to engage in the ALLWheel intervention (MMSE ≥ 25). Individuals will be excluded if they anticipate a
health condition or procedure that contraindicates training; have a degenerative condition that is expected to progress quickly; or are concurrently or planning to take part in another LTPA intervention over the period of the study. Participants will be screened using the Physical Activity Readiness Questionnaire (PAR-Q+) and e-PARmed-X+. Institutional ethics will be obtained from each of the three sites.

Intervention: Preferred duration and delivery methods for the ALLWheel intervention will be explored in Phase II. However, for the purposes of study planning and budgeting, the intervention length (6 months) and number of contacts with participants (14) will be based on the findings of an effective telephone-counselling intervention for improving LTPA for individuals with SCI. For the proposed study, a physically active peer coach who has had a SCI for at least five years will deliver the ALLWheel intervention. The peer coach will receive comprehensive training through a 2-3-day workshop administered by study investigators.

Outcome measures: All assessments will be administered by trained testers at each site who will be trained in a 3-hour workshop facilitated by study investigator (KB, EL).

Descriptive characteristics and sociodemographic information will be collected at baseline (T1), including psychological well-being and social support (which are known to influence LTPA among individuals with SCI). To control for potential confounding, depression and anxiety will be assessed using the 14-item Hospital Anxiety and
Depression Score (HADS)\textsuperscript{49,50} and social support will be assessed using the 6-item Interpersonal Support Evaluation List (ISEL).\textsuperscript{51,52}

Feasibility indicators related to process, resources, management, and treatment will be collected throughout study.\textsuperscript{53} A description of feasibility indicators, how they will be measured, and the parameters for success are described in Table 1.

Testers at each site will administer all outcome measures at baseline (T1), post-intervention (T2), and 3 months post-intervention (T3). The selected outcomes are reflective of important theoretical variables known to influence LTPA uptake, adherence and retention. Additional outcomes may be identified during Phases I and II.

Primary outcome measure, LTPA, will be measured objectively using actigraphy, a non-invasive method of monitoring human activity using a small and lightweight accelerometry-based activity monitor (actigraph 3GTX) that can be worn on the body of the wheelchair user and on the wheelchair without impeding movement.\textsuperscript{54} The monitor contains an accelerometer that is sensitive to motion in all directions, and data are stored in the monitor as ‘activity counts’.\textsuperscript{55} Time between sampling units (epochs) will be set at 15 seconds, allowing the greatest sensitivity for low intensity activity.\textsuperscript{55} Concurrent validity and reliability have been established.\textsuperscript{56,57} Further validation for the use of actigraphy to distinguish between low and moderate intensities of LTPA among

\begin{center}<insert Table 1 here>\end{center}
individuals manual wheelchair users, including manual wheelchair users with SCI has been recently documented (Bourassa et al., submitted 2017).

Upon completion of all secondary outcomes (subjective self-reports) at each time point, the tester will provide participants with 2 actigraphs (one will be positioned on the rear wheel of the manual wheelchair in a waterproof enclosure; the other will be worn on the non-dominant arm). Participants will be asked to wear the actigraph at all times over a 7-day period, except during sleep, bathing, or swimming. Participants will record the time the actigraph was put on and taken off using a log. The tester will obtain the actigraph and log from the participants at the end of the 7-day period. Only data from the days in which the actigraphs were worn by participants for at least 13 h/day will be included in the analyses. Data will be converted to mean activity counts per hour (i.e., bouts/hour).

Secondary outcomes reflect the proposed theoretical impacts of the ALLWheel intervention (i.e., the relationship between LTPA behaviour and psychological determinants of behaviour change (e.g., motivation, autonomy support, and satisfaction of psychological need for LTPA). The secondary outcomes will help to discern a clinically important impact of the ALLWheel intervention.

Leisure-Time LTPA Questionnaire (LTPAQ-SCI)

Self-reported LTPA behaviour will be measured using the 7-day LTPAQ for adults with SCI. Participants will be asked to recall the frequency (number of bouts) and duration (min per bout) of light, moderate and heavy intensity LTPA over the past
seven days. Acceptable test-retest reliability and construct validity have been documented among adults with SCI.\textsuperscript{60,61}

\textit{Treatment Self-Regulation Questionnaire (TSRQ)}

Motivation to participate in LTPA will be evaluated using the 15-item TSRQ,\textsuperscript{62} which is designed to measure of the degree of autonomous self-regulation to participate in healthy behaviours. Reasons for engaging in or changing health behaviours are scored using a 7-point Likert scale ranging from 1 (not true at all) to 7 (very true). Three subscales assess six forms of motivation, including autonomous regulation (identified, integrated, and intrinsic motivations), controlled regulation (external and introjected motivations), and amotivation. The TSRQ has been validated for assessing motivation for engaging in exercise.\textsuperscript{63} Since the purpose of this study is to assess participation in physical activity that one engages in during their free time, wording for ‘exercise’ will be changed to ‘LTPA’.

\textit{Leisure-time LTPA Barrier Self-efficacy Scale}

Self-efficacy to overcome salient barriers to LTPA participation (e.g. transportation problems, bad weather, pain and fatigue) will be assessed using a 6-item Leisure-time LTPA barrier self-efficacy scale. The leisure-time LTPA barrier scale has been used in previous research with SCI,\textsuperscript{64–66} with evidence of high reliability and validity\textsuperscript{64} and acceptable internal consistency.\textsuperscript{61}

\textit{Psychological Need Satisfaction in Exercise Scale (PNSES)}
Satisfaction of the psychological needs for LTPA will be assessed using the PNSES. Participants are asked to rate 18 items that reflect how a person may feel during physical activity using a 6-point Likert scale. A mean score will be calculated for autonomy, competence, and relatedness.

Wheelchair Outcome Measure (WhOM)

The WhOM is a semi-structured interview that allows participants to select important wheelchair-oriented participation goals. Participants are asked to identify two to five goals, and then evaluate their current satisfaction with participation in each goal (on a scale from 0-10). Participation goals are incorporated into the intervention. The WhOM demonstrates good reliability and validity in use among individuals with SCI and older adults.

Data analysis: Analyses will consider study feasibility indicators and primary and secondary outcomes. Means and standard deviations (continuous variables) and frequencies and proportions (categorical variables) will be used to summarize all data. Feasibility outcomes will be treated as binary, with “success” indicating the protocol is sufficiently robust to move forwards with a randomized controlled trial (RCT) with only small or no adaptation required, and ‘revise’ indicating a need for changes before proceeding (See table 1). Within subject changes from baseline to post-intervention and from baseline to follow-up in LTPA behaviour will be determined using paired sample t-tests (or non-parametric equivalent). Paired sample t-tests will also be used to evaluate within-subject change scores from baseline to post-intervention and from baseline to
follow-up for self-reported LTPA, motivation, LTPA barrier self-efficacy, autonomy
support, satisfaction of the psychological needs for LTPA, and satisfaction with participation in meaningful activities.

RESULTS

This project is funded by the Craig H Neilsen Foundation, the Fonds de Recherche du Québec – Santé, and the Canadian Disability Participation Project. Approval has been obtained from the university Research Ethics Boards at all sites for all phases of the study. Phase I (scoping and systematic reviews have been completed and manuscript preparation is underway). Phase II (Focus groups and Delphi surveys) are near completion, and manuscript preparation is underway. Phase III (pilot and feasibility evaluation) is currently underway. All study staff have been hired and trained at all sites and recruitment and data collection are ongoing. Three peer trainers have been recruited and trained. It is recruitment for Phase III will be completed by September 2018.

DISCUSSION

The ALLWheel intervention presents an innovative approach to targeting change in LTPA for individuals with SCI. Guided by the tenets of two behaviour change theories (i.e., self-determination theory and social cognitive theory), conception of the ALLWheel will integrate important psychological precursors to LTPA, including autonomy, relatedness, competence/self-efficacy, and motivation. Furthermore, development of the ALLWheel intervention and study protocol will follow the Medical Research Council Framework for developing and evaluating complex interventions, which will ensure that
ALLWheel is evidence-based. Development of the ALLWheel program will also involve knowledge users (e.g., individuals with SCI, community organizations clinicians) throughout all aspects of development, evaluation and implementation, ensuring an integrated approach to knowledge translation. Finally, a feasibility evaluation will allow for refinement of the intervention and iterations of the protocol to maximize its impact.

Although the LTPA needs of individuals with SCI are not fully understood, there is reason to believe that including peers into intervention delivery may have benefits. Furthermore, a program delivered using a smartphone has the potential to overcome many existing barriers to LTPA for individuals with SCI, and allows for integration an important face-to-face component (i.e., through video-conferencing). The application of ‘digital peer-training’ (i.e., digital person-to-person training that is facilitated by a peer using smartphone technology) could maintain the benefits of telephone-delivered interventions (e.g., increased geographic reach), incorporate human support (i.e., an important predictor of effect and adherence of behaviour change interventions), ensure individually tailored programs, and facilitate the implementation of important psychological factors. Evaluating outcomes of autonomy, motivation and self-efficacy will allow for exploration of theorized relationship between psychological factors and LTPA. This will provide crucial information for refinement of the intervention before conducting a larger randomized controlled trial.

Including expert stakeholders (i.e., individuals with SCI, clinicians, and community partners) in the development of a theory-based ALLWheel intervention is an integral
component of this research program. Obtaining consensus from our stakeholders and knowledge users will ensure that we develop a comprehensive LTPA intervention that is desirable by the people it is intended for. Evaluating the feasibility of the intervention in pre-post study design will allow for feedback from the stakeholders and modifications before implementing a larger more expensive effectiveness trial.

ALLWheel has potential for large geographic reach to individuals of various ages, and feasibility for administering the program in English and French may lead to translation in other commonly used languages in Canada. Future studies can estimate cost-effectiveness, measure long-term retention, and assess impact on the known health benefits.

Limitations

Larger multi-site clinical trials are required to establish evidence that informs effective behaviour change strategies for individuals with SCI. However, a 3-year development and feasibility study is a critical and prudent process to follow before designing a large and expensive multi-site RCT. Developing a pilot the testing the intervention according to the Medical Research Council Framework will help to ensure that the intervention is evidence-based and that the protocol and intervention are feasible to administer. While the generalizability of ALLWheel is limited to individuals with SCI at this point, it is possible that ‘digital peer training’ may provide a useful strategy for delivering LTPA programs to a broader population of wheelchair users and even the general population.
CONCLUSION

Using peer coaches and smartphone technology may help to cultivate autonomy supportive environments that also enhance self-efficacy. Following a framework for developing and evaluating a novel intervention, that includes input from stakeholder input at all stages, will ensure the final product (i.e., a replicable intervention) is desirable for knowledge users and ready for evaluation in a RCT. If effective, the ALLWheel program has the potential to reach a large number of individuals with SCI to promote LTPA uptake and adherence.

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Figure 1. Illustration of the processes for the development and evaluation of the ALLWheel program according to the Medical Research Council Framework.
Table 1: Description of feasibility indicators, and parameters for success of the SPPAC intervention and study protocol.

<table>
<thead>
<tr>
<th>Feasibility indicator</th>
<th>Outcome measure</th>
<th>Parameter for success</th>
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</thead>
<tbody>
<tr>
<td><strong>Process</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recruitment rate</td>
<td># of participants recruited/ time</td>
<td>2 participants/month</td>
</tr>
<tr>
<td>Consent rate</td>
<td>% of participants consenting</td>
<td>&gt; 20% acceptance</td>
</tr>
<tr>
<td>Retention rate</td>
<td>% of participants with complete data at T2 and T3</td>
<td>Complete T2 &amp; T3 with ≥ 80% of participants</td>
</tr>
<tr>
<td>Perceived benefit</td>
<td>Post-intervention interview</td>
<td>Qualitative analysis</td>
</tr>
<tr>
<td><strong>Resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant adherence</td>
<td>Complete 14 SPPAC sessions</td>
<td>&gt; 85% of participants</td>
</tr>
<tr>
<td>Peer-trainer adherence</td>
<td>Recruit /retain peer-trainers</td>
<td>Facilitate 14 x12 sessions</td>
</tr>
<tr>
<td>Data collection burden</td>
<td>Data collection time T1</td>
<td>&gt; 85% of participants complete in ≤ 2 h</td>
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<tr>
<td></td>
<td>Data collection time T2</td>
<td>&gt; 85% of participants complete in ≤ 1.5 h</td>
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<tr>
<td></td>
<td>Data collection time T3</td>
<td>&gt; 85% of participants complete in ≤ 1.5 h</td>
</tr>
<tr>
<td>Translations</td>
<td>Translate and administer study materials in English and French</td>
<td>No issues</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Processing time</td>
<td>Time between initial subject contact to enrolment</td>
<td>Mean time is &lt; 30 days</td>
</tr>
<tr>
<td>Combining data</td>
<td>Combine data in English and French</td>
<td>No issues</td>
</tr>
<tr>
<td>Protocol administration</td>
<td>Study protocol checklist</td>
<td>Modifications can be made with minimal changes</td>
</tr>
<tr>
<td>Intervention fidelity</td>
<td>Peer-trainer SPPAC checklist</td>
<td>Peer-trainer completes &gt;85% of checklist</td>
</tr>
<tr>
<td></td>
<td>Health Care Climate Questionnaire*</td>
<td>Participants will rate their perceived autonomy support as 5 points on average at T2 and T3</td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intervention</td>
<td># of adverse events</td>
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</tr>
<tr>
<td>Data collection</td>
<td># of adverse events</td>
<td>No adverse events</td>
</tr>
</tbody>
</table>

* The Health Care Climate Questionnaire, a 6-item scale, will be used to assess perceived autonomy support. (Williams, Grow, Freedman, Ryan, & Deci, 1996) Participants will be asked to respond to questions about their perceived PA autonomy on a 7-point Likert scale at mid-intervention (i.e., between session 6 and 7), and at T2 and T3. High Chronbach’s alpha levels have been demonstrated in previous studies. (Williams et al., 1996; Williams, McGregor, King, Nelson, & Glasgow, 2005)