

PERCEPTIONS OF THERAPISTS AFTER A PRACTICAL WORKSHOP ON WHEELCHAIR SKILLS

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ABSTRACT

To evaluate the perceptions of participants after a 1-day practical workshop for 16 therapists learning to use the Wheelchair Skills Program (WSP), we used questionnaires at the end of the workshop ($n = 14$) and after a follow-up period of 3 months ($n = 11$). The evaluations were highly positive, with scores in the 78-100% range. 100% of participants said they would recommend the session to others. A variety of useful comments were provided that will guide future workshops.

BACKGROUND

Research evidence has been accumulating that demonstrates the safety and superior effectiveness of a formal approach to wheelchair skills training for wheelchair users and their caregivers. The Wheelchair Skills Program (WSP), available free on the Internet [1], includes evaluation and training tools to help practitioners translate this research evidence into clinical practice.

For rehabilitation professionals who wish to implement the WSP, the on-line materials can be used to provide the necessary knowledge. However, developing the appropriate practical skills is more challenging. One solution is to offer practical workshops (or "boot-camps") to those interested. But, how effective are such workshops? Four previous studies have shed light on this question; each will be briefly summarized.

Coolen et al [2] reported on a randomized controlled trial (RCT) on 2nd year occupational therapy students, 22 of whom were randomly allocated to receive a 2-hour workshop on the

WSP (Version 2.4). From pre- to post-intervention, the students in the training group increased their mean (\pm SD) percentage WST scores from 64.8% (\pm 9.0) to 81.0% (\pm 5.2) ($p < 0.001$). Over a comparable period, the 18 students in the Control group increased from 66.0% (\pm 8.0) to 72.4% (\pm 7.1) ($p = 0.015$). The WSTP group improved to a significantly greater extent ($p = 0.005$). For a subset of 8 students in the WSTP group who were re-tested 9-12 months later, the mean WST score was 79.7 (\pm 4.1)%, not significantly less than their WST#2 scores ($p = 0.29$).

Routhier et al [3] reported on 8 participants trained in an 8-hour WSP workshop who were evaluated pre- and post-training with the French-Canadian version of the Wheelchair Skills Test (WST-F) (Version 3.2). There was a significant improvement between pre- and post-training on the WST-F Total Score (73.7% [\pm 8.5] to 84.3% [\pm 10.2], $p=0.001$) and on the WST-F Advanced Subscore (11.6% [\pm 27.5] to 42.9% [\pm 34.6], $p=0.008$).

In a RCT by Kirby et al [4], 24 first- and second-year medical students were randomly allocated into intervention and control groups. The intervention group received a 4-hour workshop. After the workshop, the mean scores on the written knowledge test and practical examination for the intervention group were higher than the control group by 23.9% ($p<0.0001$) and 34.4% ($p<0.0001$). The perceptions of the students who took the workshop were highly positive.

Kirby et al [5] reported on a full-day workshop for therapists on WSP 4.1 in a small regional hospital. There was a 20% improvement in the post- vs pre-workshop

test scores of 16 participants on a written examination that tested knowledge of the WSP.

The objective of the current study was to extend the scope of these earlier studies further into the qualitative area, evaluating the early and late perceptions of practicing therapists who participated in a practical workshop on WSP 4.1.

METHODOLOGY

Participants

There were 16 therapist participants from 12 institutions representing all 6 health regions in British Columbia. Their average age was 37 years (range 25-51) and 13 (81%) were women. Their average experience working with wheelchairs and wheelchair users was 14 years (range 0.25-30 years). There were approximately equal numbers of physical and occupational therapists.

Learning Objectives

On completion of the full-day workshop, the objectives were that the attendees would be able to:

1. explain the rationale, elements and the research evidence supporting the use of the WSP for manual wheelchairs operated by their users
2. describe the practical steps involved in conducting wheelchair skills training
3. demonstrate appropriate assessment, spotting and training techniques
4. implement the WSP in their own settings

The Workshop

The workshop included a 1-hour didactic introduction to the WSP including video demonstrations, the WSP principles and an overview of the existing body of evidence. The 6-hour practical component of this workshop provided attendees with an opportunity to experience a range of manual wheelchair user and caregiver skills including spotting techniques and assessment methods, but we focused primarily on training issues (both the 'tricks of the trade' and motor-skills-learning principles).

We used an indoor obstacle course [1] that had been set up at the Blusson Spinal Cord Centre in Vancouver (Canada). Because this was only a one-day session, we confined ourselves to manual wheelchairs. We used 1 wheelchair for every 2 participants (i.e., 8 wheelchairs for the group of 16). About half of the wheelchairs were of the modular lightweight type with folding frames and removable footrests. The other wheelchairs were rigid-frame ultralight wheelchairs. All had cushions. None had fixed rear anti-tip devices.

The participants were divided into 4 groups of 4 and rotated among 4 stations. There was an opportunity to independently score a Wheelchair Skills Test from a video; this was reviewed by the group.

Near the end of the workshop, participants put the skills that they had learned earlier in the day into practice in indoor and outdoor areas other than those settings in which the earlier practice had taken place.

Evaluations

Questionnaires were used to evaluate the participants' perceptions, both at the end of the workshop and after a follow-up period of 3 months. For questions using 5-point Likert scales, participants were asked to provide scores as follows: 1 = "Extremely not", 2 = "Somewhat not", 3 = "Neutral", 4 = "Somewhat so", and 5 = "Extremely so". The scores were summed and reported as percentages of the highest possible scores.

RESULTS

Evaluation immediately after the workshop (n = 14)

In answer to the questions *Did you find the boot-camp sessions useful, relevant, easily tolerated, understandable, enjoyable and inspiring?*, the scores were 97, 94, 97, 96, 100 and 93% respectively. Regarding the duration of the session, 79% felt it was "just right", 21% "too short" and 0% "too long". 100% of participants said that they would recommend the session to others.

In answer to the question *Can you think of anything we neglected to include?*, the answers included "More information on power mobility assessment and training elderly", "Useful websites on this topic in handouts", "Escalators", "A bit more on transfer techniques in and out of chair" and "Expand caregiver techniques".

In answer to the question *What did you find most helpful?*, the answers included "Training tips (caregiver)", "Short, packed sessions with variety", "Assessment skills basics", "Skills practice..." and "Motor skills information...".

In answer to the question *What did you find least helpful?*, the answers included "The (video) presentation portion prior to the grading of wheelchair users" and "Wheelie skills were fun but most of my patients wouldn't use them".

In answer to the question *Any other comments on how we could improve this practical session?*, the answers included "Better description of the assessment before the start of the hands on sessions", "Longer period to practice skills and problem solve..." and "Expand to two days".

Evaluation at 3-month follow-up (n = 11)

In answer to the question *With regard to the learning objectives, please indicate the extent to which you feel the objectives were achieved*, the scores for objectives 1-4 (listed above) were 85, 93, 91 and 78% respectively.

In answer to the questions *Did you find the boot-camp sessions useful, relevant, easily tolerated, understandable, enjoyable and inspiring?*, the scores were 85, 87, 91, 93, 95 and 87%. Regarding the duration of the session, 73% felt it was "just right", 27% "too short" and 0% "too long". 100% of participants said they would recommend the session to others.

In answer to the question *Can you think of anything we neglected to include?*, the answers included "Better instructions of spotting/training teaching to caregivers.

Description of acceptable modification to the WSP for facilities/community not equipped with the standard assessment area", "As I work in residential care, some content directed towards folks with decreased strength, range of motion and decreased cognition would be very much appreciated. I felt much of the content was for the younger client with paraplegia. Some more details/practice for power mobility would also be helpful" and "Would have liked to have seen a few more assessments or training videos."

In answer to the question *What did you find most helpful?*, the answers included "(Training) tips to improve wheelchair skills. Outdoor skill session.", "Experiencing the wheelchair techniques myself", "New skill training options", "Hands on training...", "...information was provided on where literature could be accessed... ", "Learning different ways of teaching a skill...", "The discussion and practice of how people learn skills best... ", "...lots of time to practice and ask questions", "Hands on practice" and "Practical sessions are always the most helpful. I believe that it is important for clinicians to actually be capable of performing the skills they intend to teach."

In answer to the question *What did you find least helpful?*, the answers included "...how to navigate stairs in a wheelchair..." and "Some of the higher level skills for paraplegia ... my clients will never get there."

In answer to the question *Any other comments on how we could improve this practical session?*, the answers included "...provide this video/slideshow to attendees prior to the assessment", "A longer session with more time devoted to learning the different skills...", "More time and perhaps bring in clients to work alongside us if willing" and "...importance of practicing in your practice on return home. If this isn't done, retention of the skills will be poor. This course really highlighted for me the areas of my practice that were lacking. I do lots of wheelchair prescription in a small town and spend a lot of time helping clients choose the right wheelchair. I haven't thought enough of

the skills that would need to be transferred to clients/caregivers once the wheelchair was in place. We also forget about this step too as many of our higher level wheelchair users go to Vancouver to get this kind of training before we see them."

DISCUSSION

We accomplished our objective of obtaining early and late feedback from a high proportion of the practicing therapists on their perceptions of a practical workshop on wheelchair skills. This builds on earlier evidence in support of such training [2-5].

We recognize that a full-day session is less desirable for learning new motor skills than a number of brief sessions with opportunities between sessions for practice (although the latter would have been impractical, since many of the instructors and participants had to travel to attend the workshop). We were reassured by the evaluations and the literature [2-5] that much can be accomplished in a single session lasting 2-6 hours.

The format of the workshop, using different stations manned by different instructors, has some logistical advantages, but has the disadvantage that only one of the 4 groups was able to experience the sequence of skill presentation that is an important part of the training program.

The follow-up evaluations were consistent with those provided immediately following the workshop, but provided additional comments that we believe were made possible by the extra time that participants had to reflect on their experiences and how they might implement some aspects of the workshops into their own practice settings. The specific comments and suggestions will be useful as future workshops are planned.

There were a number of study limitations, including the small sample size and failure to simultaneously evaluate the participants for changes in knowledge and skill. Future studies will need to address the

optimal duration and format for such training.

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