# EVIDENCE BASED PRACTICE SYMPOSIUM
## OCCUPATIONAL THERAPY CLASS OF 2017

**June 19, 2017**

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**Purpose:** To identify, map and evaluate the existing network of vocational supports in the Hamilton area that can be accessed by individuals aged 16-35 with emerging psychosis. **Methods:** A focus group was conducted with three occupational therapists in order to identify the various needs that youth with mental health challenges experience when seeking and maintaining employment. In addition, nine, semi-structured interviews were led with various employment organizations in the Hamilton area to inform the development of an online navigation tool for client and clinician use. **Findings:** Various strengths and opportunities for improvement within the network of employment supports for youth in the Hamilton area were identified. **Conclusion:** The landscape of employment supports for youth in Hamilton remains one that is complex and difficult to navigate for both clinicians and clients. Currently, limited and contentious program funding and a lack of long-term job support present as barriers for youth with psychoses who want to find and maintain employment. Future research should examine the impact of enhancing communication between the healthcare and employment sectors in Hamilton.

While a multiplicity of employment services exist within Hamilton, Ontario, it can be challenging for both clients and occupational therapists (OTs) to navigate programs that present with varying target outcomes, funding models and eligibility criteria. There is a current need for the consolidation of this information in a manner that is accessible for both clinicians and clients. This project aims to identify and map the existing network of employment supports for youth aged 16-35 in Hamilton, in the form of a web-based, visual tool. Additionally, an evaluation of existing supports within the employment sector in Hamilton was conducted to identify future directions for collaboration and change.

**Literature Review**

Young adulthood is a transitional developmental period often characterized by building an identity rooted in both education and employment (Bond, Drake & Campbell, 2016; Bond, Drake & Luciano, 2015). However, with the onset of mental illness, the process of seeking and maintaining employment can be diversely impacted dependent upon illness severity. The academic literature supports the notion that participation in employment is an integral component of the recovery process that can be facilitated by supported employment models (Brown, 2012).

A large body of literature indicates that supported employment and specifically, the Individual Placement and Support (IPS) model is the current best practice when supporting individuals with severe and persistent mental illness with employment goals (Bond, Drake & Becker, 2012; Brown, 2012). IPS is characterized by a focus on competitive employment, client interests, rapid job search and long-term job support (Bond, 1998). However, concerns regarding the resource intensive nature of IPS have prompted the study of ‘lighter’, more cost-effective adaptations for which there is emerging evidence (Burns et al., 2015).

**Methods**

An initial focus group was conducted with three OTs from St. Joseph’s Healthcare Hamilton (SJHH) in order to determine the barriers and facilitators to finding and maintaining employment among youth with emerging mental illness. Information from the focus group in addition to two semi-structured interviews with vocational counselors from SJHH informed the development of an initial roster of existing employment organizations in Hamilton.

Semi-structured interviews were conducted with nine employment organizations in Hamilton using an interview guide that was developed in collaboration with methodology consultant, Susan Strong. Interviews were recorded and reviewed by each team member to aid in the development of nine organizational profiles that outline and summarize the services offered by each organization in detail.

In order to consolidate the collected data into an adaptable and user friendly tool, a website was developed and can be accessed at: **https://ebp2017.wixsite.com/employmentsupports**
Findings

An evaluation of the employment sector in Hamilton revealed current strengths and opportunities for both ground-level and systemic improvements. At this time, youth unemployment and mental illness appear to be at the forefront of current initiatives including new employment programs and research projects. Additionally, elements of the IPS model are currently being implemented by several employment organizations in Hamilton. For example, a variety of organizations offer on the job support and also communicate with employers on a regular basis to ensure ongoing and adequate support is provided to youth with barriers to employment. Though the current system is difficult to navigate, this demonstrates that Hamilton is a resource rich city with much to offer in respect to employment supports for youth.

Several opportunities for growth within the current employment sector were identified. Firstly, because many employment organizations operate under a business model, employment readiness among youth is strongly valued in order to maintain relationships with employers and demonstrate successful outcomes to funders. Consequently, youth with emerging mental illness may not have the opportunity to participate in available programming if their symptoms of illness are seen as a barrier to job placement and retention. It was also observed that there tends to be a youth friendliness ‘trade-off’. Organizations that are accommodating of the positive and negative symptoms associated with psychoses face challenges with creating a youth friendly environment while organizations targeted towards youth are less flexible with higher expectations around youth participation and performance. Additional findings include a lack of: formal training among individuals working in the employment sectors, long term follow-up upon youth employment program completion and high fidelity implementation of the IPS model.

Importantly, there is currently a significant communication breakdown between the health and employment sectors in Hamilton. Though individuals working within both areas expressed a desire to collaborate, this is not currently occurring in practice. Barriers to cross sector collaboration may include issues around client disclosure and consent for inter-professional communication. Additionally, because the employment and health sectors typically receive funding from different sources, the delivery of their services and targeted outcomes may not be complementary. For example, employment organizations may be funded based on successful job outcomes while healthcare organizations are typically funded by the number of client visits.

Conclusion & Future Directions

It should be noted that this project did not include the first-hand experience of youth living with emerging mental illness. Additionally, secondary to time constraints, not all employment organizations in Hamilton were captured within the online tool.

Moving forward, it is recommended that healthcare providers and specifically, OTs, be placed within employment organizations to: (1) facilitate immediate access to professional mental health support, (2) reach youth with mental illness who may otherwise not seek support within the formal healthcare system, (3) provide post-employment program support (4) enhance the sustainability of funding dependent employment programs. The findings of this project will be used in collaboration with YouthCAN (a large-scale, collective impact project targeting youth unemployment) to promote cross-sector collaboration and ultimately provide youth with optimal health and employment supports simultaneously.

Acknowledgements

Thank you to Brian Cooper and Susan Strong for your time, expertise and commitment to our learning. We would also like to thank the frontline clinicians at SJHH for their ongoing support and guidance. Our deepest appreciations also extend to each community organization that participated in this project. Your time and knowledge were invaluable.

References

Partnership for Change (P4C), a collaborative and tiered model for delivering rehabilitation services, was piloted with Occupational Therapy (OT) services in child care centres. A program evaluation was conducted using a qualitative approach to explore the experiences of the child care centres. Outcomes were compared to previous P4C literature to identify unique considerations for implementing P4C in child care settings. Recommendations for future practice and research have been outlined.

Introduction

Partnership for Change (P4C) is an evidence-informed model for delivering rehabilitation services. It was designed for Occupational Therapy (OT) services addressing the needs of children with Developmental Coordination Disorder within school settings. The primary principles of the model are captured in the 4C acronym: Building Capacity through Collaboration and Coaching in Context. P4C service delivery uses a tiered approach, with the bottom tier of universal design for learning applying to all students and the higher tiers of differentiated instruction and accommodation applying to progressively fewer students. The emphasis throughout the model is the partnership between parents, therapists, and educators to enhance children’s participation.

To extend the P4C model beyond the school setting, P4C OT services were piloted in six child care centres. Services were provided in ten week blocks with the OT present at each centre one day per week. This research outlines the evaluation of this pilot project.

Literature Review

The Ontario Special Needs strategy is being developed with a primary goal of an integrated approach to rehabilitation service delivery. The P4C model is aligned with this and has been evaluated over time through a demonstration project, as well as implementation and formative evaluation studies (Missiuna et al., 2015). To date, five peer-reviewed publications and three evidence-based program evaluations have been completed; no research has explored implementation of the P4C model in child care centres.
when OTs removed the expert hat and approached them as equals in the collaborative process.  

**Building Capacity.** Validation was considered foundational in the capacity building process. Child care staff identified feeling increased confidence based on the OT’s validation of effective strategies already in place within the childcare centres. OTs built upon these existing skills through a variety of knowledge translation techniques such as modelling new strategies and providing a rationale for their use. Child care staff found that this increased their understanding of “why they do what they do” and allowed them to generalize skills to other contexts. It also increased their understanding of the OT role and comfort utilizing OT services in the future. 

**Early Identification.** Child care staff appreciated P4C’s collaborative approach to identifying children requiring additional support. This allowed teams to identify children needing intervention more quickly and easily than with previous models of service. Having the OT in the classroom on a regular basis was key to this process. 

**Consent.** One barrier to early identification was the requirement of parental consent before conducting assessment or intervention at Tier 2 or Tier 3. Child care staff identified the need to develop relationships with parents in a gradual manner before obtaining consent. A longer program may have facilitated movement through the P4C model more fully as there would be time for a natural progression of relationship building, building capacity regarding child development and available services, and obtaining informed consent. **Tier 2.** Many participants felt there were challenges with Tier 2 in child care centres. Due to the nature of child care and emphasis on child-led activities, running purposeful small groups for only select children was seen to be problematic. 

**Successful Participation & Inclusion.** Many participants had difficulty gauging the direct result of P4C on children’s participation due to the natural ebb and flow and numerous causative factors on child development. However, participants noted the emergence of skills introduced by the OT and felt that their increased capacity was the first step in facilitating children’s participation and inclusion. Additionally, several participants spoke of children’s increased success when strategies were shared with both parents and educators. The researchers hypothesize that children’s participation and inclusion is a secondary outcome of partnership and building capacity; thus, drawing a causal relationship between it and P4C is elusive to effectively research. However, the sequential pattern of increased capacity of educators and parents leading to increased participation and inclusion of children may be an area for future study. 

**Logistics.** Ten week blocks were considered too short for moving through the tiered model. Many participants reported that the partnership was built, but there was a lack of time to then implement that partnership fully. Participants had varied recommendations for dosage of the P4C model within child care. 

**LIMITATIONS**  
This research used a qualitative methodology with purposeful and snowball sampling, which creates the potential for participant bias. Additionally, fidelity to the P4C model within this pilot project was not formally evaluated. As such, the results of this study may not be generalizable to other P4C projects or child care settings. 

**FUTURE DIRECTIONS**  
Re-thinking Tier 2. While many findings were consistent with previous research in school setting, one component that was unique to child care settings was the difficulty reported with running small groups in Tier 2. Future research could identify strategies for successfully implementing this level of support. Additionally, further consideration of whether consent is necessary for every interaction at the Tier 2 level would be beneficial. 

**Dosage.** The frequency, duration and intensity of P4C services were the subject of diverse opinions. The most effective dosage of services should be evaluated further. 

**Evaluation.** A program logic model was developed based on these research findings. For future evaluations of P4C in child care, it is recommended that the components outlined in the program logic model be used to inform evaluation components. These components could effectively be evaluated in a survey design. 

**ACKNOWLEDGEMENTS**  
The authors would like to acknowledge Debra Stewart, Sandra Sahagian-Whalen and Natalie Spain for their mentorship and guidance. 

**REFERENCES**  


Introduction: ASD is a neurodevelopmental disability where 1 in 68 Canadian children are currently diagnosed. In adults with ASD, the unemployment rate is over 80% and this may be linked to the few employment programs and work experiences available to youth with ASD. Purpose: To examine the qualitative perspectives of secondary students with ASD, their parents and job coaches of JTP, a 13-week pre-coop summer employment program. Methods: 12 Hamilton high school students aged 16+ with Autism Spectrum Disorder (ASD) were recruited to participate in JTP. Upon completing JTP, various methods were used to collect qualitative perspectives on program outcomes and feedback. Semi-structured interviews were conducted with the student participants, a focus group was conducted with the parents of the participants, and a survey was provided to the participant’s job coaches. Data was analyzed using content analysis and a rigorous coding process within and across data sources. Results: The analysis yielded two main categories of content shared across all three perspectives of data sources: benefits of JTP and recommendations for JTP. Though there were some unique representations of these themes within each dataset, themes were largely similar, such as learning about work expectations, gaining valuable work experience, and improved social development. Conclusion: Overall, participants believed JTP to provide valuable social and skill building opportunities, job experience, and engagement. Other recommendations included modifying and expanding the JTP curriculum, and expanding the work placement opportunities to future implementation of JTP.

Introduction: Autism (ASD) is a general term used to describe a group of complex neurodevelopmental disorders (Autism Speaks, 2013). Persons with ASD experience varying degrees of challenges around communication, social interaction, and restrictive or repetitive behaviours and interests impacting employment pursuits. In Canada, 1 in 68 children are diagnosed with ASD, making it one of the most common developmental disabilities (Autism Speaks, 2017). As youth continue into adulthood, they continue to have challenges with employment. As unemployment rates are high for persons with ASD, youth need earlier exposure and increased work opportunities. Though there are high school co-op opportunities, they are often difficult and unsuccessful for youth with ASD due to their lack of guidance or mentorship. Thus, a proof-of-concept study examined the Job-Train Program (JTP); a 13-week program designed to provide vocational training, support and experience for secondary students with ASD to prepare them for high school co-op.

Literature Review: A review of the literature yielded three similar programs for youth with ASD: (1) JobTIPS; which was shown to be effective in improving verbal content skills. However, JobTIPS was not a broad multidisciplinary program as it taught only one of the many skill sets that are required for successful employment, and did not include any on-the-job training. (2) Project SEARCH (PS) and (3) The Project SEARCH-Autism Spectrum Disorder program (PS-ASD) – both of which provide strong evidence for multidisciplinary programs of this nature. Though both programs resulted in high employment rates post-intervention, PS and PS-ASD required students to be completely immersed in the internship program, precluding their participation in regular school.

Aim of study: A proof-of-concept study aims to test the feasibility of an idea; it is experimental and preliminary. As such, the aim of this study is to gain the perspectives of participants, their parents and job coaches. These perspectives will be used to supplement quantitative data collected as part of a main JTP study led by the authors’ supervisor.

Methods: 12 Hamilton high school students with Autism were recruited by community partners according to the following inclusion criteria; (1) have a diagnosis of ASD (2) enrolled as high-school student in Hamilton region with an upcoming co-op (3) aged 16 – 18 years. These students progressed through a novel 13-week summer employment program. After the program’s conclusion, audio recorded semi-structured interviews were conducted with the programs participants, to collect qualitative data that was subsequently transcribed verbatim and subjected to a rigorous conventional content analysis. Analysis and coding was completed independently by two coders who engaged in memoing of the transcription process, as well as the keeping of detailed research meeting minutes. The two independent coders convened to discuss their analyses and come to an agreement on the final categories and themes, with the research supervisor providing adjudication for any codes, categories, and themes that could not be agreed upon. Additionally, one focus group was conducted with the parents of the participants, and a survey was provided to the program’s job coaches. These data were subjected to a separate content analysis by the research supervisor. Findings across groups were analyzed and clear similarities and differences were identified independently by each researcher. Similarly, adjudication was provided by the project supervisor strengthening the rigour across findings.
Results: 11 interviews from youth participants were transcribed and analyzed. 1 file was lost due to corrupted datafile. Additionally, 1 focus group was conducted with the participant’s parents and each job coach completed a survey. Participant findings: (1) “Benefits of JTP” as described by themes such as overall learning (skill based and social learning), the opportunity to engage socially, personal development, and the value of paid employment. (2) “Recommendations for future JTP” which included modification of curriculum content, an increase in job placement opportunities and work hour durations, and structural program recommendations (increased organization). Job Coach findings: Data from job coaches who worked closely with the participants, suggested that the benefits of the JTP program included an increase in overall skills (e.g. organizational skills) and improvement in communication abilities (e.g. asking supervisor for instructions). Parent findings: Parent data yielded themes similar to participant findings, such as positive social growth, new skill acquisition and the value of the program. Parents also described additional benefits of JTP including their child being motivated to take on more responsibility and independence at home, as well as the fact their child was given the opportunity to have summer employment that allowed youth to “fit in” with their peers. Parent recommendations for JTP included having job placements integrated within the community (outside of the university), increasing work duration times, and to include a parent education component to support and advocate for jobs within the community with future employers. Similarities across data sources: All data sources (participants, their parents and job coaches) highlighted that the JTP program was beneficial overall, as it encouraged social growth, and new skill acquisition, as well as the program’s job club being a valuable part of encouraging the acquisition of new skills, positive social growth, and independence.

Discussion: The data from this proof-of-concept study, specifically the themes detailing which parts of the program were most valuable, will aid in the selection of measurement tools to quantify future outcomes. Further, the recommendations from the qualitative analysis serve to suggest improvements that will strengthen the evidence-based program from a service-user’s points of view and result in improved satisfactions and outcomes for all involved. Additionally, this research addresses the previously established gap of persons with ASD in the Canadian job market, as well as the gap of Canadian data on Autism research and intervention programs. Lastly, this project excelled at bringing expertise together in order to process and translate rigorous, evidence-based research into practical, tangible community outcomes by working within the existing academic and community supports for youth with autism.

Conclusions: The benefits of employment transcend beyond the individual with ASD, also impacting their family and the community in a positive manner by providing the opportunity and experience for youth to take on a productive role within their homes and their greater community. JTP provided an opportunity for youth with ASD to gain knowledge about their performance/abilities, learn skills that will help them be better prepared for their upcoming co-op, and to actually engage in work - which may increase financial independence, a sense of purpose, social integration and self-esteem (Dudley, Nicholas & Zwicker, 2015). The findings from this JTP proof-of-concept study support the different benefits of paid employment.

Future Directions:
- Expanding the JTP curriculum so it is tailored to the needs of participants
- Facilitating parent education to support their children in finding employment beyond the JTP
- Expanding the work placement opportunities for youth beyond the university campus setting to increase exposure to different work settings out in the community
- Incorporating these qualitative findings to quantitative results from JTP main study findings
- Follow up analysis to determine benefits gained by JTP participants in their subsequent co-op

References


Purpose: To develop and pilot test an employment assessment (EA) model to profile key vocational abilities and needs for young adults with autism spectrum disorder (ASD). Methods: Community-based research approach was taken in this proof-of-concept study. A model was developed through reviewing the literature and working in partnership with community participants, and the model was subsequently trialed on two young with ASD. Results: The EA model consists of three stages—intake, observation and profile development—and considers the individual, the environment, and the job tasks. The intake stage includes eight assessments, followed by a situational observation and employer interview in a work environment. The final stage entailed using information collected from stages 1 and 2 to create a work profile of the individual. Conclusion: This study has provided preliminary knowledge into the feasibility and utility of a standardized assessment process for profiling vocational abilities to support young adults with ASD with successful transitions into meaningful employment.

Introduction

An estimated 4900 Canadians with autism spectrum disorder (ASD) turn 18 years old annually (Shattuck et al., 2012). As this population transition towards adulthood, employment is typically a common aspiration (Hendricks, 2010). However, these individuals may face significant challenges with securing and maintaining successful employment, which is reflected in high rates of both unemployment and underemployment. Employment for individuals with ASD is low, ranging from 10-50% (Nicholas et al., 2014).

To date, little research has been conducted on young adults with ASD. Specifically, there is a lack of evidence-based practices for facilitating successful transition into employment, including how to best identify job-fit for this population (Dudley et al., 2016). Therefore, there is an identified demand to assess employment needs and to improve successful employment outcomes for this continually growing population (Hendricks, 2010). Proper matching between the individual and the work environment, coupled with proper supports, can promote successful and ongoing employment (Hendricks, 2010). As such, the objective of this proof-of-concept study is to develop and test an employment assessment (EA) model for young adults with ASD through community-based research (CBR). CBR is a process where community partners are actively engaged in all aspects of the research—providing different perspectives, strengths, and resources (Isreal et al., 1998). Partners work together to integrate knowledge into action.

Methods

Development of EA model: The Autism LifePath (ALP) group—a community group made up of parents, clinicians, and researchers—expressed interest in developing an EA model to determine job-fit for young adults with ASD. Student researchers conducted a literature search to identify existing employment-focused measures for individuals with ASD i.e. Autism Employment Metric Repository (Nicholas & Di Rezze, 2016) and contacted other organizations and research groups doing similar work in this field. Identified measures were categorized using a Person-Environment-Occupation (PEO) framework (Law et al., 1996). The list of assessments and a proposed framework for an individualized work profile were shared by the project supervisor within ALP group meeting for feedback. Following ALP approval, the researchers connected with an expert group with experience in vocational assessments to further explore the observational assessment framework and to fill any gaps within the model. A meeting was then held to discuss feedback provided by the community members and utilized in revision of the model prior to final selection of assessments to trial.

Trialing of EA model: Ethics was obtained through Hamilton integrated Research Ethics Board. Following, the EA model was tested with participants—recruited from the ALP group in the Halton/Toronto region—to test the feasibility and utility of the content collected to develop an employment profile. The trial included 3 stages: Stage 1, the completion of an intake assessment package, followed by a semi-structured interview conducted by the student researchers; Stage 2, the conduction of a job-site observational assessment of the participant and an employer interview; and Stage 3, the creation of an individualized work profile based on Stage 1 and 2 content results to be shared with individuals and their families.

Results

Development of EA model: Assessments from the model are categorized by constructs within a PEO framework. The model consists of a total of ten assessments which gather information about the individual person, as well as the work environment. See Table for list of assessments. Members of the ALP group added the ABAS-II and the Identification, Placement, and Review Committee Report in order to gather comprehensive results. Feedback from experts in vocational assessment was used to develop the key components of the in-situ observation.

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### Trialing of EA model:
The EA model was trialed on two young adults with ASD (males; mean age=22). One participant was involved in a co-op program in his final year of high school, whereas the other individual was working in part-time employment.

Information gathered from the assessments was used to inform a work profile of the individual. The Employment Profile included the following heading with content populated by specific measures (in parentheses): Work History (ASWQ, WES), Job Interests (COPM, card sort), Skills and strengths (AQ, AWSQ, ABAS-II), Areas for support (WRI, COPM, JDA), Work goals (COPM, card sort), Work habits (AWSQ, COPM, ABAS-II), Skills for development (COPM, WRI), and Next Steps i.e. concrete action plan using SMART goals.

### Discussion

#### Development of EA model:
Inclusion of community partners throughout the research process offered diverse contribution to the development of the EA model and the measures associated with it. However, challenges of CBR exist regarding the time it takes to coordinate and schedule meetings and to ensure decisions are made collectively.

#### Trialing of EA model:
Effective use of the EA model involves completion of individual assessments prior to the initial interview. It was noted that reviewing these assessment results may contribute to a better informed interview process in which the interviewer can target specific challenges or ideas identified by the individual in the COPM and card sort. Further, participants’ level of insight for engaging in the assessment process and providing valid information may determine whether parent perspectives should supplement this data. This intake of assessments is complimented by the in-situ observation in further understanding the job-fit for the individual.

The chosen assessments consider different aspects of the person; as such, the results provide a good depiction of the individual when developing the profile to optimize job-fit. In exploring the utility of the work profile, this information can provide the young adult with individualized information about themselves to be used when seeking employment or when requesting accommodations to best facilitate job-fit.

Limitations exist within the development of the current model with limited access to certain assessments, as well as a lack of ASD specific employment measures. It is important to note that assessments were conducted with a small sample size within a limited time frame. Participants held pre-existing jobs, thus may not be generalizable for young adults entering the workforce.

As identified by the expert group, there is currently a disparity of services for young adults with ASD entering the workforce. It may be useful to begin this employment transition process for these individuals at younger age while they still have access to services. Further, occupational therapists (OT) are well positioned to take on a case managerial role in supporting these individuals in their productive occupations. This may include coordinating assessments and evaluations of workers and employment settings through the use of job coaches and partnerships with various employers. Facilitating this process from an OT perspective would enhance the job fit by supporting the PEO elements of workers with ASD.

Through the inclusion of community partners, this initial research can serve to create action for furthering a standardized assessment process for supporting these individuals with transitioning into meaningful employment. Initial findings illustrate the significance of furthering research for this population. Future work includes follow-up of the assessment process to be conducted by project supervisor through seeking feedback from families about their experience. In addition, the employment profile is to be further developed by the project supervisor and the psychologist from the ALP group. It is recommended that the EA model be trialed on a greater number of individuals with ASD, with and without work experience, over a longer period of time.

#### Acknowledgement

The authors would like to acknowledge the members of the ALP group, Rhoda Reardon, Jill Trites, Judy Clarke, Glenn Rampton, and Rosanna Derubeis for their participation in this CBR process. We would also like to thank Dr. Bruino Di Rezze (supervisor) for his support and guidance, as well as Helena Viveiros (Study Coordinator) for her contributions.

#### References


Children with autism spectrum disorder (ASD) have difficulty managing self-care tasks that require imitation, executive functioning skills, and motivation. Increased independence in self-care tasks will not only ease caregiver burden, but also promote self-efficacy and increased participation for children with ASD. Video-based interventions are a proposed modality to teach self-care skills in this population, as visual tools align with the visual perceptual skills and learning styles of children with ASD. The objectives of this study are to: 1) review existing literature on video-based interventions in ASD; 2) create self-care videos; and 3) create a caregiver-education package. The literature review revealed a paucity of high-quality evidence. However, the growing body of available evidence suggests that video-based interventions are an effective modality to teach children with ASD self-care tasks. Informed by available evidence, a total of 81 self-care videos were created and accompanied by a caregiver-education package to facilitate knowledge translation.

**ABSTRACT**

Autism spectrum disorder (ASD) is a complex developmental disorder that impairs a child’s ability to communicate and interact with others, while also impacting a child’s ability to complete functional daily tasks (American Psychiatric Association, 2013). Children with ASD have difficulty managing self-care tasks that require imitation, executive functioning skills, planning, sequencing, and motivation (Cardon & Wilcox, 2011). Dressing, teeth brushing, toileting, and other self-care or hygiene tasks are particularly difficult for children with ASD (Meister & Salls, 2015). Increased independence in self-care skills not only eases caregiver burden, but also promotes self-efficacy and increased participation for children with ASD. Occupational therapists (OTs) play a primary role in helping children develop independence in self-care tasks. OTs consider self-care tasks to be meaningful occupations central to a child’s development and participation. These tasks also allow children to engage in their communities whilst fostering personal responsibility and independence. OTs utilize several approaches and modalities to teach self-care skills to children with ASD (e.g., visual schedules or backward chaining). Advancements in technology have also prompted the use of video-based interventions in this population (Cardon & Wilcox, 2011). Used for skill building, videos teach a targeted skill by capitalizing on the visual learning strengths of children with ASD. Video interventions exist in a variety of different formats including live-action, animation, point-of-view or scene perspectives, video modelling or video prompting, and ‘other as model’ or ‘self as model’. Moreover, videos also limit environmental distractions and lessen the demand for direct teaching as the intervention is delivered in a visual format. Videos are also naturally reinforcing and inherently motivating for children with ASD (Meister & Salls, 2015). Although video-based interventions are theoretically well matched with ASD learning styles, the evidentiary support for this type of intervention is uncertain. Thus, the objectives of this study are to: 1) conduct a literature review to identify, appraise, and summarize existing evidence on video-based intervention use in children with ASD; 2) utilize results from the literature review to inform the development and creation of self-care intervention videos; and 3) create an accompanying caregiver-education package to facilitate knowledge translation.

**INTRODUCTION**

Autism spectrum disorder (ASD) is a complex developmental disorder that impairs a child’s ability to communicate and interact with others, while also impacting a child’s ability to complete functional daily tasks (American Psychiatric Association, 2013). Children with ASD have difficulty managing self-care tasks that require imitation, executive functioning skills, planning, sequencing, and motivation (Cardon & Wilcox, 2011). Dressing, teeth brushing, toileting, and other self-care or hygiene tasks are particularly difficult for children with ASD (Meister & Salls, 2015). Increased independence in self-care skills not only eases caregiver burden, but also promotes self-efficacy and increased participation for children with ASD. Occupational therapists (OTs) play a primary role in helping children develop independence in self-care tasks. OTs consider self-care tasks to be meaningful occupations central to a child’s development and participation. These tasks also allow children to engage in their communities whilst fostering personal responsibility and independence. OTs utilize several approaches and modalities to teach self-care skills to children with ASD (e.g., visual schedules or backward chaining). Advancements in technology have also prompted the use of video-based interventions in this population (Cardon & Wilcox, 2011). Used for skill building, videos teach a targeted skill by capitalizing on the visual learning strengths of children with ASD. Video interventions exist in a variety of different formats including live-action, animation, point-of-view or scene perspectives, video modelling or video prompting, and ‘other as model’ or ‘self as model’. Moreover, videos also limit environmental distractions and lessen the demand for direct teaching as the intervention is delivered in a visual format. Videos are also naturally reinforcing and inherently motivating for children with ASD (Meister & Salls, 2015). Although video-based interventions are theoretically well matched with ASD learning styles, the evidentiary support for this type of intervention is uncertain. Thus, the objectives of this study are to: 1) conduct a literature review to identify, appraise, and summarize existing evidence on video-based intervention use in children with ASD; 2) utilize results from the literature review to inform the development and creation of self-care intervention videos; and 3) create an accompanying caregiver-education package to facilitate knowledge translation.

**METHODS**

**Literature review.** A PICO (population, intervention, comparison, outcome) question was developed to guide the literature review. The population is children aged 3-18 years with ASD; the intervention is video-based interventions; and the outcome of interest is acquisition or increased independence in self-care skills. The comparison component was not selected to inform the search strategy in order to maximize retrievals. A systematic search was conducted using the full or altered search string based on database-specific indexing and available limits. Inclusion criteria included: English language; children (3-18 years) with a diagnosis of ASD; community or outpatient setting; and video-based interventions. Exclusion criteria included: studies focused on behavioural changes or social skill video interventions; interventions focused on imitation of play; and child-specific video interventions. The search began at the highest available level of the 6S Pyramid (summaries) in clinical practice guideline databases. This search revealed 1 Best Evidence Statement (BESt) specifically addressing video-based interventions in teaching self-care skills to children with ASD. The search subsequently continued down the 6S Pyramid. Databases were searched without a year limit to maximize retrievals. Relevant databases searched include: National Guideline Clearinghouse, Clinical Key Guidelines, Cochrane, AMED, PsychInfo, ERIC, Pubmed, Medline, CINAHL, TRIP, and EMBASE.
In order to avoid duplication of information, single studies included in high-quality review articles or meta-analyses were excluded from the current review.

**Video intervention development.** Key findings from the literature review informed the creation of live-action and animated self-care videos. Typically developing children between the ages of 3-12 years were recruited through personal contacts to serve as actors in the videos. Verbal and written consent for children’s participation in videos was obtained from caregivers. Children were filmed completing self-care tasks in their home environments using digital single lens-reflex cameras. Self-care tasks filmed include: indoor dressing (i.e., socks, shirts, pants); outdoor dressing (i.e., coats, zippers, snow pants, hats, mittens, gloves, boots, shoes, shoe-lace tying); teeth brushing; hair brushing; nail trimming; and hand washing. Live-action videos (n=80) were created using MacBook computers, iMovie, and iTunes software (Apple). In coordination with a media consultant, an animated toileting video (n=1) was created using a custom animation computer at the Lyons New Media Centre (McMaster University) using Photoshop, After Effects, and Premiere (Adobe). Lastly, a caregiver-education package was created to provide a medium for knowledge translation, which included an inventory of all videos along with recommendations for video use.

**RESULTS**

The systematic search revealed limited studies that investigate the use of video-based interventions in teaching self-care skills to children with ASD. Many retrievals focused on social skill acquisition and play imitation, and thus, were excluded. After retrieval exclusions, the search yielded: 6 single studies, 2 review articles, 1 meta-analysis, and 1 BESt. The following themes derived from the literature review informed the development and creation of video interventions in the present study: (1) video-prompting may be superior to video-modelling in self-care skill acquisition; (2) human subjects and live-action videos may result in greater skill acquisition compared to animation; (3) ‘other as model’ may be superior to ‘self as model’ as it eliminates the potential for fixating on oneself; (4) subjects in live-action videos should be similar-aged peers and matched to gender of child observer; and (5) videos should capitalize on visual processing strengths of children with ASD.

Overall, evidence suggests video-based interventions promote acquisition of self-care skills to varying extents in children with ASD. Videos may be less resource intensive when compared to the direct therapy time required to result in self-care skill acquisition. Moreover, when caregiver acceptability of video-based interventions was measured, evidence suggests that caregivers perceive video interventions to be feasible and well accepted by both their children and themselves (Corbett & Abdullah, 2015). The studies reviewed were conducted in a variety of settings and video-based interventions were shown to be effective in school, home, and clinical settings. Notably, a number of methodological inconsistencies also exist across the literature, limiting the comparative value of study results. Studies included varying timelines for intervention and follow-up, and multiple interventions were often delivered simultaneously (e.g., behavioural interventions in combination with videos). Many studies included inconsistent outcome measures, ranging from caregiver-reported Likert scales to standardized outcome measures. Reflective of the literature, it is difficult to infer generalization of skills to additional settings or maintenance of skills over a longer period of time as studies generally did not include follow-up with participants extending beyond 4-weeks.

**CONCLUSIONS & FUTURE DIRECTIONS**

Currently, there is limited evidence supporting self-care skill acquisition in children with ASD receiving video-based interventions. Evidence suggests video-based interventions may promote acquisition of self-care skills in children with ASD. The current literature review revealed a number of video principles that may result in self-care skill acquisition; however, child-specific differences, such as literacy level or learning ability/preferences, limit the ability to generalize a video format for all children with ASD. Due to a paucity of evidence, many questions remain in terms of best practice for the use of video-based interventions. Given the various modalities for video-based interventions, it will be valuable for future studies to compare video perspectives, animation versus human subjects, and video modelling versus video prompting to resolve discrepancies in video formats. Moreover, future research should aim to determine if skill acquisition is maintained over time and is generalizable to other settings and environments. The next phase of the current project will be to evaluate the effectiveness of the developed video interventions for children with ASD, review caregiver and clinician feedback, and revise the videos as required.

**SEMINAL REFERENCES**

Implementing P4C in Child Care Settings: The OT Experience
Taylor Corelli and Brianna McClelland, M.Sc. OT Candidates 2017, McMaster University
Supervisors: Nancy Pollock, M.Sc. OT Reg.(Ont.), Leah Dix M.Sc. OT Reg.(Ont.), and Dr. Cheryl Missiuna, PhD OT Reg.(Ont.)

Purpose: To describe the overall experience of occupational therapists implementing the Partnering for Change (P4C) Model in child care settings. Methods: Reflective journals were reviewed and informed development of a semi-structured interview guide used in face-to-face interviews conducted with three occupational therapists who had delivered P4C in nine Ontario child care centres. The interviews were transcribed, thematically coded, and analyzed. Findings: Overall, five themes were identified that reflected personal learning, challenges faced, and professional growth in regard to relationships, collaboration, and capacity building. Implications: P4C has the potential to reach, identify, and serve more children, and foster better communication between therapists and child care staff.

INTRODUCTION
The Partnering for Change (P4C) model of school-based service delivery was developed to increase early identification and management of motor and coordination challenges in school-aged children, and to enhance support for all children through capacity building, collaboration, and coaching in the context of the classroom (Missiuna et al., 2012b). Over the past nine years P4C has been implemented and evaluated in schools across southern Ontario. It has proved valuable in helping children with diverse needs (Missiuna et al., 2012a), and research demonstrates that P4C resulted in greater reach and earlier identification of children in need of service as compared to typical service provision (Missiuna et al., 2015).

In response to the success of P4C implementation in primary schools, a pilot project was developed to trial the service delivery model in child care centres. Three experienced occupational therapists from KidsAbility participated in the pilot project. P4C was delivered once weekly, for service blocks of ten weeks to nine child care centres in the Kitchener-Waterloo region during the 2016–2017 school year. Prior to the project, therapists completed one full-day training session delivered by the P4C team.

The purpose of this study was to expand upon the existing P4C literature and describe the experience of occupational therapists implementing P4C in child care.

METHODS
A qualitative research approach was used to gain an in-depth understanding of the experiences of the occupational therapists that implemented the P4C model.

Participants: Convenience sampling was utilized for this study, and comprised of the three occupational therapists who participated in the pilot project. All occupational therapists were female with experience ranging from 17.5 - 21 years, and 12 - 15 years of experience delivering the SPOT model of service.

Data collection: Therapists were asked to keep a reflective journal throughout the three, ten-week service blocks, documenting barriers they overcame and supports they utilized. A semi-structured interview guide was developed using the reflective journals to explore the occupational therapists’ experiences implementing the P4C model in child care settings.

Semi-structured interviews were conducted face-to-face by both student authors (TC and BM) and lasted approximately 45-60 minutes. Interviews were digitally recorded and manually transcribed by TC and BM, who removed all identifying information. Project supervisors (LD and NP) received copies of the transcripts to review and enable participation as expert consultants throughout the process of data analysis.

Data analysis: In accordance with the study’s exploratory nature, an inductive thematic analysis approach was used. Both student authors (TC and BM) conducted data analysis following Braun and Clark’s (2006) six phases of thematic analysis. Methodological strategies were employed to strengthen the study’s dependability, and included each author reviewing the transcript and identifying initial themes individually, followed by meeting to share and discuss proposed themes. Lastly, expert opinion was sought from the project supervisors (LD & NP) and final themes were developed (Lincoln & Guba, 1985). To strengthen the study’s credibility and confirmability authors maintained individual audit trails. The trustworthiness of themes was ensured through member checking.

FINDINGS
Five major themes were identified and named using a nautical metaphor through analysis of the interview transcripts: riggings of the ship, navigating the waters, all hands on deck, learning to sail, and reaching greater depths. These themes reflected the occupational therapists’ personal learning while implementing the P4C model, the challenges they faced using this new service delivery model, and their feelings of professional growth in relationship building, collaboration and capacity building during this experience. All three therapists participated in the member-checking process and were in agreement with all themes. A description of each theme is provided below.

Riggings of the Ship: Occupational therapists identified several logistical barriers while implementing P4C: service blocks were too short, complexities with consent, and limited access to health information. Therapists identified the length of the service blocks as the most significant barrier, and perceived it as a key contributor to many of the other challenges they faced implementing the model.

Navigating the Waters: The therapists indicated that reaching greater depths was a significant learning experience and described how the culture of child care, particularly the emergent curriculum, influenced how they were able to deliver the P4C model.
All Hands On Deck: Occupational therapists spoke of the critical importance of cultivating and establishing strong relationships before moving on to other aspects of the model. They also spoke of the importance of collaboration to provide feasible strategies/suggestions, and offering support to the child care staff.

Learning to Sail: The therapists described a growing confidence as they progressed through the pilot project and identified some key components to successful P4C implementation. They identified both collaboration with child care staff, and peer support as contributors to their own growth in confidence. They also stated collaboration with child care staff helped increase the staff’s confidence, particularly in identifying a child and making a referral.

Reaching Greater Depths: Occupational therapists described how experiences differed greatly between centres, and how an additional learning curve was encountered at each child care centre with their unique approaches to care. They also identified that implementing the P4C model stimulated personal reflections allowing them to identify how their personal and professional practices had evolved as a result of the pilot project.

DISCUSSION

The learning curve and challenges identified by the occupational therapists implementing P4C in child care were similar to those found by Campbell et al. (2012) and Hutton (as cited in Campbell et al., 2012). In all three studies therapists gained confidence through relationship building, were better able to provide realistic and feasible recommendations after spending time in the classrooms, and felt that despite having provided service in this setting before, it was an ‘eye-opening’ experience.

Although the therapists expressed that the experience was rewarding and positive, consistent with existing literature (Campbell et al., 2012), they identified several challenges, such as: obtaining consent, the care child curriculum, and adjusting to various child care centres’ cultures. With respect to the challenges the therapists felt, many could be attributed to the short service blocks, and that within the ten weeks relationship building was the most impactful part of implementing P4C. Further research is needed to determine whether longer service delivery blocks would eliminate some of these challenges.

Despite the challenges, congruent with existing literature therapists believe they were able to make an impact in each centre (Campbell et al., 2012). Similarly, therapists felt their involvement in this project led to increased capacity and improved ability in care child staff to identify and assist children.

LIMITATIONS & FUTURE DIRECTIONS

The study was limited by a small sample of therapists from one geographic location, decreasing the transferability of the results. Additionally, in retrospect, clearer instructions regarding the reflective journals should have been given to ensure consistency and enhance the richness of the data.

As this study only explored the experiences of occupational therapists, in future it would be of interest to determine if the P4C model is consistent with the activities of other rehabilitation professionals within their role in child care. Likewise, as partnerships involve therapists, teachers and parents, future research should determine the most effective approaches for engaging families while providing service in child care settings.

CONCLUSION

The occupational therapists who implemented the P4C model reported that it was a positive professional and personal learning experience that will change the way they practice. They identified increased confidence as a result of the relationships they were able to establish with child care staff, subsequently resulting in more feasible suggestions and strategies. Although, barriers such as the culture and philosophies of child care, personalities, short treatment blocks, and complexities of consent were seen as challenges, all three therapists found the experience to be positive and rewarding. They believed that P4C is a favourable model for child care service delivery as it would allow therapists to reach, identify and serve more children, and foster better communication between therapist and centres.

KEY MESSAGES

- Occupational therapists highlighted the importance of relationship building and its influence on successful implementation of P4C.
- Occupational therapists reported that each child care centre had its own culture, making each experience different.
- Occupational therapists identified peer support as an essential component to implementing the P4C model.
- Although challenges were identified, all occupational therapists found the experience to be a positive and rewarding learning experience that resulted in personal and professional growth.

ACKNOWLEDGEMENTS

The authors would like to extend their gratitude to Nancy Pollock, Leah Dix and Cheryl Missiuna for their time and mentorship. They would also like to thank the occupational therapists from KidsAbility for their participation and willingness to share their experiences.

REFERENCES


Evaluation of the Choice Appointment in the Choice and Partnership Approach for Pediatric Mental Health

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North Halton Child and Youth Psychiatry Program (NHCYPP)

ABSTRACT

Purpose: As a quality improvement initiative surrounding program capacity and increasing wait times, the North Halton Child and Youth Psychiatry Program (NHCYPP) implemented a new service delivery model known as the Choice and Partnership Approach (CAPA). A study was conducted to investigate the client’s experience with the Choice Appointment and service outcomes with this new model.

Method: A questionnaire (CAEQ) was developed to evaluate both client outcomes (subjective satisfaction with service) and service outcomes (changes in wait time). 26 individuals completed the questionnaire.

Results: 73% of respondents demonstrated subjective satisfaction with the Choice Appointment. Wait time from referral to first clinician contact decreased by 22 weeks with the implementation of the new CAPA model.

Conclusion: The NHCYPP can use these results to validate that the Choice Appointment has shown to have a positive impact on service delivery by decreasing wait times while maintaining high levels of client and family satisfaction.

INTRODUCTION

The NHCYPP is a community based mental health facility based out of Milton, Ontario. The program services children ages 6-18 with mental health concerns. In efforts to decrease wait times while not sacrificing client experience, the facility decided to implement the CAPA model. CAPA is a “Service Transformation Model” based on principles of choice and collaboration (capa.co.uk). The focus of the first appointment, known as the Choice Appointment, is to give clients and families the choice of the clinician/intervention based on their identified goal. This eliminates the typical lengthy initial assessment, and instead focuses on a more individualized treatment process.

There is limited literature to date investigating the CAPA model. The recent literature on the CAPA model has found it to decrease wait times and increase service efficiency (Fuggle et al., 2016; Naughton et al., 2015). Emerging themes in the literature include collaborative working relationships between clinician and client, as well as outlining expectations at the beginning of every session to increase overall client experience (Robotham, James, & Cyhlarova, 2010; Fuggle et al., 2016). The purpose of this research study was to evaluate the Choice Appointment’s impact on client and service outcomes at NHCYPP.

METHODS

A cross-sectional design was chosen to investigate client’s experience with the Choice Appointment of the CAPA model. The Choice Appointment Experience Questionnaire (CAEQ) was created based on the CHI-ESQ, a questionnaire used to determine client service satisfaction in the Fuggle et al. (2016) study. A youth version (aged 12 and older) and a parent/guardian version (children under the age of 12), were created. To assess client outcomes, the CAEQ consisted of 9 questions with a 3-point scale (ranging from ‘certainly true’ to ‘not true’, with an ‘I don’t know’ option). Answering 9/9 questions ‘certainly true’ was the determinant of Subjective Satisfaction. Additionally, the CAEQ questions were categorized into three themes based on the Choice Appointment implementation components: Collaboration, Client-Directed, and Goal-Planning. Client satisfaction with each theme was determined by the number of ‘certainly true’ responses. To assess service outcomes, wait list times were gathered from facility wait time data for March to June for the years 2016 (old service model) and 2017 (CAPA model).

A total of 26 CAEQs were completed, and the sample consisted of clients accessing NHCYPP services. Participation in this research study was voluntary, and all clients and parent/guardians agreed to complete the CAEQ in the waiting room after their Choice Appointment. Two student researchers analyzed the data using SPSS.
An independent sample t-test was completed to compare means for ‘certainly true’ responses between parent/guardians and youth, and between new referral and re-referrals.

**RESULTS/DISCUSSION**

In terms of client outcomes, 73% of the clients and parent/guardians responded ‘certainly true’ to all 9 CAEQ questions, and 15% responded ‘certainly true’ to 8 questions. This demonstrates high overall subjective satisfaction with the *Choice Appointment*. The Client-Directed theme had the highest subjective satisfaction with 95% of clients and parent/guardians responding ‘certainly true,’ and Collaboration had the lowest with 87%. There was no statistically significant difference between the parent/guardian experience with the *Choice Appointment* compared to the youth experience (t(23)= 2.067, p=0.549). These results demonstrate similar subjective satisfactions across ages, and confirm that parent/guardians feel involved in the decision-making process. There was a statistically significant difference in subjective satisfaction between referral status, with the new referrals having a higher subjective satisfaction compared to re-referrals (t(10)= 2.23, p=0.045). This high percentage of subjective satisfaction amongst new referrals shows that the *Choice Appointment* was well received by new clients. These results demonstrate that youth, parents/guardians and new referrals had a high level of satisfaction with the *Choice Appointment*. In regards to service outcomes, wait times decreased from 25 weeks (old service model) to 3 weeks (CAPA model). Although other factors may have contributed to the wait time results, this shows that the *Choice Appointment* may have an impact on service efficiency.

**LIMITATIONS**

Limitations associated with this research study include lack of CAEQ pre-testing due to time constraints, and limited ability to generalize these results to the entire CAPA model as they pertain solely to the client experience of the *Choice Appointment*. There is also the possibility that low wait time results in March to June of 2017 may be due to other confounding factors including the low number of clients on the wait list at the start of CAPA model implementation. Another limitation to the wait time results was the inability to complete statistical analysis due to inability to access the full data set from the facility.

**CONCLUSION**

The *Choice Appointment* is a unique component of the CAPA model that focuses on principles of choice and collaboration to ensure efficient, client directed service delivery. The NHCYPP can use this research to validate their efforts in that the *Choice Appointment* is appearing to have a positive impact on reducing client wait times while still ensuring a high level of client satisfaction. The *Choice Appointment* is just one component of the CAPA model and future research should aim to evaluate the impact of the entire CAPA model.

**ACKNOWLEDGEMENTS**

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What Influences Return to Play in Asymptomatic Post-Concussive Athletes?

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Abstract:
Objective: This study aimed to examine the utility of the Chicago Blackhawks physical exertion test (BHT) as a final return to play (RTP) clearance test in youth and young adult athletes, and to determine the relationship between participant and test variables on RTP within asymptomatic athletes diagnosed with concussion.
Methods: A retrospective chart review was conducted to examine data collected from various Complete Concussion Management partnered clinics. Participants underwent the BHT to determine readiness for RTP based on pass or failure of the test. Participant and test variables were analyzed using SPSS version 24.0 to determine relationships with pass/fail rate of the BHT and amount of influence significant variables have on length of time until RTP in participants who passed the BHT.
Results: 85% of participants passed the BHT and 15% failed. Statistically significant relationships were found between pre-morbid anxiety and symptom severity with pass/fail rate of the BHT. Sex, age and pre-morbid anxiety were found to significantly predict length of time until RTP.
Conclusion: The BHT was able to identify individuals who are not ready to RTP, despite reporting to be asymptomatic, illustrating that physical exertion testing is an important aspect to inform clinical RTP decisions. Pre-morbid anxiety and symptom severity can influence whether an athlete passes or fails the BHT. Pre-morbid anxiety, younger age and female sex may predict longer time to RTP in asymptomatic athletes following concussion. The BHT may not be a suitable test for athletes of less cardiovascularly demanding sports and there is a need for sport-specific physical exertion testing.

Introduction:
Concussions are common brain injuries considered to be a subset of mild traumatic brain injury (Harmon, et al., 2013), experienced in both contact and non-contact sports (Tsushima, Geling, Arnold & Oshiro, 2016). In Canada, 66% of head injuries occur in youth sports and 1 out of every 70-220 emergency room visits are due to concussion (Statistics Canada, 2010; Zemek, Duval & DeMatteo, 2014). Concussions can negatively impact youth by limiting their performance in home life, academics, sport and other leisure activities (DeMatteo et al., 2015). It is important to examine this growing public health concern, as youth with concussions are at an increased risk of repeated concussive injuries, exacerbating brain damage, further hindering performance and may even lead to death (DeMatteo et al., 2015; Whyte, Gibbons, Kerr, & Moran, 2015).
Exercise testing can help to identify individuals who have not recovered fully from concussion (Leddy, Baker, Kozlowski, Bisson & Willer, 2011) and prevent premature RTP by provoking concussive symptoms with exercise. The use of provocative exercise testing is consistent with the world expert consensus opinion on establishing recovery from concussion (Leddy & Willer, 2013).

The Chicago Blackhawks physical exertion test (BHT), developed by the Chicago Blackhawks medical staff of the National Hockey League, is used to determine clearance for RTP by assessing full recovery from autonomic and cerebrovascular dysfunction following concussion. It is comprised of various activities within three main test components (stationary biking, plyometrics and balance) and aims to mimic movements and varying levels of physical exertion that may be experienced in sport. A participant is deemed to have failed the test if there is any experience of concussive symptoms.

Current literature suggests that individuals with a greater number of previous concussions, are younger in age, female and have comorbid anxiety pre-injury tend to take longer to recover and for subsequent RTP.
Methods:
A total of 759 male and female athletes ages 13 to 25 recovering from concussion and are patients at one of the Complete Concussion Management (CCMI) partnered clinics across Canada were included in this study. A retrospective chart review was conducted to examine the data collected from the clinics. Each participant underwent the BHT to determine medical
clearance for full contact practice after completing other physical exertion activities as part of CCMI’s RTP protocol.

SPSS version 24.0 was used for all analysis. Chi-Square analyses and independent samples t-tests were used to examine the relationship between participant and test variables and the pass/fail rate of the BHT. Multiple linear regression analyses were used to determine variable influence on length of time until RTP in athletes who passed the BHT. Significance was established at p<0.05. This study was approved and informed consent was obtained.

Results:

85% of individuals passed and 15% failed the BHT. Although hockey (45%) and football (11%) players had the greatest proportion of the sample population, winter sport athletes (41%) and baseball players (40%) had the greatest proportion of failures.

Pre-morbid anxiety (X² = 4.77, p<0.05) and symptom severity score (t = -2.32, p<0.05) were found to be significantly associated with the pass/fail rate of the BHT. The mean symptom severity score as determined by the SCAT3 for passers was approximately 5 points less than that of failures. Multiple linear regression analyses identified anxiety (β=0.149, p<0.05), age (β=0.110, p<0.05) and sex (β=0.104, p<0.05) as statistically significant predictors on the length of time to RTP. Specifically, pre-morbid anxiety, younger age and female sex predict greater number of days to RTP.

Discussion:

There was still a percentage of athletes who failed the BHT, indicating that the test was able to identify individuals who were not ready to RTP, despite self-reporting to be asymptomatic. This illustrates that physical exertion testing is important to inform appropriate clinical decisions in preventing premature RTP.

Anxiety of performing the test may have contributed to the exacerbation or misinterpretation of symptoms during the test. Greater initial symptom severity may indicate more severe injury and prolonged recovery. Inaccurate self-report of symptom severity to determine BHT eligibility may have also led to subsequent failure. The BHT may not be suitable for athletes of less cardiovascularly demanding sports, as reflected in the higher percentage of failed test in these participants. Overall, an athlete’s progress towards RTP is influenced by many factors that can help or hinder their recovery.

Limitations to this study include: unvalidated physical exertion test, differences in stationary bikes used, lack of criteria to determine choice of administered test and participant self-report error.

Conclusion:

Pre-morbid anxiety and symptom severity were found to have a significant relationship with the pass/fail rate of the BHT. Pre-morbid anxiety, younger age and female sex influenced length of time to RTP by prolonging recovery. Additionally, the BHT may not be a suitable RTP assessment for athletes of less cardiovascularly demanding sports as it requires a level of physical exertion that may not be suitable for athletes of all sports. Therefore, sport-specific physical exertion testing may be most beneficial to ensure appropriate RTP protocol post-concussion and prevention of premature RTP.

References:


Abstract
Hamilton Health Sciences (HHS) Comprehensive Spasticity Management (CSM) Program is a specialized outpatient program at the Regional Rehabilitation Center (RRC) that offers services for individuals with various diagnoses who are affected by spasticity. Patients may include individuals who have experienced stroke, brain injury, spinal cord injury (SCI), cerebral palsy (CP) or multiple sclerosis (MS) complicated by spasticity. Currently, the CSM Program struggles to implement a comprehensive, best practice service delivery model with timely patient access and flow. This project aims to re-imagine the current service delivery model through: (a) collaborating with the RRC interprofessional CSM team to establish the current state of service delivery (b) conducting a literature review of best practices in spasticity management and delivery of care (c) conducting an environmental scan of service delivery models of other spasticity management clinics and (d) conducting a Health Equity Impact Analysis (HEIA) to situate the proposed service delivery model within the broader community context. This information is then compiled to create recommendations depicting the potential future state of the CSM Program service delivery model utilizing the Hamilton Niagara Haldimand Brant Local Health Integration Network (HNHB LHIN) business case template. These recommendations are aimed at improving the quality and efficiency of patient access and care delivered by the HHS CSM Program.

Introduction
Spasticity is a chronic neurological condition that leads to stiff, tight or contracted muscles, and is prevalent across various conditions including stroke, brain injury, SCI, CP and MS (Royal College of Physicians, 2009). A multitude of impairments across physical and psychological domains are associated with spasticity, ultimately leading to decreases in role participation and reduced quality of life (Wissel et al., 2009). Within the Hamilton region, the population of adults aged 18 and above is 339,466 (Statistics Canada, 2006). Of these adults, it is estimated that 6,348 have been impacted by stroke, brain injury, SCI, CP and MS, and thus it is believed that approximately 2,543 adults are living with some form of spasticity (Allergan, 2010). These identified adults benefit from the services of the HHS CSM Program, which aims to improve the quality of care for patients challenged with spasticity. Individualized intervention is based on the needs and goals of each patient and may include: reducing pain and discomfort, increasing independence in self care activities, improving fit and function of orthoses, reducing caregiver burden and improving a patient’s overall function and quality of life (Hamilton Health Sciences, n.d.). Currently, the CSM Program struggles to implement a comprehensive, best practice service delivery model with timely patient access and flow. This project aims to re-imagine the current service delivery model through: (a) establishing the current state of service delivery (b) reviewing the literature for best practices (c) conducting an environmental scan and (d) conducting a HEIA to inform the ideal future state.

Methods
Objectives: (1) To establish the current state of service delivery offered by the CSM Program (2) To gain an understanding of best practices in spasticity management and delivery of care (3) To gain an understanding of the service delivery models of other spasticity management clinics (4) To ensure delivery of equitable health services within the broader community context. Current State: The current state of the CSM Program was elucidated through two informal group process mapping sessions with the allied CSM Program team, as well as three individual interviews with program physiatrists. As a result of these sessions and interviews, a process map was created outlining the current CSM Program service delivery model, with specific pain points and opportunities identified as a target for future recommendations. Literature Review: A systematic literature review was conducted utilizing relevant health databases (National Guideline Clearinghouse, National Institute for Health and Clinical Excellence, BMJ Best Practice, Cochrane Library, MEDLINE, EMBASE, PubMed) and the following keywords combined with “AND”: “spasticity management”, “spasticity”, “best practice”, “adult”. Environmental Scan: A meeting with representatives from a pharmaceutical company yielded contacts for spasticity management clinics in the region. From this, three spasticity clinics were contacted; one clinic was responsive and provided consultation over the phone. HEIA: A HEIA was completed according to the Ontario Ministry of Health and Long-Term Care Guidelines (2012). The CSM Program staff was consulted to ensure accuracy of the information included. LHIN Business Case: Information gleaned from the above efforts was compiled to complete the LHIN Business Case template in order to develop future recommendations for the CSM Program’s service delivery model.
Results

Current State: The CSM Program consists of eight clinics staffed individually by eight physiatrists, one 1.0 full-time equivalent (FTE) registered nurse (RN), 0.3 FTE occupational therapists (OT) and 0.3 FTE physiotherapists (PT). At the program’s inception in 2013, bolus start up funding was supplied by a pharmaceutical company. From 2014-2017, third party funding continued to support the operations of the CSM Program. That third party funding ended April 1st 2017. Currently, the program is being funded by the RRC’s outpatient budget, though this is not sustainable. Within the clinics, mixed musculoskeletal and spasticity patient populations are served five full days per week by the physiatrists and RN simultaneously. Three OTs and three PTs are available to support the clinics Tuesday, Wednesday and Thursday mornings, working in mixed OT/PT teams of two. As a result, the program struggles to implement standardized and comprehensive spasticity management care, as patients only have access to OT and PT during three of eight physician clinics. Literature Review: The management of spasticity has garnered more attention in the literature due to the significant impacts it has on individuals with various conditions. It is now widely accepted that the potential development of spasticity be assessed in patients with stroke, brain injury, SCI, CP and MS due to its high prevalence (Elbasiouny et al., 2016; Hebert et al., 2016; Ontario Neurotrauma Foundation, 2016). Treatment strategies have increased in complexity along with enhancement in the understanding of the pathology of spasticity, with the mainstay of treatment consisting of a combination of pharmacological and nonpharmacological approaches, including: active and passive physical treatments (exercise and stretching), splinting and/or serial casting, oral medications, chemodenervation and invasive treatments such as intrathecal baclofen pumps and other surgical procedures, in some cases (Elbasiouny et al., 2010; Hebert et al., 2016; NICE, 2016; Ontario Neurotrauma Foundation, 2016). This best practice approach includes allied health, as well as the CSM team for their ongoing support and research. Specifically, an influx in sustainable funding, referral sources from the community, experienced allied health staff and widespread provision of spasticity education are presented as vital to the success of pre-existing spasticity management clinics. HEIA: The CSM Program provides services in an equitable fashion to all patients regardless of social, economic and environmental conditions in order to mitigate health disparities. LHHN Business Case: Two recommendations were generated for presentation to RRC’s senior leadership. The first recommendation consists of implementation of a new clinic model that runs three full days per week serving solely spasticity patients supported by the current staffing structure. The second recommendation proposes implementing the aforementioned CSM model utilizing a new staffing structure of three to six physiatrists and the introduction of 0.6 FTE: business clerk, OT, PT and RN.

Conclusions

Completion of the LHIN Business Case illustrated the potential for the CSM program to re-imagine its current service delivery model. Consideration of the second recommendation allows the CSM Program to enhance the quality and efficiency of patient care by implementing a comprehensive, best practice service delivery model with enhanced patient access and flow. As a result, the RRC will be better able to serve the population of adults experiencing spasticity within the Hamilton region.

Acknowledgements

The authors would like to acknowledge Rebecca Fleck, as well as the CSM team for their ongoing support and valuable input. Additionally, representatives from Baycrest Hospital’s Assistive Technology Clinic and Allergan are acknowledged for their willingness to contribute to this project.

References

Instilling Empathy: Evaluation of CAST Canada’s Workshop on Trauma

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Introduction: Come and Sit Together (CAST) Canada, established in 2003, is an organization founded by Tom Regher, which runs educational opportunities for helping professionals in health and social services who often work with individuals who have been exposed to complex trauma. Becca Partington, director of operations, coordinates all CAST Canada events. The Trauma Essentials workshop is a 6-hour introductory workshop that utilizes discussion, visual aids, tools, and reflective learning to explore topics of trauma, loss, and unresolved grief. The aim of this project was to evaluate the impact of the Trauma Essentials workshop and the extent to which it instilled empathy and confidence among service providers.

Literature Review: Research in the area of trauma-informed service provision suggests that all service providers could benefit from introductory information about trauma, in order to become more sensitive to and reduce the chances of re-traumatizing consumers who are seeking services (Harris & Fallot, 2001). Literature suggests that the most powerful form of trauma training comes from hearing the lived experiences of those who have survived trauma (Harris & Fallot, 2001). Further, the literature around teaching empathy and enhancing sensitivity in health professionals suggests that multimodal approaches including audio-visual technology, role modeling, observation, role playing, discussion and debriefing are some of the most effective strategies (Berkman & Rutchick, 1987; Shapiro, 2002).

Methods: The primary method of gathering data from CAST Canada workshop participants was via a cross-sectional survey design. The survey consisted of both short-answer and five-point ordinal responses ranging from “Not at all” to “Extremely.” This scale was used to increase the reliability of the measure (Streiner, Norman, & Cairney, 2014). The authors utilized LimeSurvey, an open source survey software, to create and host the online survey, as it was appropriate for cross-sectional data, and compliant with the Hamilton Integrated Research Ethics Board (HiREB) and McMaster Research Ethics Board. Feedback from HiREB was sought in order to ensure ethics were not required for this project. The survey questions were developed in consultation with the research team. Once finalized, the survey link was emailed to past workshop participants (n = 797) on April 9, 2017, and participants were sent two email reminders prior to the survey closing on April 28, 2017. The online survey was then adapted into a paper version, which was distributed by the authors to participants (n = 17) who attended the Trauma Essentials workshop on April 28, 2017. All survey results were exported and entered into Excel, in which categorical responses were coded into quantitative values to calculate basic descriptive statistics, including mean, median, and standard deviation. The frequency and relative frequency of the categorical responses were calculated in order to display the data in graphic representations.

At the end of the survey, participants were invited to participate in a follow-up interview consultation about their experience. Of those who were interested (n = 14), 9 were purposefully contacted, and 4 responded and participated in a telephone interview. Following all data collection, each author utilized a systematic approach to analyze qualitative data obtained from written survey responses and key informant interviews. Qualitative data was categorized, and key themes and subthemes supported by meaningful quotes emerged. Triangulation and an audit trail were utilized to enhance credibility and dependability of these results (Houghton, Casey, Shaw, & Murphy, 2013).

Results: Response rates for online and paper surveys, and key informant interviews were the following: 5%, 100%, and 44%, respectively. Respondents were helping professionals who attended the workshop up to 6 years prior to survey completion. Based on a thematic analysis of short answer survey responses and telephone interviews, three key themes were extracted. The first theme, new learning for some, but not for all, emerged as some respondents stated they left the workshop with no new learning. Others stated they retained new information regarding the following: types and impacts of trauma, approaches,
Instilling Empathy: Evaluation of CAST Canada’s Workshop on Trauma

practice skills and tools, and new perspectives and understandings of trauma. Quantitative data indicated that 94% of paper (n=17) and 78% of online survey respondents (n=27) felt moderately-extremely more effective in managing challenging situations with clients. The second theme, facilitators and barriers for applying workshop content, emerged as respondents described factors that impacted their ability to implement workshop content. These factors included the following: practice constraints, client complexities, location of and attendees at the workshop. Quantitative data indicated that since the workshop, 86% of paper survey respondents (n=15) intended to change their practice, while 71% of online survey respondents (n=27) moderately-extremely feel they changed their practice. The final theme, “I would like to see a workshop that...” and other recommendations moving forward, emerged as respondents provided insight regarding workshop improvement, and personal professional development. Topics that arose included: workshops building on trauma essentials, more application, environmental changes, debriefing, expansion of topics covered, and tailoring the workshop to location and attendees.

Discussion and Limitations: Based on the descriptive and thematic analyses of data the authors created the following recommendations for CAST Canada Trauma Essentials workshops: 1) Tailor workshops to audience and location, 2) Use relevant and effective marketing strategies, 3) Include more opportunity for audience-presenter dialogue, interaction, and application of practical skills, 4) Promote an accessible and inclusive environment, 5) Include continuing education information. Although the results are useful in terms of providing meaningful recommendations to improve CAST Canada’s workshop, several methodological issues must be acknowledged. At the participant level, a low response rate of 5% for the online survey, volunteer bias, social desirability bias, and recall bias are all challenges with survey methodology which may have impacted the findings. Sampling error may have occurred in the selection of the key informants, and the authors’ own biases and experiences of the workshop may have influenced their interpretation of the findings, reducing the confirmability of the results.

Conclusion and Future Directions: Trauma-informed care is an approach that should be applied by all service providers, including occupational therapists (OTs), when working with trauma survivors. As OTs use occupation to enable clients to achieve manageable goals, live in the moment, and fill their day with meaningful activity, they are well-positioned to work effectively with this population (Bulk, 2015). In implementing the proposed recommendations, CAST Canada will improve their educational workshops to further enable the understanding of trauma and positively impact the practice of helping professionals.

Acknowledgements: We would like to thank Tom Regehr and Becca Partington for their passion and inspiration, and for trusting us in evaluating their workshop. We offer thanks to Rebecca Gewurtz for her guidance and support throughout the project. We would like to sincerely thank all participants who took the time to provide their feedback and share their insights.

References
Abstract: The purpose of this research is to map the experiences of individuals with mental illness as they move through provincial income and employment support programs in Ontario and Nova Scotia, namely the Ontario Disability and Support Program (ODSP) and Employment Support and Income Assistance (ESIA). Policies relevant to the support systems of interest were reviewed and seven key informant interviews were conducted and analyzed using a descriptive qualitative approach to develop four primary themes that informed the construction of process maps for ODSP and ESIA. Various clinical and system level implications emerged from these four themes.

Introduction and Literature Review: Mental illness is one of the leading causes of new claims for disability benefits (Organization for economic Co-development, 2012). However, there is minimal understanding of how benefit systems could be structured to better support and meet the needs of those with mental illness (Bond et al., 2001). There is a need to better understand how the various systems work in conjunction with each other, including how they interact and overlap. This type of analysis will enable the identification how individuals move through the disability benefit systems and gaps that exists from the perspective of those who rely on the system to meet their income and employment support needs.

Purpose: The purpose of this research is to map the disability benefit systems and the experiences of those moving through these systems in order to identify issues related to coverage, access, and flexibility. These issues will inform policy recommendations to support system improvements. Drawing on a human rights perspective, the following research question guided this work: What are the experiences of disabled workers who have mental health problems in Ontario and Nova Scotia as they interact with ODSP and ESIA?

Methods: Prior to starting this project other team members completed policy reviews. Although the student occupational therapists (SOT) were not involved in this process, recruitment of the seven participants was based on the issues identified in this review. Participants were invited to take part in this study and provided informed consent to participate in telephone interviews. Participants included two ODSP recipients, one ODSP caseworker, two ESIA recipients, and two ESIA case-workers. Team members conducted semi-structured interviews with each participant, which were transcribed verbatim. The SOT then coded the interviews in Dedoose. Analysis was guided by the principles of constructivist grounded theory to develop themes that further informed the development of the process maps.

Process Maps: Initial construction of process maps for ODSP and ESIA were based on the policy review. Using the online process mapping system draw.io, the SOT drafted process maps of both the ODSP and ESIA systems. The process maps depict the system structure and process, and allow for comparison of recipient experience with ODSP or ESIA (Object Management Group, 2009). Key informant interviews were used to inform how different workers with mental illnesses move through the ODSP and ESIA given various work, personal, disability, and social circumstances. This allowed for in-depth exploration of how individuals move through the systems, outlining both context and process (Flyvbjerg, 2011).

Findings: Four themes emerged from analysis of the key informant interviews:

1) Interactions between case worker and recipient – Participants described contentious relationships with their case-workers in the ODSP system. Conversely, the ESIA workers described efforts to engage recipients and develop rapport.
   a. About a OW caseworker “…she just laughed in my face and she never did say anything…”
   b. ESIA caseworker “…having that rapport with them and letting them know that it’s okay. And I know I mentioned this before but that’s the biggest thing..”

2) Financial Insufficiency of ODSP and ESIA – Participants across both systems described the insufficiency of the income support that they receive.
   a. ODSP recipient “…I’m only getting $1355 a month on ODSP and in
b. ESIA recipient “...because I don’t have the money…”

3) The processes and associated frustration in accessing ODSP and ESIA – ODSP recipients described their frustration trying to access services
   a. ODSP recipient “It was frustrating you know like it was frustrating because I’d be like well the hell with it…”
   b. ODSP recipient “I think that ODSP has tried to and succeeded at bringing me to my knees…”

4) ODSP and ESIA inherent barriers to independence - Recipients cannot achieve financial independence or be independent of ODSP or ESIA due to inherent barriers of ODSP and ESIA
   a. ODSP recipient “basically, if you’re making $10 an hour, you’re making $5 an hour on ODSP.”
   b. ESIA case-worker “...80% of the people who are on assistance ... had already been on before. So only 20% are like those new people coming in”

Discussion & Clinical Implications: Through the process maps created, it appears that applying for, being accepted, and then receiving ODSP or ESIA should be straightforward. However, findings from the interviews described contentious interactions as recipients moved through the systems. The recipients described turning to these systems for support, and service providers stress the importance of rapport building, yet such relationships were not always found. Recipients expressed their extreme frustration with navigating these systems all for what they described as “peanuts” in return. They were forced to jump through “hoops” to access services. It appeared that the complexities of having a mental illness created further barriers for these recipients as they interacted with the system such as stigma.

These findings have implications at the individual and systems levels. At the level of the individual health care provider (HCP) comes a need to acknowledge and understand both the facilitators and barriers that clients may face when interacting with ODSP and ESIA. This understanding will ensure that support is provided in an appropriate manner, especially to those with mental illnesses who face additional barriers. At the systems level, there is a need to advocate for the further development of ODSP and ESIA to help support recipients, especially those with mental illness.

Limitations: Limitations of this study include the small participant pool and the small sample of participants who were willing to volunteer their time to share their experiences. However, including the perspectives of both case-workers and recipients might help mitigate this bias. The SOT were not a part of the interview process, meaning key information that might have informed this paper could have missed due to inability to ask follow-up and clarification questions.

Conclusion: The relationship between a disability support recipient and their case worker colours their experience as they move through the various levels of the support system. Regardless of the nature of the relationship, recipients with mental illness appear to experience significant challenges meeting their financial needs, frustration at the process in accessing such support, and system level barriers that prevent them from achieving economic independence and stability. Challenges interacting with case-workers and accessing services within the system should be addressed in order to better support recipients. Overall an overhaul of ODSP and ESIA is warranted in the near future to help support those with mental illness as they access and experience ODSP and ESIA.

References
Occupational Therapy in Workplace Mental Health: A Provincial Survey
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Abstract
Occupational therapists (OTs) have the potential to make a key contribution to the field of workplace mental health (WMH), yet, little is known about the profile of therapists providing these services in Ontario. The purpose of this study was to explore the current practice, education, and support needs of Ontario-based OTs practicing in WMH. An online survey was completed by 93 participants, and 10 therapists participated in follow-up focus group discussions of the survey findings. Analysis of the survey and focus group findings led to the identification of three key issues: (1) Occupational therapy (OT) in WMH is complex, (2) Training and resources are required to build the competence of therapists in this area of practice, and (3) Advocacy is needed to raise the profile of OT in WMH. Recommendations were developed from this data to inform strategic directions, which will guide the growth of OT in this important practice area.

Introduction and Literature Review
WMH is a vital public health issue. The economic impacts are staggering, with mental health conditions among working-age Canadians costing over $20 billion per year in lost labour force participation. Despite recent developments such as the National Standard for Psychological Health and Safety (Canadian Standards Association, 2013), a recent survey of 239 Canadian employers found that few (39%) had implemented a mental health strategy (Chenier, 2016). OTs have the potential to make an important impact in WMH, from organizational interventions promoting psychological wellbeing to individual strategies related to return to work. There is a growing base of evidence supporting the impact of workplace interventions on reducing symptoms and improving occupational outcomes (Joyce et al., 2016), yet, little is known about the approaches and interventions actually used in practice by OTs. Thus, this study was undertaken to learn about the current practice, challenges, and support needs of Ontario-based OTs practicing in WMH.

Methods
This mixed-methods study utilized an online survey and focus groups to explore the experiences and perspectives of OTs in WMH. Survey and focus group recruitment was conducted primarily through email invitations to members of the Ontario Society of Occupational Therapists. There were 93 participants who completed the survey, and 10 participants included in the focus groups. The online survey included 23 questions about the current role of OTs in WMH, as well as their perceived challenges and support needs. Descriptive statistics were used to explore practice trends and beliefs. Additional analyses compared differences in responses based on practice context (private versus public) and experience in WMH. The follow-up focus groups were designed to explore identified issues in more depth. Content analysis of the focus group data led to the identification of trends. Key issues combined the survey and focus group results, and recommendations for change were developed.

Survey Results
Current practice profile: Approximately one third of participants (30%) reported WMH as part of their practice for more than 10 years. Participants practiced in both private (42%) and public (39%) contexts. Most worked in clinical roles (84%) with individual clients (78%), though some had workplaces as clients (12%). Typical referral sources were healthcare programs (56%), insurers (49%), self-referrals (26%), and employers (21%). Nearly all participants provided multiple services, the most common being return to work (67%), reactivation (60%), and functional cognitive assessment (53%). Varied assessments were used by OTs. Challenges and barriers: Various challenges and barriers to WMH practice were identified including limited time (46%), limited funding (42%), limited training (37%), role overlap (35%), and limited awareness of the OT role (35%). Significantly more participants working in public contexts felt that low value placed on mental health was a barrier, compared to those working in private contexts $\chi^2 = 6.19(df=1, N=74)$, $p = .013$. Significantly more participants that had less than 10 years of WMH experience felt that limited training was a barrier, compared to those with more than 10 years of experience $\chi^2 = 8.88(1, N=92)$, $p = .003$.

Resources: Evidence-based and best practice reviews, online webinars or courses, resource lists, in person courses or workshops, community of practice, and mentorship were all resources rated as important. Position statements were rated as being neither important nor unimportant. Participants less experienced in WMH perceived evidence based practice reviews to be significantly more important than participants with more experience ($U = 637$, $p = .042$, $r_s = .25$).

Education: Continuing education on the subjects of accommodation and stay at work strategies, mental health promotion, return to work initiatives, WMH training, understanding legislation and systems, consultation, supported employment, disability case management, and vocational preparation were perceived to be helpful. OTs working in the private context perceived accommodations to be significantly more helpful than OTs in the public context ($U = 411$, $p = .004$, $r_s = .36$), yet OTs in the public context perceived supported employment to be significantly more helpful ($U = 506$, $p = .039$, $r_s = .26$). Participants less experienced in WMH perceived accommodation and stay at work strategies ($U = 605$, $p = .013$, $r_s = .30$), mental health promotion in the workplace ($U = 644$, $p = .048$, $r_s = .24$),
return to work initiatives \((U = 693.5, p = .048, \rho = .24)\), understanding systems \((U = 610, p = .026, \rho = .28)\), and vocational preparation \((U = 536.5, p = .005, \rho = .36)\) all to be more helpful than those more experienced in WMH.

**Supports**: Promoting OT, advocacy with the government, and education were perceived to be very important. Advocacy with employers and employment agencies, and networking opportunities were all perceived to be important.

**Focus Group Results**

Five trends emerged, depicting the role of OT in WMH.

1) **Diversity in roles and services**

Participants reported providing multiple diverse services. Roles often encompassed more than just WMH. “I can do accommodations, return to work, mental health promotion...expected that you can do all of these things.”

2) **Multiple stakeholders**

Focus group participants identified that in WMH there are many stakeholders, including employers and insurers, making it difficult to accommodate their many needs, “OT recommendations go through all those filters, the influence of OT gets diluted or distorted...”

3) **Poor availability of resources**

All participants identified limitations in resources specific to WMH practice, including OT-specific training, funding, and performance-based assessment tools. “Limited time is a factor...there’s varied priorities, and return to work often... falls at the bottom of the pile.”

4) **Lack of mentorship and networking opportunities**

Participants stated that those new to WMH could benefit from mentorship and networking opportunities, yet these are not readily available or funded. “Having somebody mentor you through these processes can be really helpful to learn.”

5) **Limited awareness of the occupational therapy role**

Participants identified the need for advocacy to raise the profile of OT in WMH to get stakeholder buy-in. “…advocacy and education to government policy makers and the rest of them will follow suit.”

**Discussion**

From the amalgamated survey and focus group results, three key issues for reflection and action emerged.

1) **OT in workplace mental health is complex**

OTs practice in diverse roles, contexts, and provide varied services. OTs newer to WMH often feel that they do not have adequate training, which may be due to the complexities of WMH practice. Preparation is needed, not only for current roles, but also for emerging roles related to health promotion and organization-level consultation.

2) **Training and resources are required to build the competence of OTs in workplace mental health**

Regardless of the practice context, OTs report many barriers to their WMH practice. While many resources and educational opportunities were seen as important by survey participants, access to these is difficult, due to funding and time constraints, or a lack of appropriate resources. Few opportunities currently exist for networking and mentorship.

3) **Advocacy is needed to raise the profile of occupational therapy in workplace mental health**

Limited awareness of the OT role and role overlap were identified as key barriers for many participants. Employers may not be aware of, or understand, the value of OT. Interventions that OTs provide have been shown to be effective in addressing WMH. Advocacy is needed with employers and other decision-makers to establish our credibility and role in this evolving area of practice.

**Conclusion and Recommendations**

In conclusion, the expanding role of OT in WMH offers many opportunities for practitioners, yet we also have the responsibility to build our competence, credibility, and profile as professionals and individuals. The following recommendations were developed to guide this growth.

1) Build a strong network of OTs in the WMH field.
2) Develop a framework to inform priority areas for training.
3) Develop OT-specific workshops or training opportunities (e.g. navigating systems, assessment and intervention).
4) Build mentorship opportunities.
5) Promote the OT role in WMH outside the profession (e.g. attend human resource conferences).
6) Identify gaps for future research and development, related to evidence-based assessment tools.

**Strengths and Limitations**

This was the first study to explore the OT role in WMH in Ontario. Triangulation of data methods and sources strengthens the credibility of the findings. It should be noted that this is a cross-sectional study with a response rate of 24%, and as such, it may not be representative of all Ontario OTs practicing in WMH. Additional research will be required to track changes in WMH practice over time.

**References**


Montessori-Based Intervention for Dementia Care in a Hospital Setting

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Abstract

The goal of the current research project was to examine whether implementing Montessori-based activities in a hospital setting would reduce responsive behaviours in patients with dementia. Ten participants were identified by staff for the research project and were observed for 15 minutes before and after participating in the Montessori-based activities. Using paired t-tests, it was found that there was a significant difference in the scores for responsive behaviours before the intervention ($M = 17.10$, $SD = 10.51$) and after the intervention ($M = 9.80$, $SD = 8.05$), $t(9) = 4.17$, $p = .002$. Additionally, through qualitative observations, it was found that the level of cognitive functioning impacted participants’ engagement in the Montessori-based activities. The results suggest that participation in the Montessori-based activities helped to reduce the occurrence of responsive behaviours following the intervention; however, level of cognitive function was observed to impact the level of engagement in the activities.

Discussion of the results will focus on the feasibility of the protocol in a hospital setting and how best to implement the intervention to ensure the appropriate population is benefitting from the activities.

Introduction and Literature Review

In 2012, it was reported that 747,000 Canadians were living with a form of cognitive impairment or dementia (Wong, Gilmour, & Ramage-Morin, 2016). In 2010, it was reported that over 500,000 Canadians were living with a form of dementia alone (Wong, Gilmour, & Ramage-Morin, 2016). These numbers are expected to rise with the aging population, which raises concerns about how to best manage the disease including treatments and therapies for responsive behaviours. Previous research has focused on the effectiveness of Montessori-based activities on engagement and affect in long-term care facilities. However, the current literature does not explore whether Montessori-based activities are effective in reducing responsive behaviours in patients in hospital settings.

The primary purpose of this research project was to examine whether implementing Montessori-based activities in a hospital setting reduces responsive behaviours in patients with dementia. This project aimed to explore the feasibility of implementing Montessori-based activities in a hospital setting.

Methods

**Design:** A before and after, non-randomized single group study design was applied using both a quantitative and qualitative behavioural checklist form to capture the participants' responsive behaviours pre- and post-intervention.

**Participants:** 10 participants with mild to severe dementia (5 male, 5 female) were identified by staff for this research project. Ages ranged from 61 to 90 years ($M = 82$, $SD = 8.82$).

**Data Collection:** Participants were observed and responsive behaviours were documented using an original and adapted responsive behaviours checklist. The checklist included 29 items, 6 domains (emotional behaviours, vocal behaviours, cognition, physical aggression/non-aggressive behaviours, inappropriate sexual behaviours, and wandering behaviours). Responsive behaviours were scored on a Likert-scale from 0 (none) to 3 (severe).

**Procedure:** Participants were recruited through staff based on cognitive function and responsive behaviours. Participants were observed for 15 minutes prior to the Montessori Methods intervention and observed for 15 minutes following the implementation of the intervention. Behaviours were observed and recorded from a distance without interacting with the participant. Following the 15-minute observation period, participants engaged in 15 minutes of Montessori-based activities and were observed for another 15-minutes post-activity.

**Data Analysis:** A concurrent triangulation, mixed methods design was used for the current research project. Quantitative data was used to examine changes in responsive behaviours before and after the implementation of the intervention. Qualitative data was collected through written observations.
field notes from observing participants' behaviours before and after the implementation of the intervention. Before and after data was analyzed using paired t-tests with SPSS software to analyze scores.

Results

**Quantitative:** The first hypothesis was supported as there was a significant difference in the scores for responsive behaviours before \( (M = 17.10, SD = 10.51) \) and after the intervention \( (M = 9.80, SD = 8.05) \), \( t(9) = 4.17, p = .002 \). The mean decrease in responsive behaviour scores was 7.30 with a 95% confidence interval ranging from 3.34 to 11.26.

**Qualitative:** Based on the observations and field notes, participants who presented with more severe cognitive impairment and increased responsive behaviours were less engaged in the Montessori-based activities. Participants with more severe cognitive impairment were also found to have higher baseline responsive behaviours including increased agitation and irritability in comparison to participants with more mild-moderate cognitive impairments.

Discussion

The number of responsive behaviours had a statistically significant decrease following engagement in Montessori-based activities. This research project demonstrated that Montessori-based activities could be feasibly implemented in a hospital setting.

The results indicate that Montessori-based activities have the potential to decrease responsive behaviours by increasing engagement and participation in activity.

Future Directions

Future studies should focus on identifying the severity of cognitive impairment in participants using standardized assessments and comparing the effects of Montessori-based activities on responsive behaviours in various levels of cognitive impairment. Future research should also aim to examine long-term outcomes by observing the effects of engagement for longer periods of time.

Acknowledgements

The authors would like to extend their sincere gratitude for the support of their supervisors, Tanya Greve, OT Reg. (Ont.), Patricia Medeiros, OT Reg. (Ont.) and Jennifer Michetti, OT Reg. (Ont.) for offering their extensive clinical expertise.

References


Let's Talk About Sex: Post-Stroke Recovery

Authors: Bennett, E. (Co-PI) Student Occupational Therapist (OT), Ashley, M. (Co-PI) Student OT
Institutional Affiliations: McMaster University; Hamilton Health Sciences: St. Peter’s Hospital.

Abstract

Introduction: An OTA/PTA and OT at St. Peter’s Hospital (SPH) identified a gap in services for post-stroke clients in addressing sexuality and intimacy (SI). The research team developed the following questions: Are healthcare providers (HCPs) on the Restorative Care Unit (RCU) at SPH addressing SI with individuals post-cerebrovascular accident (CVA)?; How can HCPs improve the quality of care specifically in relation to SI for clients post-CVA? Methods: This interpretive description qualitative study involved a focus group with HCPs (n=17) and interviews with clients (n=10). The Co-PIs explored both perspectives to understand the experience of how SI is relevant during slow-paced rehabilitation. Analysis/Results: Through coding and thematic analysis, four key themes were identified. Three themes reflected both HCP and client data: (1) Lack of Knowledge, (2) Level of Comfort Impacts Action, and (3) Not a Priority. One additional theme was derived from the client perspective: (4) Stroke Impacts Life. Fifteen recommendations were developed to improve the quality of care on the RCU.

Introduction and Literature Review: In Canadian adults, CVA is the primary cause of disability and impacts sexual health, which affects quality of life and is an integral part of individuals’ self-concepts (Guo et al., 2015). There are biological and physical impacts on sexual function; however, these have psychosocial implications such as reduced self-esteem and impaired relationships (Hall, 2013). Overall, literature suggests that sexual activity and sexual satisfaction are markedly reduced following strokes in both males and females (Hall, 2013).

The Canadian stroke best practice recommendations: managing transitions of care following stroke (Cameron et al., 2016) recommends that HCPs provide education about SI and tailor the information to the clients. Despite these best practice recommendations, SI is currently not prioritized and is rarely addressed in practice (Guo et al., 2015). Instead, there is a focus on maximizing and restoring function, remediating deficits, and providing education about compensatory strategies (Brandstater & Kim, 2016).

There is a lack of consensus regarding the following areas of practice: whose responsibility it is to address SI with clients; uncertainty about when during rehabilitation it would be best to address SI; clients not being aware of the scope of the healthcare supports available; general discomfort in discussing SI; and HCPs feeling that they are not adequately prepared to address sexual concerns (Richards et al., 2016). This research project aims to better understand why that is the case and to provide recommendations to improve the quality of care at SPH to align with best practice guidelines.

Methods: This interpretive description qualitative study used a combination of focus groups and semi-structured interviews. Ethics approval was obtained from the Hamilton Integrated Research Ethics Board (HiREB) and informed consent was obtained. The researchers conducted a focus group with HCPs from various fields (n=17) to gather their perspectives of SI and how it is currently addressed at SPH. The Co-PIs conducted individual interviews with RCU clients with primary diagnoses of CVA (n=10). Recruitment: All RCU healthcare staff were invited to participate in the focus group via staff email. Post-CVA clients were approached by the LPI and/or the Co-I. The focus group and interviews were audio recorded and transcribed. Researchers engaged in clinical immersion and used field notes, reflective journals, and member-checking. Analysis: Interpretive Description philosophy promotes inductive analysis of data, as it facilitates discovery of meaningful analytic interpretations. The Co-PIs independently read and coded the data and agreed upon codes through discussion. The codes were organized and defined within a code-directory. Co-PIs engaged in discussion to derive themes from the codes and to develop deeper meaning of the overall findings through an iterative process. The transcripts were then re-examined to identify salient quotations and recommendations.

Results/Discussion: Three themes reflected both HCP and client data: (1) Lack of Knowledge, (2) Level of Comfort Impacts Action, and (3) Not a Priority. One additional theme was derived from the client perspective: (4) Stroke Impacts Life.
(1) Lack of Knowledge: Clients expressed a lack of knowledge about the implications of stroke in general, as well as a lack of knowledge regarding the roles and scopes of their HCPs. Clients shared many questions and expressed a desire for more information. HCPs expressed a lack of practice knowledge regarding stroke and felt they required additional education and training to feel competent to address SI. (2) Level of Comfort Impacts Action: Comfort was complex and multifaceted. Perceived comfort of HCP and client, from both perspectives, interacted with gender and cultural dynamics, personality factors, and power differentials. The RCU environment was also influential, as a lack of privacy for discussion and minimal opportunity to discover one’s own sexual functional abilities were often expressed. (3) Not a Priority: Client expressed mobility and functional recovery as priorities during rehabilitation. Some expressed ageist attitudes about SI. The only clients to address SI were men with erectile difficulties post-stroke. HCPs also did not prioritize SI, stating they have too much to complete throughout the day and focus on maximizing functional independence. (4) Stroke Impacts Life: This unique client theme reflects the difficulty clients experienced in accepting the magnitude of the impact that stroke had in their lives. The importance of relationships was commonly noted. Overall, this theme recognizes the life-altering effects of stroke.

Conclusions/Future Directions: HCPs on the RCU at SPH are currently not addressing SI with clients post-CVA for a multitude of reasons. Client participants expressed that SI is not a primary goal during rehabilitation but that having general information and resources about where to receive support would be beneficial. Overall, there is an immense lack of knowledge relating to stroke and the implications on function, including SI, from the perspective of clients. HCPs would benefit from further training and education about how to appropriately address these concerns within the slow-paced rehabilitation context. The RCU staff have been provided with fifteen implementable recommendations to improve the quality of care and enhance practice.

Recommendations

<table>
<thead>
<tr>
<th>Lack of Knowledge</th>
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<tbody>
<tr>
<td>1. Provide a pamphlet with education about the impact of stroke</td>
</tr>
<tr>
<td>a. Include sub-section with information about sexuality and intimacy</td>
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<tr>
<td>2. Create a post-stroke myth-busters educational poster to put up in the unit</td>
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<tr>
<td>3. Offer education session about sexuality and intimacy</td>
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<tr>
<td>4. Increase educational and training opportunities for HCPs</td>
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<tr>
<td>5. Develop a document with community sexuality and intimacy resources and referral sources</td>
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<tr>
<td>6. Integrate sexuality and intimacy into HCP role descriptions in RCU information package</td>
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<table>
<thead>
<tr>
<th>Level of Comfort Impacts Action</th>
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<tbody>
<tr>
<td>7. Get to know the client</td>
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<tr>
<td>8. Provide a question box</td>
</tr>
<tr>
<td>9. Offer one-to-one private discussions with opportunity for partner involvement</td>
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<tr>
<td>10. Designate a private space</td>
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<tr>
<td>11. Announce when entering one’s room/opening curtains</td>
</tr>
<tr>
<td>12. Streamline admission assessments and explicitly integrate into initial intake assessment</td>
</tr>
<tr>
<td>13. Address at admission, prior to therapeutic leaves of absence, and prior to discharge</td>
</tr>
<tr>
<td>14. Document HCP-Client discussions about sexuality and intimacy</td>
</tr>
<tr>
<td>15. Designate a sexuality expert (this individual should not provide daily personal care)</td>
</tr>
</tbody>
</table>

Future research should address the outcomes of the implemented recommendations, client-partner perspectives, and the longer-term implications of addressing SI during rehabilitation.

The RCU OT team intends to implement practice changes based on these recommendations and to share the results with other organizations. This will inform post-CVA practice in other slow-paced rehabilitation facilities. This study demonstrates how OT, as visionary leaders with a holistic and client-centered approach, can foster improvements in practice.

Acknowledgments: We extend thanks to the following individuals for their contributions and support throughout our study: Brenda St. Amant, Clinical Manager of the RCU; Carol DeMatteo and Bonny Jung, Faculty Advisors at McMaster University; Esther Coker; and the entire RCU staff and clientele, especially those who participated in our study. Special thanks to Susan Pettit and Sarah Ferguson.

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References


Abstract. A program evaluation was conducted at the Hamilton Program for Schizophrenia (HPS) to determine if the BrainFx 360 assessment is sensitive to changes in neurofunction following Cognitive Adaptation Training (CAT) for adults with schizophrenia. Neurofunction is defined as an individual’s everyday functioning as impacted by their neurological/cognitive status (BrainFx, 2017a). Two participants completed pre- and post BrainFx 360 assessments over a two-month period, during which they were also receiving CAT. Percentile ranks of both participants decreased by two in intermediate cognitive skill performance. Participants had different change trajectories of their percentile ranks (i.e. one increased, the other decreased) for foundational and complex cognitive skill performance, and executive functioning. The results are inconclusive as to whether BrainFX 360 is sensitive to changes in neurofunction, due to the small sample size, confounding variables, and concerns about the ecological validity of the assessment.

Introduction. Schizophrenia is commonly characterized by cognitive impairments, including deficits in memory, attention, and executive functioning, that impact everyday functioning and participation in daily activities of life (Draper, Stutes, Maples, & Velligan, 2009). To address these impairments in neurofunction faced by many of their clients, the HPS trained all of its case managers in CAT. CAT is an evidence-based intervention, specific to schizophrenia, that helps to improve individual’s’ everyday functioning through the use of environmental supports and cognitive compensatory strategies (Draper et al., 2009). Due to growing interest and use of BrainFx 360 in the mental health population (BrainFx, 2017b), this assessment was chosen as an outcome measure for this project. The BrainFx 360 is a tablet-based assessment developed in 2013 by two occupational therapists in response to need for an assessment that was functional, comprehensive, and sensitive to mild to moderate neurological impairments (BrainFx, 2017a). The purpose of this program evaluation was to determine if BrainFx 360 is a sensitive tool to changes in neurofunction as a result of CAT in adults with schizophrenia.

Literature Review. The BrainFx 360 assessment has primarily been studied within the brain injury population (Searles, 2015; Sergio, 2014). The use of BrainFx 360 in mental health populations, including individuals with schizophrenia, has not been documented in literature and is only beginning to be explored (BrainFx, 2017b). In contrast, CAT has been frequently cited in literature as beneficial in improving functional outcomes, decreasing symptoms and relapses for individuals with schizophrenia, and even leading to improved cognition (Velligan et al. 2000; Fredrick et al. 2015). For example, compared to treatments such as cognitive behavioural therapy for psychosis or standard psychosocial treatment, client’s receiving CAT show greater improvements in functioning (Velligan, Mahurin, True, Lefton, & Flores, 1996; Velligan et al., 2015).

Methods. A pre-posttest design was utilized to measure change in neurofunction over a period of two months, during which participants were receiving CAT. Four clients began CAT at the start of this evaluation, however only 3 consented to and completed pre-testing. BrainFx 360 assessments, lasting 90-120 minutes, were conducted by two student occupational therapist trained as Certified BrainFx Administrators. HPS case managers also completed the following assessments for all clients receiving CAT: Frontal Systems Behavioral Scale (FrSBe) and the Environmental and Functional Assessment (EFA). The FrSBe assesses and classifies individuals’ observable goal-directed behaviour and the EFA gathers information about the individual’s living environment, and the functional tasks they perform in their home. Upon completion of these various assessments, CAT interventions were implemented over the next two months to address functional issues that were identified collaboratively by clients and their case managers. Two clients completed the BrainFx 360 post-test; however, one client declined the post-testing due to personal and medical reasons. Both clients were female adults (ages= 58, 26) with schizophrenia, who were not participating in any formal intervention other than CAT during the two months. Both clients are living at home independently, with no formal supports needed.

Data analysis. The numerical BrainFx 360 assessment results for each client are computed automatically, and are presented in comparison with the results contained within the Living Brain Bank. The Living Brain Bank is a repository of BrainFx results from all individuals who have completed the assessment (approximately 1000 individuals at the time of this evaluation) and have agreed to their results being included in this bank. BrainFx 360 generates overall scores for the foundational, intermediate, and complex cognitive skill sections, as well as the specific scores for the subtasks in each section (Table 1). Scores are presented as a percentile ranking within the normative sample, and their proximity to the mean is visually presented.
Table 1. Cognitive skill examples based on category

<table>
<thead>
<tr>
<th>Skill category</th>
<th>Specific skills</th>
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<tbody>
<tr>
<td>Foundational</td>
<td>Sustained attention, immediate memory, simple problem solving</td>
</tr>
<tr>
<td>Intermediate</td>
<td>Selective attention, delayed memory, moderate problem solving</td>
</tr>
<tr>
<td>Complex</td>
<td>Divided attention, prospective or complex memory, complex problem solving, executive functioning</td>
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</tbody>
</table>

Results. Percentile rankings were compared between pre and post BrainFx assessments for each client. Statistical analysis was not completed due to the small sample size. Changes in rankings within the cognitive skills sections of the assessment did not show a consistent trend when participant’s scores were compared, except for a small decrease (-2) in intermediate cognitive skill performance for both clients. For the remaining cognitive skill sections, the first participant’s ranking increased post-CAT (foundational = +8, complex = +6), while the second participant’s decreased (foundational = -29, complex = -2). For executive functioning (within the complex cognitive skill section), the first participant’s ranking slightly increased (+4), but other’s ranking decreased by a large amount (-19).

Discussion. The results of this evaluation do not provide a clear answer as to whether BrainFx 360 is sensitive to changes in neurofunction following CAT. The variability within the results suggests that multiple confounding variables may have been influencing participants’ performance, including the following: differences in level of education, difficulties using the touch screen technology, and degree of follow-through with CAT interventions. There was little improvement in executive functioning, which is noteworthy considering that CAT targets this cognitive skill. This may reflect BrainFx 360’s poor sensitivity in detecting changes in neurofunction post-CAT, although the sample size is too small to make this conclusion with confidence. It may be that the compensatory environmental changes implemented through CAT do not necessarily generalize to improvements in the cognitive skills measured by BrainFx 360. Conversely, it may be that the weak ecological validity of some of the tasks included in BrainFx 360 did not allow for participants to demonstrate their improved neurofunction. Finally, it is possible that a greater length of time receiving CAT is required in order to see improvements in neurofunction as measured by BrainFx 360.

Implications and Future Directions. The BrainFx 360 assessment presents with questionable sensitivity to neurofunction after CAT implementation, with barriers to use including concerns about clinical utility and ecological validity. In particular, the length of the assessment and the potential for technological mishaps may be unsuitable within a busy clinical setting. However, BrainFx 360 does provide a comprehensive picture of a client’s cognitive skills, based on functional task performance, that is not as easily replicated through traditional pen and paper assessments.

As a result, it is possible that BrainFx 360 can be an unique and valuable assessment for HPS to use. However, it will be important for case managers to exercise their clinical reasoning when administering the assessment and interpreting the results. Further evaluation of the BrainFx 360 assessment is recommended. A longer evaluation with a larger sample size may produce results with increased validity and generalizability.

Acknowledgements. The authors would like to acknowledge Gord Hirano for his guidance during this project. Thanks are also extended to Milinda Alexander and Rachel Martini for providing additional assistance, and the BrainFx Support Team for their technical support throughout this project.

References


Implementing Organized Stroke Care Access Across Income Levels (OSCAIL)

Authors: Amy Chai and Samantha Tuohimaa (MSc. OT Candidates, 2017)
Project Supervisor: Jackie Bosch (PHD, OT Reg.)
McMaster University, School of Rehabilitation Sciences

Abstract
The OSCAIL project aims to implement key elements of stroke units in developing countries, where organized stroke units do not exist. Guided by an implementation science framework, training modules are created to address the unique challenges and barriers in developing countries. Each training module targets one key element, and are designed to train staff, family and patients.

Introduction
Stroke is one of the top three leading causes of death across both upper-middle and low and middle-income countries (LMIC; World Health Organization, 2015). While high quality evidence shows that organized stroke units are effective in improving patient outcomes, hospitals in LMIC often do not have the resources or infrastructure to deliver these services. This indicates the need for implementation research, which is the study of methods to promote the uptake of research findings or theory into practice, in order to address ‘real-world’ contextual factors not identified in the evidence (Eccles & Mittman, 2006). OSCAIL aims to determine if formal training on implementing components of stroke units can result in a change in stroke treatment behaviour. This pilot study involves an international, multidisciplinary team of leading experts in stroke care. A total of eight study sites are selected across four countries: Rwanda, India, South Africa, and Uganda will participate in a stepped wedge design pilot study. The team developed a ‘toolkit’ containing nine key elements of stroke care to help sites implement best practices. As student occupational therapists (OTs), our role was to use an implementation research framework to develop training modules on early mobility and multidisciplinary teamwork. We propose that training modules that use appropriate strategies to address unique implementation challenges and barriers can effectively increase the implementation of key stroke unit elements.

Process
Review of evidence. To establish foundational knowledge of best practices in stroke care, relevant literature identified by both the OSCAIL team and our own supplementary search was reviewed. Multiple high quality guidelines and studies were consulted to help structure training content. OSCAIL team members provided contextual information on challenges and barriers relevant to each study site.

Creation of training materials. To create a comprehensive set of training materials, we first developed a curriculum structure grid to outline learning objectives and to summarize recommendations identified through review of evidence. Training modules were then constructed in an easily modifiable PowerPoint format and were comprised of modified best practice recommendations based on LMIC challenges and barriers. Supplementary resources were subsequently created and include videos, documentation templates, one-page checklists and decision pathways.

Consultation with OSCAIL team. The OSCAIL team regularly reviewed the modules and supplementary resources throughout development. Frequent, on-going feedback was communicated through written email correspondence and bi-weekly Skype conference calls.

Revision of training materials. Feedback from team members was incorporated into revised versions of modules and resources. This emerged as an iterative process, where revised versions were then shared with the team for additional feedback and modifications.

Discussion
Key element selection. We recognized that most LMICs are not exposed to OTs, so we wanted to incorporate our unique OT perspective (e.g. through functional activities, client-centred care, etc.) in an easy to integrate manner. This was reflected in our decision to focus on the topics of early mobility and
multidisciplinary teamwork. In our modules, we emphasized functional activities and recovery, as well as client-centred care and collaborative healthcare approaches.

**Development challenges.** Langhorne and Pollock (2002) identify clinical guidelines for stroke care to be limited in their ability to provide tangible recommendations for implementation, particularly in LMIC where resources and infrastructure are limited. A variety of site-specific challenges were experienced throughout the development and revision of modules, and included: lack of generalizability of guideline recommendations to LMIC, cultural and language differences, limited resources (e.g. staff and hospital space), lack of education and training in stroke, limited access to online resources (e.g. training videos), and limited availability of research regarding implementing recommendations in LMIC.

**Addressing challenges.** We discovered that a systematic process to module development was crucial in creating modules that would effectively enhance knowledge translation and change behaviours. Some LMIC have access to stroke guidelines, but rarely implement recommendations because this “bench to bed-side” translation is often ineffective and inefficient (Pinnock et al., 2017). This highlighted the need for us to use an implementation research framework to tailor modules for LMIC. For instance, we used context-specific pictures relevant to each geographic area to acknowledge cultural differences. We developed videos to increase engagement, and one-page checklists and decision pathways to enhance knowledge translation and accommodate the busy workloads of health care providers in LMIC.

Feedback from team members, who had first hand experience of the challenges at each site, was an essential element in how we tailored training modules. On-going revision, along with the understanding that modules can be adapted to each site’s unique needs, ensured that site-specific challenges would be addressed. Working within OSCAIL’s large, diverse team often led to conflicting feedback and opinions in content development. However, this was salient in providing a broad perspective on both clinical and academic challenges related to implementation, as well as identifying and solving related issues. We recognize that training modules alone may not change the realities of stroke care practice in LMIC, but they are an important component of the bigger picture, and a valuable tool to develop. Lastly, evaluating the effectiveness of training materials will be an important step to further identifying site-specific needs and areas for modification. We recommend various output measures for evaluation, including number of times patients are mobilized throughout admission.

**Conclusion/Future Directions**

Understanding the realities of practice in LMIC and adapting best practice recommendations to reflect them is essential in generating sustainable improvements to stroke care. The next step for the project is to complete module development for the remaining key toolkit components. Once staff training begins at each site, further modification to account for cultural or language factors are recommended in order to ensure that modules are relevant and appropriate. This process allowed us to understand the challenges associated with implementing evidence into practice. We believe that further research into implementation of stroke units in LMIC are needed.

**Acknowledgements**

We would like to thank Jackie Bosch, the OSCAIL Team and McMaster University School of Rehabilitation Sciences for all of their guidance, assistance and support throughout this research project.

**References**


Abstract

Background: One of the most common deficits post-stroke is upper limb sensorimotor impairment, which significantly impacts a person’s ability to move and use their affected arm. However, there is a dearth of studies exploring patients’ and caregivers’ perspectives on the facilitators and barriers specific to participation in upper limb rehabilitation.

Purpose: To explore stroke survivors’ and caregivers’ experience of participating in upper limb rehabilitation programs, and to identify and explore the barriers and facilitators to participation.

Design: An interpretive description methodology was used to guide this study.

Method: Semi-structured interviews were conducted with 11 participants: 7 stroke survivors and 4 carers. The interviews were audio-recorded and transcribed. An aphasia-friendly interview guide was developed to be inclusive of persons with aphasia.

Results: Five preliminary themes were identified using student researchers’ field notes and reflective journals to describe the researchers’ experiences of conducting interviews with this population: 1) Taking Your Therapist Hat Off, 2) Practice Effects and Confidence, 3) Communicating Through Aphasia, 4) Power Dynamics, and 5) Emotional Regulation and Objectivity.

Future Directions: The preliminary findings demonstrate the potential of qualitative research studies to give voice to participants with aphasia through the use of supportive communication techniques and aphasia-friendly materials. At the conclusion of data collection and analysis, identified themes may influence stroke rehabilitation and guide future research.

Introduction and Literature Review

Stroke has a profound effect on disability worldwide (WHO, 2011), with stroke-related global burden continuing to rise in terms of incidence, prevalence, disability, and mortality (Feigin et al., 2014). One of the most common deficits post-stroke is upper limb sensorimotor impairment, which significantly impacts a person’s ability to move and use their affected arm (Pollock et al., 2014).

The Canadian Stroke Best Practice Recommendations (Hebert et al., 2016) provide up-to-date and evidence-based recommendations for upper limb rehabilitation across the continuum of care. To date, several studies have sought to understand the facilitators and barriers encountered by therapists regarding implementation of these recommendations (Chen, Xiao, & De Bellis, 2016; O’Connell et al., 2001; White, Magin, & Pollack, 2009).

Qualitative studies that seek to understand stroke survivors’ lived experiences can provide rehabilitation professionals with valuable information regarding the challenges faced and the internal and external influences that affect participation in stroke rehabilitation (Atler, 2016). In upper limb rehabilitation, qualitative studies have explored facilitators and barriers for therapists implementing the Graded Repetitive Arm Supplementary Program (Connell, et al., 2014; 2016). Identified factors influencing participation in upper limb rehabilitation, included the role of family members and the prioritization of lower limb rehabilitation for discharge from hospital (Harris, Eng, Miller, & Dawson, 2009; Lincoln, Parry, & Vass, 1999).

To our knowledge, there is a dearth of studies exploring patients’ perspectives on the facilitators and barriers specific to participation in upper limb rehabilitation. The facilitators and barriers experienced by individuals receiving upper limb rehabilitation for stroke may impact rehabilitation outcomes, and thus require further delineation.

Research Question

What are the barriers and facilitators to participation in upper limb rehabilitation experienced by patients and their carers, while attending stroke rehabilitation?

Methods

Methodology: We conducted a qualitative study using an interpretive description framework to explore participants’ experiences in stroke rehabilitation for the upper limb and gain an understanding of the barriers and facilitators to participation. Interpretive description is a framework used to construct a representation of a subjective healthcare experience for the purpose of informing clinical care and research (Thorne, 2008).

Participants: Adults who were receiving hospital-based stroke rehabilitation for the upper limb and/or their caregiver. Participants were excluded if they had cognitive deficits impacting interviews, or were non-English speaking. A total of 11 participants were interviewed: 7 stroke survivors and 4 carers.

Data Collection: A semi-structured interview guide was developed based on the research question, literature review, and researchers’ prior knowledge in the area.
Clinicians from two main study sites at Hamilton Health Sciences provided input and feedback on the proposed interview questions. To be inclusive of persons with aphasia, an aphasia-friendly version of the guide and communication cards were developed. Semi-structured interviews were conducted by four student occupational therapists (OTs) in groups of two and were audio-recorded. Interviews were conducted at the site where the participants were involved in rehabilitation in a private, quiet room. Field notes and personal reflections were completed following each interview. Completed interviews were transcribed and reviewed for quality assurance (ongoing).

**Data Analysis:** Once all interviews are completed and transcribed, the data will be analyzed using an interpretive description framework. Since the study is ongoing and interviews have not been transcribed, the focus of our analysis is a description of our reflective journals and field notes. The process used included independent synthesis of reflections and then a round-table session to develop common themes.

**Ethics and Consent:** Approval was received from HiREB and informed consent was obtained from all participants.

**Results: Reflection Process**

The following 5 themes were identified from this process:

**Theme 1: Taking Your Therapist Hat Off:** Experiencing the paradigm shift from student OT to researcher was often challenging. Participants would express concerns and we would immediately think of solutions to address them but needed to remain in our researcher role.

**Theme 2: Practice Effects and Confidence.** For all student team members, this was the first time conducting qualitative interviews. As the interviews progressed, we gained confidence using the interview guide to facilitate a semi-structured interview.

**Theme 3: Communicating Through Aphasia.** Even with the aphasia-friendly interview guide and supported communication techniques, there was a steep learning curve completing open-ended interviews with individuals with aphasia. This process takes patience, understanding, and practice.

**Theme 4: Power Dynamics.** We recognized a power differential in the researcher-participant relationship. Participants viewed us as the experts and would at times seek our advice.

**Theme 5: Emotional Regulation and Objectivity.** Throughout the interviews, participants expressed emotions such as sadness or frustration in response to their rehabilitation. Holding our own emotions back, as interviewers, was sometimes challenging.

**Future Directions:**

**Implications for Stroke Rehabilitation**

This study has demonstrated that the inclusion of participants with aphasia is a possibility in stroke-related qualitative research. When interviewing persons with aphasia, it is best to be prepared with resources in place and to appreciate their level of ability. It is important to be aware of power dynamics that might exist in the researcher-participant relationship. Working to minimize this through rapport building and acknowledgement is imperative.

Depending on the results of the data analysis, identified themes have the potential to influence client care in stroke rehabilitation and guide future research in this area.

**Acknowledgements**

Thank you to staff and participants at Hamilton Health Sciences (St. Peter’s Hospital and the Regional Rehabilitation Centre). We are also grateful to Dr. Tara Packham & Dr. Jocelyn Harris for their continuous support and guidance throughout this process.

**References**


Wheelchair Skills Training for Spinal Cord Injury Rehabilitation
Casey Cadeau, Jacqueline Kirkconnell, Diana Herrington, and Rebecca Fleck

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We would like to thank our supervisors Diana Herrington and Rebecca Fleck for their support and guidance. We would also like to thank the spinal cord injury rehab team and survey participants for their contributions to this project.

Abstract
The purpose of this project was to examine the current state of wheelchair skills training at the Regional Rehabilitation Centre (RRC) at Hamilton Health Sciences (HHS) Spinal Cord Injury (SCI) Rehab Unit and determine areas of strength and potential improvement. Recommendations will be put forth to the spinal cord rehabilitation unit in order to improve the wheelchair skills training offered as part of the program. In order to establish the present practices for wheelchair skills training at HHS SCI Rehab a current state meeting was conducted. Additionally, an environmental scan was completed in order to determine the practices of wheelchair skills training nationally. The recommendations for the wheelchair skills training program at HHS SCI Rehab will draw from literature, an environmental scan and clinical reasoning.

Introduction
People who have experienced an SCI who are required to transition to a wheelchair as their primary means of mobility often experience a process as they are acquiring the necessary skills for everyday mobility where the wheelchair starts to become part of their identity (Papadimitriou, 2008). It is critical that rehabilitation professionals educate these clients on effective strategies to negotiate all situations they may encounter when using their wheelchair at home and in the community. It has been shown that educating clients on wheelchair skills prevents future health concerns and also reduces future participation restrictions (Morgan, Engsberg, & Gray, 2017).

Literature Review
A literature search was conducted to determine the current available evidence to support wheelchair skills training. Databases searched included CINAHL, Ovid MEDLINE, PsychINFO, Google Scholar (first 10 pages) and targeted searching which included the website publications from Dalhousie Wheelchair Skills Training Program website. A total of 63 articles were selected based on titled review. Based on abstract review 10 articles were selected for complete review.

It was discovered that there are standardized educational programs for teaching wheelchair skills. The gold standard is the Wheelchair Skills Training Program (WSTP) from Dalhousie University. It has been extensively researched and proven to increase wheelchair skills for new wheelchair users (MacPhee et al., 2004). Wheelchair skills have also been implemented using the WSTP in a group setting and discovered that this setting increased advanced wheelchair skills capacity and goal attainment (Worobey et al., 2016). These standardized programs are not frequently used in practice because of limitations of clinician’s time, resources and knowledge (Best, Routheir, & Miller, 2015).

Methods
Current State Meeting A current state meeting was conducted with the staff of the spinal cord unit at Hamilton Health Sciences. There they were asked about the current methods of administering wheelchair skills training and assessment of client’s skills.

Environmental Scan The focus of the environmental scan was to determine the level of clinician training, assessment and program implementation of wheelchair skills training in SCI rehab units nationwide. A survey was developed based on the survey created by Best et al. (2015), with contributions from Diana Herrington and Diana Fleck. The survey was administered to clinicians registered with the Rick Hansen Institute for Spinal Cord Injury or professional networks provided by HHS. The 29 question survey was generated using SurveyMonkey and emailed to participants.
Results

Current State Meeting: There was a lack of standardized administration of training or assessing wheelchair skills in the SCI unit at HHS RRC. It was also found that there was not designated wheelchair skills training sessions. Client wheelchair skills goals were discussed but were not recorded in a standardized way. Additionally, it was noted that there was a lack of a standardized training process for clinicians.

Environmental Scan: There were 16 clinicians who responded to the survey. It was discovered that 50% of clinicians used all or parts of the WSTP from Dalhousie. Additionally, 10 clinicians indicated they use the Wheelchair Skills Test to assess client’s wheelchair skills. There were 15 clinicians who indicated they spend 1-2 hours a week working on wheelchair skills. Of the clinicians surveyed, 25% reported they use a group format to teach their clients wheelchair skills.

Discussion

The recommendations made to the spinal cord unit of Hamilton Health Sciences is informed by the current available literature, the current state meeting, the environmental scan and clinical reasoning. The recommendations put forth are as follows:

1. **A standardized checklist**, this was recommended based on the understanding that formal outcome measures support evidence based practice, and it was indicated to be clinician’s preference in the current state and survey findings.

2. **Designated wheelchair skills training sessions**, as literature and the environmental scan highlighted the importance of targeted wheelchair skills training sessions, and it is thought to improve accountability by clinicians for comprehensive wheelchair skills training.

3. **Group skills training sessions**, utilizing the HHS RRC SCI Wheelchair Skills Group session plans, which have been developed to be implemented by OT, PT, or OTA/PTA.

4. **Integrate client goals**, identify wheelchair skills specific goals using the above mentioned checklist, in combination with frequently reviewing and updating goals.

5. **Access to formal training**, for clinicians who are inexperienced with wheelchair skills.

Conclusion

The results and recommendations were presented to the SCI rehab team at HHS to be incorporated into their rehabilitation program. A checklist was developed based on the Wheelchair Skills Test that will be used by clinicians on the SCI rehab team to record client wheelchair skills goals, assess their abilities and document their progress. Additionally, session plans have been developed to guide group wheelchair skills training sessions that can be lead by OT, PT or OTA/PTA. These materials will ease in the implementation of the recommendations discovered as a result of this program evaluation.

References


The Clock-Drawing Test: Inter-Rater Reliability of a New Scoring Method

Student: Lauren Heinken (MSc. OT Candidate, 2017) Co-Supervisors: Brenda Vrkljan PhD, OT Reg. (Ont.) & Ruheena Sangrar, PhD student, OT Reg. (Ont.), School of Rehabilitation Science, McMaster University
In collaboration with: Paul Vaucher, PhD, University of Applied Health Sciences and Arts Western Switzerland

Abstract: A new scoring method has been proposed for the Clock-Drawing Test (CDT). Two individuals trained in this method scored a total of 443 clocks. Inter-rater reliability of the 27-item scoring method was analyzed using Cohen’s Kappa coefficients. The scoring method showed strong inter-rater reliability on most criteria. With further validation, this scoring method has the potential to be administered using a mobile-based application (e.g., computer tablet). Given the importance of the CDT as a ‘flag’ for cognitive issues that can affect safety, including driving, a quick, easy and validated scoring mechanism is needed. For example, in Ontario, the CDT has been administered to over 117,000 drivers aged 80 years and older as part of the Ministry of Transportation Senior Driver Renewal Program.

Introduction: The Clock-Drawing Test (CDT) is a common neuropsychological screening tool used to measure an individual’s level of global cognitive functioning (Shulman, 2000). While the tool is highly valued across clinical settings due to its ease of administration and lack of language, culture, and education biases, there is no agreement on the most appropriate scoring criteria (Shulman, 2000). Since the 1980s, many different scoring methods have been proposed. As well, the psychometric properties of these methods have been investigated and compared (see Spenciere, Alves & Charchat-Fichman, 2017). Further refinement and validation of the scoring criteria is still under development, including a 27-item scoring method whose inter-rater reliability was examined in the current project.

A ‘New’ CDT Scoring Method: The proposed scoring method for the CDT is based on a combination of existing approaches, such as Mendez et al. (1992) and Freund, et al. (2005). This ‘new’ method includes more items (see Table 1), as a major concern was the objectivity of existing criteria. The purpose of the current study was to assess the inter-reliability of this ‘new’ scoring method.

Methods: Participants: 443 older drivers in Switzerland with a mean age of 75.4 years completed the CDT (male: 62.6%; <12 years education: 26.2%). Approximately half of the participants were considered “healthy”, meaning they had normal vision, functional mobility, and no cognitive impairment (MoCA ≥ 26).

CDT Scoring Process: Two researchers from the Swiss research team initially scored 50 clocks from the dataset. The scoring criteria were then updated. The same researchers repeated this process (i.e., 50 clocks scored) until a 90% concordance rate was reached. One Swiss researcher then scored 443 clocks. Finally, the McMaster-based research team (BV, RS, LH) who were not involved in development of the criteria were trained on this method by the Swiss lead (PV). One member of the McMaster team (LH) scored 443 clocks using this new method.

Statistical Analyses: The 27-item criteria for each clock were entered into MS Excel. Inter-rater reliability was calculated using Cohen’s Kappa coefficient via Stata analysis software. Interpretation of Kappa scores: <0.00 poor, 0.00-0.20 slight, 0.21-0.40 fair, 0.41-0.60 moderate, 0.61-0.80 substantial and 0.81-1.00 almost perfect (Landis & Koch, 1977).

Results: As outlined in Table 2, 8 of 27 items were considered ‘almost perfect’ (green), 15 items demonstrated ‘moderate’ (yellow) to ‘substantial’ inter-rater reliability, and only 3 items were interpreted as ‘fair’ (red). These results indicate that most criteria in this ‘new’ scoring method have moderate to strong inter-reliability.

Table 1. Summary of existing scoring methods

<table>
<thead>
<tr>
<th>Scoring Method</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shulman et al., 1986</td>
<td>5 criteria</td>
</tr>
<tr>
<td>Wolf-Klein et al., 1989</td>
<td>10 ‘clock patterns’</td>
</tr>
<tr>
<td>Sunderland et al., 1989</td>
<td>10 criteria</td>
</tr>
<tr>
<td>Rouleau et al., 1992</td>
<td>10 criteria</td>
</tr>
<tr>
<td>Mendez, Ala &amp; Underwood, 1992</td>
<td>20 criteria</td>
</tr>
<tr>
<td>Freedman et al., 1994</td>
<td>15 criteria</td>
</tr>
<tr>
<td>Manos &amp; Wu, 1994</td>
<td>10 criteria</td>
</tr>
<tr>
<td>Shua-Haim et al., 1997</td>
<td>6 criteria</td>
</tr>
<tr>
<td>Royall, Cordes &amp; Polk, 1998</td>
<td>15 criteria</td>
</tr>
<tr>
<td>Lam et al., 1998</td>
<td>10 criteria</td>
</tr>
<tr>
<td>Freund et al., 2005</td>
<td>7 criteria</td>
</tr>
</tbody>
</table>
Table 2: Kappa coefficients as calculated using Stata

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Kappa</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: attempt made to indicate time</td>
<td>1.000</td>
</tr>
<tr>
<td>2: clock diameter &gt;2cm</td>
<td>0.8155</td>
</tr>
<tr>
<td>3: centre of clock &lt;1cm away from centre of free space</td>
<td>0.3436</td>
</tr>
<tr>
<td>4: &lt;1/2 clock drawn with shaky line</td>
<td>0.7287</td>
</tr>
<tr>
<td>5: the clock frame fits in a circle</td>
<td>0.5288</td>
</tr>
<tr>
<td>6: no frame gaps &gt; 15 degrees</td>
<td>0.8025</td>
</tr>
<tr>
<td>7: end of each drawn line making the frame joins the beginning of the next</td>
<td>0.7968</td>
</tr>
<tr>
<td>8: no construction marks</td>
<td>0.7036</td>
</tr>
<tr>
<td>9: no correction marks</td>
<td>0.5765</td>
</tr>
<tr>
<td>10: no other marks</td>
<td>0.3213</td>
</tr>
<tr>
<td>11: position of clock symbols where you would expect them to be</td>
<td>0.3531</td>
</tr>
<tr>
<td>12: all symbols within clock frame</td>
<td>0.9095</td>
</tr>
<tr>
<td>13: symbols equally adjacent to frame</td>
<td>0.4802</td>
</tr>
<tr>
<td>14: symbols ordered clockwise</td>
<td>0.8733</td>
</tr>
<tr>
<td>15: 7+ same symbol type ordered sequentially</td>
<td>0.8993</td>
</tr>
<tr>
<td>16: numbers 1-12 are present</td>
<td>0.6242</td>
</tr>
<tr>
<td>17: numbers do not go beyond 12</td>
<td>0.8483</td>
</tr>
<tr>
<td>18: no repeated/duplicated number symbols</td>
<td>0.7476</td>
</tr>
<tr>
<td>19: symbols all Arabic or all Roman</td>
<td>0.7669</td>
</tr>
<tr>
<td>20: 3+ quadrants have 1+ appropriate numbers</td>
<td>0.7892</td>
</tr>
<tr>
<td>21: ‘11’ presented and pointed to</td>
<td>0.8005</td>
</tr>
<tr>
<td>22: ‘2’ presented and pointed to</td>
<td>0.8269</td>
</tr>
<tr>
<td>23: attempt to indicate time with hands</td>
<td>1.0000</td>
</tr>
<tr>
<td>24: 2 distinct and separable hands</td>
<td>0.7966</td>
</tr>
<tr>
<td>25: hands radiate from clock centre</td>
<td>0.2559</td>
</tr>
<tr>
<td>26: hands are totally within the clock</td>
<td>0.7080</td>
</tr>
<tr>
<td>27: minute hand longer/thinner than hour hand</td>
<td>0.6999</td>
</tr>
</tbody>
</table>

**Discussion:** Inter-rater reliability was addressed in the current project as part of the process of establishing psychometric properties of a ‘new’ CDT scoring method. While our initial analysis indicates this method is promising in terms of its inter-rater reliability, caution is warranted given low Kappa values on some criteria. For example, differences in how the ‘clock’ template was positioned between raters could be corrected with further training (See #3 and #25 on Table 2). Nonetheless, the results are promising with regard to reliability particularly given the number of items in the new scoring method. The intent of this project was to include all items that had been addressed in previous studies of scoring criteria (see Table 1 for citations of studies). A potential limitation of this study of inter-rater reliability is that the scoring method is still under development. If modified, inter-rater reliability may need to be reassessed. Although one of the scorers (LM) was considered a novice, training and other supports were provided, which ensured the protocol for conducting this study was followed.

**Future Directions & Clinical Considerations:**
As individuals grow older, they are more likely to experience changes in cognition that can impact their ability to safely perform occupations, such as driving, (Freund et al., 2005). Low scores on the CDT are related to problems with executive functioning and visuospatial processing (Freund et al., 2005). In Ontario, the CDT is used to screen drivers aged 80+ through the Ministry of Transportation Senior Driver Renewal Program. In 2012, 117,237 older drivers completed this program (MTO, 2014). For older adults, having a standardized and valid measure that is sensitive to subtle changes in cognition is needed. Screening tools, like the CDT can be helpful to ‘flag’ those who require further follow-up, which can include more in-depth office-based, on-road testing and/or having a conversation about driver retirement.

Once validated, there is potential for this ‘new’ scoring method to be translated to an automated algorithm that is administered on a mobile-based application (i.e., computer tablet). This application could improve efficiency and accuracy. However, as Spenciere et al. (2017) noted there is still much value in qualitative observations captured when a patient completes the CDT (e.g., time to complete test, asking for assistance). In addition to further validation of the psychometric properties of this new method, other considerations include examining the relationship between CDT scoring criteria and performance on other cognitive measures, such as the MoCA, or with errors during on-road testing. Exploring linkages with driving errors is critical when determining cut-points for measures like the CDT to ensure they have the sensitivity and specificity necessary to make an accurate determination of fitness-to-drive.

**Key References:**
Facilitating Change through Motivational Interviewing: Canadian Mental Health Association (CMHA) – Quality Assurance Project

Students: Sarah Darmanin and Kyra Michel
Supervisors: Chelsea Crocker, OT Reg. (Ont.) and Emma Bruce, OT Reg. (Ont.)

Abstract: The CMHA Waterloo Wellington (WW) ran a motivational interviewing (MI) group at 2 site locations for 4 weeks. The objectives of this quality assurance project were: 1) to determine the groups influence on participants' stage of change, and 2) to develop an understanding of participants' experiences in the group. The readiness ruler (RR) was used pre and post group, and qualitative interviews were conducted with participants. No statistically significant differences were found for RR ratings, however limitations of the use of this outcome measure were identified. Qualitative data revealed 5 themes: group interactions, personal changes, group content, barriers, and feedback. The participants' responses highlighted positive experiences and learning, which is consistent with Yalom’s therapeutic group factors. Qualitative findings provide support for the continued use of MI groups at the CMHA WW as well as suggestions for improvement in the future.

Introduction and Literature Review: MI is a method of eliciting change by increasing one's internal motivation to change through exploring and resolving ambivalence. Although originally used to treat substance use disorders, MI has expanded to be used in the treatment of several psychological and physical conditions. MI is used by many professionals, including occupational therapist (OTs) in a variety of practice settings. This is supported by the results of a survey, which identified MI as the second most common psychotherapeutic approach used by OTs in Ontario. Additionally, despite the rising popularity of group therapy interventions, there is limited evidence of MI used in a group format, and although positive results have been identified most groups have focused on substance abuse.

Methods: A MI group was run at two CMHA WW locations by the same three student OTs, and two supervising OTs— one at each location. The RR was administered pre and post MI group to identify stages of change, and was completed by the participants themselves and their support coordinator (SC). Qualitative data was collected through semi structured face-to-face interviews with individual participants. Phone interviews were completed with a select group of participants who did not complete the group. The authors individually reviewed all interview notes, and themes were finalized through discussion and consensus. Statistical analysis of the RR ratings was completed using paired t-tests and ANOVA tests, on Microsoft Excel 2016.

Results: Qualitative analysis of the 12 face-to-face interviews and 4 phone interviews revealed 5 themes: group interactions, personal changes, barriers, group content, and feedback. Firstly, for group interactions many participants mentioned that they enjoyed the group environment as it created a sense of unity with others going through a similar experience. All participants in the face-to-face interviews described the group leaders and the overall group environment positively. Four participants commented on the fact that 3 leaders were students and that at times it was evident that they were still learning how to handle more challenging situations. For the second theme personal changes, 11 participants described changes in their thinking which included outlook, attitude and self-esteem. Six participants joined a subsequent group run at the CMHA after the MI group, and changes in behaviour were described by 5 participants—2 of which applied for a job or volunteer position. Thirdly for group content, topics covered in the MI
group—specifically the session on strengths and personal values—were frequently cited as participants’ favourite and/or most memorable part. Also, having the session handouts in writing format was described as beneficial for 7 participants. For the next theme barriers, 2 participants described personal barriers and 6 identified environmental barriers. Finally, for the theme feedback, participants identified several areas for improvement which included changes to the structure of the group (i.e. 2 shorter breaks vs. 1 long break), increasing the length of the group (i.e. more sessions), and attention to the physical layout of the room to ensure it is not crowded.

No statistically significant differences were found between the pre and post group ratings on the RR completed by the participants (n=12) or the SCs. Further, there were no statistically significant differences between the 2 groups, or between the SC and participant RR ratings. However, observation revealed some discrepancies in scores between the 2 raters.

**Discussion:** The results of the qualitative analysis revealed many therapeutic group factors. The first theme, group interactions, captured a number of these elements, such as universality, cohesiveness, and interpersonal learning. These social connections can have a positive impact on the person, as social relationships have been found to play an important role in an individual’s recovery from severe mental illness. The second theme, personal changes, is related to the therapeutic group factor of self-understanding. The group and content played an important role in participants learning as they identified personal characteristics that they were not aware of. Additionally, closer observation of the RR ratings revealed discrepancies between participants and SCs, which may be in part due to different levels of insight. However, we identified that this is more likely due to participants and SCs not providing a rating for the same area of change, as there was not enough instruction and guidance provided for the use of this measure.

**Limitations.** Limitations of the project are as follows: an extended period of time (approximately 2 months) between the end of the group and the administration of qualitative interviews, interviews could not be recorded which limited transcription, lack of instruction provided to SCs for use of the RR, and no measure to ensure the fidelity of the treatment. However, steps were taken throughout the project to help account for the aforementioned limitations.

**Conclusions and Future Directions:** No statistically significant findings were found in terms of the RR, however due to limitations of this data we cannot draw firm conclusions for the first project objective—group impact on stages of change. For the second objective, the qualitative information highlighted the valuable therapeutic group factors that were present in the MI group, which supports the continued use of this group at the CMHA. In the future increased instruction should be provided when using the RR as an outcome measure, and suggestions to improve the group, such as changes to structure, organization and physical room layout should be considered.

**Acknowledgements:** We would like to thank our supervisors Chelsea Crocker and Emma Bruce for their guidance and support. We are also grateful to all the participants and support coordinators for their time and contributions.

**References**
Introduction: Vision Cardiac is a 15,000-participant observational cohort study occurring over 15 sites in 12 countries researching 30-day mortality, undetected myocardial injuries, and incidence of major vascular complications related to cardiac surgery. Classically, risk stratification has focused on these outcomes, however function is an outcome of central importance to patients (Depp, Glatt & Jeste, 2007). While there has been some research done on Activities of Daily Living (ADLs) and cognitive functioning following cardiac surgery (Hoogerduijn, de Rooij, Grobbee & Schuurmans, 2014; Newman et al., 2001; Selnes, Royall, Grega, Borowicz, Quaskey & McKhann, 2001; van Dijk et al., 2007), there are no existing large cohort studies on the global function of individuals following cardiac surgery. The Standardized Assessment of Global function in the Elderly (SAGE) can be completed quickly and combines cognitive, instrumental, and basic ADLs. The SAGE must first be validated before use in research on functional outcomes in the adult cardiac surgery population. The following study examines the relationship between SAGE, WHODAS and COPM results. Student OTs administered these in the home to assess clients function and perceived performance. The SAGE has a moderate positive correlation with the WHODAS (r= 0.72) and a moderate positive correlation with the COPM (r=0.52). The preliminary results support the SAGE can identify activity and/or participation limitations in the adult cardiac population.

Methods: Participants were recruited by Student OTs after consenting to participate in VISION-Cardiac after surgery at the Hamilton General Hospital. The Student OTs administered the COPM (COPM; Law et al., 1998), the WHODAS (Üstün, 2010), and the SAGE to assess overall function, independence, and participation. To determine whether the SAGE can identify activity and participation limitations in the adult cardiac population, preliminary data was used to compare the SAGE with the WHODAS and COPM. A linear correlation was completed to compare the SAGE with the WHODAS and COPM. It was hypothesized that both measures would show a positive, moderate correlation. A four-quadrant concordant analysis was used to determine the agreement of the SAGE between the WHODAS and the COPM. The hypothesis was that there is agreement between the SAGE and the WHODAS and COPM.

Results: Overall, 40 participants were assessed for this paper. Participant scores on the SAGE, WHODAS, and COPM are not distributed normally with more participants scoring very low on all measures (see tables below). The SAGE has a moderate positive correlation with the WHODAS (r= 0.72). The SAGE has a moderate positive correlation with the COPM (r=0.52).

Discussion: The preliminary results support the hypothesis that the SAGE can identify activity and/or participation limitations in the adult cardiac population. The SAGE and WHODAS may measure similar constructs, as there was a moderate, positive correlation.
Visual analysis of the concordance graph suggests many participants who scored on the WHODAS also scored on the SAGE (indicating functional limitations), or did not score on either measure (indicating no functional impairment). The SAGE and COPM also appear to identify a similar number of functional issues, as there was a moderate, positive correlation. Visual analysis of the SAGE-COPM concordance graph suggests many participants who identified Occupational Performance Issues (OPIs) on the COPM also had a positive SAGE score, or those who had no OPIs also did not have a SAGE score.

These results were consistent with our initial hypotheses and there are several explanations for why the correlations were not higher and there was not more agreement between measures. While both the WHODAS and the SAGE are meant to be global measures of function, the content differs slightly. Overall, the SAGE focuses on more foundational tasks, while the WHODAS contains more complex activities. There are also differences in the types of questions, for example the WHODAS contains an item regarding the emotional impact of their health condition whereas the psycho-emotional domain is not reflected on the SAGE.

Participants who scored on the SAGE but not the WHODAS may be explained by the higher number of questions on the SAGE. If these explanations are accurate, the moderate correlation and 40% discordance may not be a barrier for use of the SAGE in research.

The strength of association between the SAGE and the COPM was not expected to be strong. The COPM relies on participants identifying functional concerns, whereas the SAGE prompts participants to rate their difficulty performing specific activities. It was therefore expected that there would be more total items identified on the SAGE. Alternatively, it was expected that some participants would identify OPIs on the COPM but not have any or few identified difficulties on the SAGE, as the SAGE does not consider leisure activities. Individuals who scored at least 1 on the SAGE but who identified 0 OPIs may have experienced some functional changes following surgery, but do not feel concerned enough about those changes to identify them as an OPI. This may be because the individual expects change to resolve with time, they are receiving specific support, or because the change they experienced is not meaningful in their lives.

Limitations: Generalizability of findings is notably impacted by the small sample size and potential for volunteer bias within that sample. Furthermore, lack of standardization in the administration of the COPM despite efforts to do so may have skewed number of OPIs identified in either direction.

Conclusion and Future Directions: Preliminary evidence indicates the SAGE may be used in research to study the impact of cardiac surgery on global functioning in adults. Correlation and agreement between the SAGE and the WHODAS and COPM suggest that it similarly measures global function and issues facing patients. Additional research will be required to establish a cut-off score on the SAGE which indicates functional independence. Further research should also be conducted on the impacts of cardiac surgery on leisure activities and mental health of individuals.

Acknowledgements: The authors would like to thank Jackie Bosch, Jessica Spence, and VISION cardiac for their continuous support and mentorship throughout this project. We want to thank the participants for volunteering their time and welcoming us into their homes.

References
Hand-Hygiene Initiative in Forensic Psychiatry

Courtney Bergart & Tyler Thrasher
MSc. Occupational Therapy Master’s Candidates, McMaster University
Supervisor: Natalie Dubeau, OT Reg., (Ont)

ABSTRACT

Objectives. The purpose of this project was to evaluate the implementation and success of a hand hygiene initiative on patient engagement, empowerment, and recovery in a forensic psychiatry setting. Within this initiative, volunteering patients act as observers to track the hand hygiene compliance of care providers.

Methods. This process evaluation used an inductive qualitative approach, and sought to answer the following questions: (1) What are staff and patient perspectives on the hand hygiene initiative?; (2) What is the impact of the initiative on patient engagement, empowerment, and recovery?; and (3) Is the initiative feasible and sustainable in this setting?

Results. A number of key themes emerged from the qualitative analysis including the following: Barriers to Implementation, Patient-Provider Relationships, Other Engagement Opportunities, and Benefits of the Project. The main barriers to implementing this program were related to resource constraints such as busy staff schedules, high staff turnover rates, and a lack of funding for patient incentives. Some of the perceived benefits of the program included helping patients learn new skills, improving staff and patient relationships, and maintaining cleanliness on the unit.

Conclusion and Recommendations. Recommendations include providing a certificate or other incentive for program participation, implementing a standardized procedure to assess patient engagement and appropriateness for program involvement, and engaging patients as peer researchers when conducting research in forensic mental health settings.

INTRODUCTION & LITERATURE REVIEW

The forensic mental health system is a unique setting governed by the legislation set out in both the Criminal Code of Canada and the Mental Health Act. Due to the secure nature of this setting and the close supervision of patients in the forensic system, choice, autonomy, and the therapeutic alliance between clients and healthcare providers (HCPs) may be compromised (Bressington, Stewart, Beer, & Machnives, 2011). The forensic patient typically is socially isolated, faces discrimination due to stigma related to mental illness and criminal actions, and must adhere to strict compulsory care regulations. Despite the restrictions to freedom in forensic mental health settings, certain programs may promote patient engagement and empower individuals to become active agents in their healthcare (McGuckin & Govednik, 2013). A hand hygiene (HH) initiative was implemented in April 2016 at St. Joseph’s Healthcare, Hamilton in the Forensic Psychiatry department to encourage productive occupation in patients, and contribute to engagement, empowerment, and recovery. Participants were trained to audit and report staff HH compliance data, to assist staff in meeting monthly HH instance goals.

The project sought to answer the following research questions:
1. What are staff and patient perspectives on the hand hygiene initiative?
2. What is the impact of the initiative (if any) on patient engagement, empowerment, and recovery?
3. Is the initiative feasible and sustainable in this setting?

A systematic review of the literature was conducted. Previous research supported patients in playing an active role in preventing infections, thorough patient-as-observer projects (Davis, Parand, Pinto, & Buetow, 2015). A qualitative study by Farnworth, Nikitin, and Fossey (2004) assessed patient engagement in inpatient mental health care and found that participants’ time was primarily spent on self-care and passive recreation, with negligible time spent on productivity. The OT role in this setting thus requires increasing patient participation in productive occupations.

METHODS

Design. A process evaluation was selected for the hand hygiene program evaluation. Within the context of healthcare research, process evaluations focus on understanding how well a program is working, the extent of design’s implementation, and the acceptability of the program to its participants. The process evaluation utilized a general inductive qualitative approach.

Data collection. Data was triangulated by means of semi-structured interviews, questionnaires, field journaling, retrospective review of hand hygiene compliance data, and a standardized assessment tool of engagement, the Singh O’Brien Level of Engagement Scale (SOLES; O’Brien, White, Fahmy, & Singh, 2009).

Analysis. Both researchers independently coded interview notes using open coding and identified major themes. Researchers then used a focused coding method. All data was organized under labels identified during open coding. Researchers discussed themes identified and merged or appended to final themes using a consensus method. Staff survey data was aggregated using a spreadsheet and graphed for visual interpretations by both student researchers and the project supervisor.
RESULTS

**Participants.** 30 pre-implementation staff questionnaires were collected (17 and 13 from two different units). Student researchers conducted interviews with three team leads and three patients.

**Thematic Analysis.** The following major themes emerged from the qualitative analysis:

**Barriers to Project Implementation**

Busy staff schedules, high staff turnover rates, a lack of patient incentives, and frequent relocation of patients were identified as major barriers.

**Patient-Provider Relationships**

Most staff agreed that the program would contribute to improved patient-provider relationships, and patient participants also felt more accepted by HCPs. “During the project, staff felt more personable and I had more interaction with healthcare providers.”

**Other Engagement Opportunities**

Staff and patients noted that opportunities for engagement are at times limited in this setting, despite the benefits of engagement in occupation. “We try to make plans with them and help them make decisions on their own care, but this is not as much as it should be.”

**Benefits of the Program**

This program allowed patients to learn observation and data collection skills, and feel like they were part of the team. “The hand hygiene program kept me occupied and I felt involved in something instructive. I learned about hand hygiene and how to wash my hands more.”

**Questionnaire data.** The majority of staff agreed that they saw this project potentially helping to empower patients. One third of respondents indicated they were ‘neutral’ to a question on contributing to the project.

**SOLES.** Due to limitations in participant and total SOLES data collected, data could not be analyzed in a quantitative before/after method as originally intended. Data was qualitatively analyzed within the context of themes, as with interview data.

**Hand hygiene compliance data.** A decline in compliance rates temporarily occurred during the initial project implementation.

**DISCUSSION**

**Staff and Patient Perspectives**

- Overall, HCPs are receptive to the program and results indicate that the project may improve patient engagement in this setting.

**Feasibility**

- Recruitment and retention of participants is an issue for the sustainability of the program.
- The climate in secure units may be less appropriate for this type of program than in the general unit (Dickens, Suesse, Snyman, & Picchioni, 2014).

**Hand Hygiene Compliance**

- The initial decline in hand hygiene compliance may reflect more accurate data with the patient-as-observer method.

**LIMITATIONS**

- The recording method for interview data (typed and handwritten notes) could have resulted in some details being missed in the data collection process. The credibility of the findings was impacted due to time and resource constraints as member checking of data did not occur.

**FUTURE DIRECTIONS**

Key recommendations for the program are as follows:

1. Provide patients with an incentive to participate in the program (e.g. certificate of completion)
2. Implement a standardized procedure for assessing patient engagement on an ongoing basis, using a tool such as the MOHOST
3. Consider additional programs or strategies for promoting patient engagement (e.g. health literacy education)
4. Continue to engage patients in program design and evaluation moving forward.

**ACKNOWLEDGEMENTS**

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A Brief Mindfulness Protocol for Burnout in Frontline LTC Workers
Ashley Kirk & Jenna McArthur, MSc OT Candidates 2017, McMaster University
Sherrie Cheers MSc OT, OT Reg. (Ont.) & Marion Penko OT Reg. (Ont.), M.Ed.; St. Joseph’s Healthcare Hamilton

Abstract

Purpose: (a): To determine the most preferred, applicable, and feasible group-based intervention for decreasing burnout in frontline Long-Term Care (LTC) workers. (b): To develop a multi-session, evidence-based group protocol for the chosen intervention to be trialed in LTC settings in the next phase of the project. Methods: Frequency percentages and mode values were calculated from ranked survey data using Microsoft Excel and data was transfigured into bar graphs and tables. Qualitative analysis was completed by an outside student who coded and themed the data. Results: A mindfulness-based intervention (MBI) was ranked highest by participants over cognitive behavioural therapy and peer support groups as the most preferred and feasible intervention from the quantitative analysis. This result was confirmed with themes from the qualitative data. Literature Review: The literature concluded that there is a lack of research pertaining to MBIs implemented specifically with frontline LTC workers and a lack of detail of the protocols used in the research. However, preliminary research suggests that a MBI may be effective for healthcare providers overall for reducing stress and burnout, particularly Mindfulness Based Stress Reduction (MBSR)-based programs. Group Protocol: A 4-week brief mindfulness-based group protocol was developed, and themes, informal and formal mindfulness practices, educational handouts, and homework activities were formulated. Pilot: The first session of the group protocol was piloted at Wyndham Manor LTC in Oakville. Preliminary feedback suggested the pilot session was clear and easy to follow, and that participants would be willing to participate in a 4-week mindfulness program. Conclusion: Results from this project will help inform the next phase of the research study which will implement and evaluate the group protocol. This will also inform others’ understanding of the feasibility and effectiveness of a brief-mindfulness based group program at reducing burnout in LTC settings for use in practice or further research.

Introduction

Older adults in Canada are expected to make up 30% of the population by 2036, and as the population ages, it will place increased demand on LTC homes.6 Due to the increased number of LTC residents, particularly those with complex care needs, frontline workers are at a high risk of experiencing negative health implications, including burnout and stress.4 Frontline care workers are employed in a variety of healthcare settings including LTC, hospitals, and home healthcare. Frontline care workers include but are not limited to nurses, personal support workers, nutrition services, and recreational therapy staff.

This project is part of phase three of a multi-phase study. Phase one used a cross-sectional design and found significantly higher perceived stress and burnout in frontline workers in LTC within the Mississauga and Halton area compared to established norms. Phase two identified three types of interventions to reduce work-related burnout in LTC workers including: Mindfulness-Based Intervention (MBI), peer support groups, and cognitive behavioural therapy. Phase two also developed/piloted a cross-sectional, mixed methods study design for determining the most preferred, feasible, and applicable intervention. Phase three implemented this study to collect the qualitative and quantitative data. Focus groups were held and survey data was collected, where participants rated the three interventions: mindfulness, peer support, and cognitive behavioural therapy, from one to three for each separate criterion: most preferred, applicable, and feasible.

The purpose of this project was to determine the most preferred, applicable, and feasible group-based intervention for burnout and stress in LTC frontline workers through analysis of previously collected data; and to develop a multi-session group protocol for the next phase of the study.

Methods

The Quantitative data collected from phase three of the study was inputted and analyzed in Microsoft Excel software using frequency and mode calculations. This data included survey data where participants ranked intervention options from 1-3. Results were displayed in frequency tables and bar graphs. Qualitative data was analyzed and themed separately by an outside student and results were used to confirm a MBI as the key intervention.

Results

A MBI was identified as the most preferred (40.9%) and feasible (41.9%) intervention, while peer support was ranked highest for applicability (37.2%), with a MBI ranked behind this equally with Cognitive Behavioural Therapy (32.6%). As a MBI was ranked highest by participants for! of the criteria, as well as identified in the qualitative themes as being favoured due to its ability to be practiced at home or work, it was determined to be the top ranked intervention.

Mindfulness Literature Review

A comprehensive review of the evidence for the use of MBIs for reducing stress and burnout in LTC frontline workers was completed. Overall, preliminary evidence
appears to support the use of MBIs, especially MBSR programs, to prevent stress and burnout in various healthcare professionals. There is a lack of research pertaining to MBIs implemented with this specific population of frontline workers in LTC settings, and a lack of detail of the components used within MBI protocols, especially brief protocols. Some other limitations of MBIs include a lack of longitudinal designs to determine the long-term implications, as well as the widespread use of self-report measures of stress rather than physiological measures. Additionally, mindfulness was stated to be difficult to measure due to the nature of its concepts, which guide one to clear their mind and change thought patterns. A key study examining burnout in this target population reported a brief MBI resulted in significant decreases in burnout symptoms, and increases in relaxation and life satisfaction, and provided a detailed protocol description.

**Group Protocol Development**

**Purpose:** to design a brief mindfulness-based group protocol for frontline workers in LTC settings. **Methods:** Current research on brief mindfulness-based protocols was evaluated. Principal authors of key studies were contacted for further information on their established protocols. Information from protocols and research was extracted and applied to the development of a brief mindfulness-based group protocol. **Results:** Developed four weekly sessions, 30-minutes in length. The weekly themes introduced in each session included: 1. Automatic Pilot and Awareness; 2. Sitting with Emotions; 3. Responding/Reacting Mindfully to Stress; and 4. Self-Care and Continued Practice. Formal mindfulness meditation practices derived from traditional MBSR principles were introduced, including: Body scan, Mindfulness of Breathing, 3-minute Breathing Space, Sitting Meditation, and Mindful Movement. Informal mindfulness activities were also used, and educational handouts and homework practice were provided at the end of each session.

**Pilot Session**

The first session of the group protocol was piloted with frontline care workers at Wyndham Manor LTC in Oakville. The concept of mindfulness as well as the theme of Automatic Pilot and Awareness was introduced, followed by facilitation of the Raisin Meditation Activity, and the Body Scan Meditation. The homework for this session: Routine Activity Awareness and the Body Scan were introduced, and feedback evaluation forms were distributed.

Feedback from the session indicated that the pilot session was clear and easy to follow, and the homework and information was applicable to their work life. Participants indicated they would be willing to participate in a 4-week mindfulness program, including attending classes during work and completing homework outside of class time.

**Conclusion/Future Directions**

Overall, the quantitative analysis indicated a MBI as the most applicable, feasible intervention for reducing stress and burnout in this population. A literature review informed the development of a 4-week brief mindfulness-based stress reduction protocol and the first session was piloted with frontline care workers. This portion of the ongoing research project will inform the next stage of the study, where the group protocol will be implemented in numerous LTC homes in the Mississauga-Halton area. This phase will gather information on the effectiveness of a brief mindfulness based stress reduction program in this setting for reducing stress and burnout.

This research will inform further research on stress and burnout for LTC workers, particularly when considering which interventions are feasible, applicable, and preferred by frontline workers. Additionally, this information will be useful when deciding on burnout interventions for healthcare workers to examine further through research.

**Acknowledgements**

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**References**

ABSTRACT

Purpose: Occupational therapists’ role includes helping individuals to transition into retirement. However, it is unclear how occupational therapists themselves experience this transition and life stage. Methods: A literature review was conducted to explore peer-reviewed and grey literature on the research topic. A survey was designed but not disseminated due to unforeseen circumstances. Through semi-structured interviews with individuals planning for retirement or currently retired from the profession of occupational therapy, we identified common themes and experiences. Results: Many themes emerged such as use of title and identity. Based on suggestions made throughout the process, recommendations were proposed to the Canadian Association of Occupational Therapists (CAOT) Retired Members Network to benefit individuals retiring or retired from the occupational therapy profession. Conclusion: There are clear opportunities for the CAOT to support retired members.

INTRODUCTION

Retirement is a life transition that may be welcome or challenging and it may be planned or unexpected. Each individual’s retirement experience is unique, as retirement is impacted by factors both external and internal. Social networks, financial state, and health status are all commonly cited issues affecting retirement (Bradley, 2001; Jonsson, Josephsson, & Kielhofner, 2001). The process of retirement for occupational therapists may be different from other professions and requires consideration. Occupational therapists are knowledgeable about life changes and skilled in identifying meaningful occupations, but retirement is not a straightforward process. This experience has not been explored to date but, given the number of baby boomers expected to swell the ranks of the retiree population over the next two decades, this is quickly becoming an important concern.

The Canadian Association of Occupational Therapists (CAOT) Retired Member’s Network was formed in May 2016. The Retired Members Network identified five main objectives (see references) to reflect the needs of all OTs considering retirement or already retired. The Network, therefore, sought to improve its understanding of the transition experience of occupational therapists and determine how the Network could better support them.

LITERATURE REVIEW

As lifespans increase, individuals are spending a larger proportion of their life in retirement (Price, 2000) and retirement norms are shifting away from the concept of mandatory retirement at age sixty-five. Many individuals are opting to remain in the workforce longer (Cook, 2015). As the nature and duration of retirement changes, supporting the transition to retirement becomes even more important. Retirement is a time of role and occupation loss (Price, 2000; Jonsson et al., 2001, Teuscher, 2010). Research shows that preparing for retirement requires much more than the standard financial preparation and that a positive experience of retirement is linked to occupation. Individuals need to undergo an activity exchange (Pettican & Prior, 2011) which is more than simply filling time or keeping “busy” (Loe & Johnston, 2016). The individual must find occupations that they find personally engaging; that require intensity and a clear set of activities (Jonsson et al., 2001). One’s attitude towards retirement and the values attached to one’s profession or work impact the retirement experience, predisposing one’s trajectory in a positive or negative manner (Jonsson et al., 2001; Teuscher, 2010). Research indicates the importance of one’s work in determining self-identity (Wijeratne, Earl, Peisah, Luscombe, & Tibbertsma, 2017; Pettican & Prior, 2011; Teuscher, 2010). Retirement often impacts established social networks and retirees may struggle to replace the social interactions and relationships that had been inherent in the workplace (Jonsson et al., 2001; Price, 2000). It is important to acknowledge the diversity of retirement experiences. Cook (2015) suggests viewing retirement as a “redirection” rather than a transition, as individuals are redefining their identities and pursuing new occupations. Retirement is simply a new direction rather than an end to the central working stage of one’s life.

METHODS

To gain thorough understanding of the transition to retirement and retirement of occupational therapists, a complex methodology was developed. A phenomenological approach was determined, as the aim was to understand the experience of occupational therapists as they undergo the diverse experience of retirement.
A semi-structured interview was designed and conducted with purposeful recruitment of retired occupational therapists through the CAOT Retired Members Network and those outside of the Network identified through project supervisors. Twelve semi-structured interviews were conducted over the telephone with members (seven) and non-members (five). The participants were located in various provinces across Canada, and in various stages of retirement, increasing the potential generalizability of the study findings.

All participants provided verbal consent for the interviews to be recorded for the purpose of transcription and review during the research process. The interviews were conducted in a conversational style, utilizing six pre-determined and structured questions; each interview lasted between 20-40 minutes in length. The order of the questions was flexible in order to ensure the interview flowed more organically. One student occupational therapist facilitated the interview while the other recorded the discussion and completed field notes in a reflective diary. The second student occupational therapist also extrapolated recommendations as they emerged throughout the interviews. The interviews were transcribed by an independent third-party before being coded and themed independently by both student occupational therapists before comparison and consensus were undertaken and accomplished.

RESULTS/DISCUSSIONS
A total of 6 common themes emerged throughout the interview process. The themes identified were: transition period or planning; social connectedness; use of title and identity; involvement with occupational therapy; finances; and advocacy. Five supportive recommendations were affirmed or offered to the CAOT Retired Members Network. These include: network recruitment; network meetings; retirement preparation; opportunities; and engagement in the profession. Limitations included gender and selection bias, and technical faults which were accounted for.

CONCLUSIONS/FUTURE DIRECTIONS
Retirement is a stage of life in which many facets are considered prior and throughout. The expectations and experience of retirement vary between individuals but there are many common aspects. For those retired from the occupational therapy profession, there are many common challenges that can be acknowledged by the CAOT. A number of recommendations were suggested to better the experience of retirement for these individuals and those approaching retirement.

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To our supervisors Sue Baptiste and Elizabeth Steggles for their support and guidance throughout the research project. To the members of the CAOT Retired Members Network for welcoming and willing involvement. To Ryan McGovern and Julie Lapointe from the CAOT for support throughout the research process. To Stacy Maskell for completing the transcriptions of interviews. To all of our participants who shared their experiences and insights.

REFERENCES
The Role of Occupational Therapy in the Context of an Integrated Chronic Pain Program

Abstract

**Purpose:** The aim of this project was to (i) determine the role of occupational therapy in a developing outpatient multidisciplinary pain program and (ii) conduct a program evaluation to generate recommendations to improve care quality and process. **Methods:** Two student occupational therapists completed an 8-week clinical placement at the St. Joseph’s Multidisciplinary Chronic Pain Program. Participant observation and findings from a stakeholder analysis were used to complete a current and future program logic model. A list of clinic recommendations was generated from identified service gaps or dilemmas identified in the stakeholder data. **Analysis:** A repeating, cyclic process of data collection, stakeholder input and revision was used to develop the program logic model. Themes from each individual interview were identified and similarities and discrepancies across all stakeholder interviews were used to determine theme categories. **Findings:** Themes were separated into categories that included gaps & challenges, program strengths, self-management, the OT role, dilemmas and future visions. A list of six recommendations was generated that aim to improve care quality and accessibility of services at the chronic pain clinic. **Conclusion:** The identified roles of occupational therapy align with the identified gaps in service at the St. Joseph’s Multidisciplinary Chronic Pain Program.

Introduction

With the aging population demographics of the baby boom generation and the gradually increasing life expectancy of first world citizens, the prevalence for chronic disease is high and expected to increase. In the Hamilton Ontario area, several chronic pain clinics exist with varying methods of service delivery which are mostly time- and therapy-intensive fee for service programs. St. Joseph’s chronic pain program is a clinic developed in October 2015 as an interventionist program for pain treatment. Throughout the past year, the program has been evolving from a medical model of care towards a biopsychosocial philosophy of chronic pain management using a self-management approach. To successfully adopt this approach, the clinic recognized the potential need for an occupational therapist (OT) and recruited two OT students to complete a role emerging placement at the clinic for 8 weeks. The aim of this project was to determine the role of occupational therapy within the context of a new and evolving integrated chronic pain program.
Literature Review

(1) Are multidisciplinary chronic pain self-management programs for adults with chronic pain more effective, compared to standard care or intervention only care, in improving self-reported ratings of pain, function, quality of life or self-management? The best practice identified within the literature is for a chronic pain program to communicate and interact as a collaborative multidisciplinary unit and use a unified biopsychosocial philosophy to guide evidence based care.

(2) Within a multidisciplinary chronic pain program, what ought the occupational therapist role encompass to foster positive clinical outcomes for adults and older adults with chronic pain? Occupational therapists are well positioned to support the patient to translate knowledge of self-management to their daily activities and not only might intervention be provided within the clinic, but also within the community. Such services are catered towards incorporating a patient’s physical and mental health, as well as physical and social environment into care.

Findings

Based on clinical experience as well as findings from within the literature reviews, a list was compiled including and detailing interventions which may be provided within the OT’s role in chronic pain. These included interventions which focus on self-management support through: education and training; collaborative goal-setting and action planning; system navigation; behavioral activation; vocational rehabilitation; stress management; and managing sexuality. Analysis of interview themes resulted in the deduction of the clinic’s strengths, gaps, views of self-management, views of the OT role, future vision, and dilemmas. The collective of findings were used to generate future recommendations.

Conclusions

Patients, administrative staff, the clinical team and researchers have collectively identified unmet needs that could be addressed by OT services. This report is intended to provide recommendations for (i) the role and responsibilities of occupational therapy within the context of the St. Joseph’s Chronic Pain Program and (ii) the clinic as a whole based on the findings of the stakeholder analysis. The provided recommendations and respective action points are suggestions intended to provide direction for potential future changes that we have determined may be of benefit to either the vision of the clinic and/or patient care.

Acknowledgements

Thank you Susan Strong for the time you’ve taken to provide insight and guidance throughout the development of the program evaluation. We would like to thank Heather Radman, specialty clinics manager at St. Joseph’s King Campus, as well as the clinical team for their time and ongoing support. Our appreciation also extends to Martha Bauer for her expertise as a preceptor with vast experience in chronic pain care.

References


Supporting OT in Practice: A Review of Suicide Intervention Training.
Authors: Mansi Patel & Christopher Degagne, MSc(OT) Candidates, McMaster University.
Supervisors: Heather Vrbanac, Kim Hewitt, Sarah Slocombe

Abstract

**Purpose:** The aims of this study are 1) to review the existing literature on gatekeeper training programs and 2) to create a document cataloging the evidence for each program to facilitate clinical decision making. **Methods:** A literature review was conducted by searching both the databases and the gray literature to identify training programs for healthcare professionals as well as the evidence supporting their use. **Results:** Seven training programs were identified which improved clinician's knowledge, skills, and attitudes about suicide and improved patient outcome. **Discussion:** The implication of this evidence is discussed in relation to occupational therapy practice. The lack of high quality evidence represents a gap in the literature that needs to be addressed with more rigorous study designs.

Introduction

In 2013, approximately 11.5 out of every 100,000 people died as a consequence of suicide, making suicide the 9th leading cause of death in Canada (Statistics Canada, 2017). Despite these numbers, a substantial amount healthcare professionals (HCPs) feel that their training is inadequate to appropriately address the topic of suicide (Canadian Association of Occupational therapist [CAOT], 2014). The role and scope of Occupational Therapy includes suicide prevention (COAT, 2014). Despite the majority of OTs feel unprepared to address suicide in practice, an estimated 90% of Occupational Therapists (OTs) will perform an intervention addressing suicide (CAOT, 2014).

One approach to filling this knowledge gap is gatekeeper training (GT; Isaac et al., 2009). GT is an approach to suicide prevention which helps train “gatekeepers” — individuals frequently interacting with populations at risk for suicide — to identify and manage the risk of suicide. While GT may be a promising approach for OT, OTs still face a dilemma: what GT programs exist for HCPs and what is the evidence for the effectiveness of these programs? Here, the authors have reviewed GT programs available to HCPs and their associated evidence in order to both facilitate clinical decision making and to help clinicians select the training that is best suited to their practice.

**Methods**

In order to answer the question, broad search terms were generated including “suicide”, “training”, “program”, “program evaluation” and “suicide prevention” to maximize sensitivity. An electronic search was conducted using National Guideline Clearinghouse, Clinical Key guidelines, Dynamed, World Health Organization (WHO) best practice documents, Cochrane, Pubmed, Medline, CINAHL, EMBASE, PsycINFO, AMED, and AgeLine. A gray literature search was completed by searching the Google platform until no novel results were generated, by contacting individual suicide prevention organizations in search of additional programs, and by reviewing individual program websites to identify any missing research papers. Finally, the Director of Clinical Education for Occupational Therapy at McMaster University, was contacted to identify guidelines for GT in educational curriculum.

The inclusion criteria was developed based on both the question and the WHO guidelines. For inclusion, research needed to include HCPs in the population, assess programs which provided training on the assessment and management of suicide risk, and assess programs with a detailed description of goals and objectives. Research was excluded if it focused on institution-specific GT programs.

After the search, both authors reviewed titles and abstracts of all articles (N=1680) to determine if they met inclusions criteria. Duplicates were removed and the remaining articles (N=31) were independently appraised by both researchers. Where discrepancies in ratings existed, both reviewers re-appraised the article and discussed until consensus. Key findings were extracted and used to create both a Gatekeeper Training Inventory (GTI), cataloguing the characteristics and evidence of GT programs, and a decision making tool.

**Results**

The authors identified 12 GT programs: Question, Persuade, Respond (QPR; N=9), Applied Suicide Intervention Skills Training (ASIST; N=7), STORM (N=6), Counselling Access to Lethal Means (CALM; N=2), Recognizing and Responding to Suicide Risk (RRSR; N=1), Suicide Awareness
and Intervention Program (SAIP; N=1), Collaborative Assessment and Management of Suicidality (CAMS; N=5), LaraSig Resources, At Risk in the ED, Connect Suicide Prevention Intervention Training, Late-Life Suicide Prevention Toolkit, and SafeTALK. Seven GT programs were added to the GTI since they had published evidence for their effectiveness.

Discussion and Implication for Occupational Therapy Practice

Overall, evidence was of low quality due to both weak study designs and study-specific methodological flaws. The majority of studies compared the effects of a single program’s outcomes to either pre-training scores or an untrained control group. Overall, programs had evidence suggesting that their respective programs increased confidence, knowledge and improved attitudes towards suicide. No studies found a reduction in suicide mortality due to clinician training; however, clinicians perceived greater competence and demonstrated more effective assessment and interventions. Only two studies included multiple training program and no studies directly compared programs.

The evidence suggests that GT programs can increase both knowledge and self-efficacy as well as improve attitudes, suicide interventions and assessments, and intervention behavior; consequently, these programs are ideally positioned to address the lack of confidence and knowledge in OT clinicians (CAOT, 2014). Individual training programs contained similar themes and objectives; however, programs did vary in emphasis, delivery method, expense, depth of content, length of time, availability of training, price, and type of instruction. In the absence of clear direction from the literature about which GT program is most effective, clinicians and managers will need to thoughtfully consider the unique elements of their practice context to determine which program is the most appropriate.

Canada’s northern, rural and remote (NRR) OTs face additional challenge. OTs in these practices may find their choices especially constricted due to limited resources and isolation. NRR therapists may gravitate towards courses which can be taken online (QPR, CALM and CAMS) or courses whose training is widely available in Canada (QPR or ASIST). CALM, which focuses on removing potential lethal methods of suicide, may be especially relevant in rural or remote areas. Courses which are typically run outside of Canada (thus requiring large travel fees for training) and have no online training may be less suited to NRR practitioners.

Currently, within the OT education curriculum, there is limited consistency in preparing entry level students to address suicide in practice (L, Shimmell, personal communication, May 31, 2017). The two training programs currently used are QPR and SafeTALK (L, Shimmell, personal communication, May 31, 2017). This review identifies that there is literature supporting the use of QPR for HCP students, however, no research was identified for SafeTALK. For this population, brief GT programs (CALM or QPR) are suited to fill the initial learning gap student may have, while also providing resources for future learning opportunities.

Conclusions

OTs enhancing their competency in suicide intervention through GT programs have an abundance of choice. Without clear direction from the literature, OTs should determine an appropriate GT program based on their resources, context and training needs. Future research is needed to determine the effectiveness of these programs relative to one another, as well as their overall effect on suicide mortality.

References


Targeting the Globe
Internationally Educated Occupational Therapists & Student Occupational Therapists: What Is The Employers Experience?

Introduction: Facilitating the internationalisation of occupational therapists (OTs) has many benefits, including expanding current practice and access to services. Despite the identified value of internationalisation available literature exploring the internationalisation of OTs remains limited. Objectives: To explore perspectives of Canadian employers in relation to their experiences supporting and integrating internationally educated occupational therapists (IEOTs) and international student occupational therapists (SOTs) Methods: Phenomenological qualitative approaches guided the research study. Individuals who represent organizations that employ OTs were invited to participate in an online survey and follow-up semi-structured interview. Findings: Participants identified a multitude of factors at the systems level, within the workplace, and at the level of the individual, which influence the integration of IEOTs into practice. These factors related to communication, new learning, individual characteristics, system factors, and additional considerations. Conclusions: OTs seeking to practice internationally must be well-prepared for novel environments, practice contexts, and cultures. Supporting IEOTs and students with knowledge translation materials may enhance engagement in international practice and expand internationalisation.

Introduction

The internationalisation of health care professionals offers a variety of opportunities, such as the sharing of knowledge, ideas, and understandings. Internationalisation also creates opportunities for cross-national and cross-cultural exchange and research, increased resources and access, and increased standards for education and practice (Parker & McMillan, 2007). In 2010, ~10% of occupational therapists practicing in Canada were educated outside of Canada, indicating that Canada has become an employment destination for occupational therapists around the world (CIHI, 2012).

Targeting the Globe (TTG) is a multi-phase study conducted by researchers from McMaster University that explored the internationalisation of student and graduate occupational therapists. Phases 1 and 2 of the study explored the perspectives of key stakeholders in relation to international student clinical placements. Phase 3 represents a pilot research study exploring the perspectives and experiences of Canadian employers in supporting and integrating IEOTs and international SOTs into the workplace. For the purpose of this study, ‘employer’ refers to a senior employee from an organization that supports the integration of an IEOT or international SOT in practice.

Literature Review

A systematic literature review was conducted in preparing for this study. The state of the literature on this topic is scarce, and is primarily from the nursing profession and the perspectives of the internationally educated clinician. Themes such as supports available during the integration process, entry-to-practice-requirements, and expectations of practice were identified as areas of challenge in successful integration (von Zweck, 2006; Mulholland et al., 2013). In both nursing and OT specific literature, individual characteristics of the clinicians and intricacies of communication skills were viewed as integral factors in integration (Mulholland, 2013; Tregunno et al., 2009). The current evidence reveals multi-layered systems, workplace, and individual level factors that influence the experience of integration into a globalized workplace.

Methods

Design: An interpretative phenomenological approach was used to design this study. Recruitment & Data Collection: Participants were recruited using convenience sampling and an electronic survey was sent to 92 employers within McMaster University’s clinical placement catchment area. The online survey included multiple choice and open-ended questions. Recruitment for survey responses proved challenging; four participants completed the initial survey. One survey participant and one key informant agreed to participate in a follow-up semi-structured interview, each lasting approximately 40 minutes. Data Analysis: Extraction of qualitative and quantitative data from Lime Survey™ and transcription of interview data. Researchers independently coded the survey responses and interview transcripts manually, then iteratively discussed developing codes. Where differences emerged between individual coding, disagreements were consolidated and agreed upon through discussion. Once codes were established, inductive thematic analysis occurred. The process of analyzing codes for higher level themes was supported by Nvivo 11 software.
Findings

Participants identified a multitude of factors at the systems level, within a workplace, and at the level of the individual that influence the integration of IEOTs into practice.

“If they’ve really developed their communication skills, both written and verbal. I think it makes it… they feel more successful. Cause that’s one of the biggest barriers, I think, is the communication.”

Communication: Among all participants, communication was identified as a significant factor in the integration of IEOTs and international SOTs. Elements of communication included written and verbal skills, language and terminology, and aspects such as assertiveness and question asking. Communication influenced the individual's ability to build rapport, document, and collaborate within the team.

“... they already have the skill set of being OTs, it’s just learning how to be an OT in Canada”.

New Learning: Participants identified funding and service delivery, scope of the OT role, community supports, equipment, documentation, time management and the use of a client-centred approach as areas of new learning. Differences in understanding may be related to the variety of ways in which OT is practiced around the world.

“For some they managed quite well, and I’m sitting here trying to think of why, um, but it was sort of more comfort and understanding of our system, I think.”

Individual Characteristics: Participants identified several aspects of the IEOT as facilitators for integration. These included: comfort with seeking support, similarity of past experiences to the Canadian practice context, connections within the larger community, developing informal support groups, bringing innovative approach into the workplace and being multilingual.

“Ya ‘cause I think resources ... it’s the OTs not being able to come together to support that person but that’s a resource thing. It’s not that they don’t want to. Um, it’s just that they have other expectations on them as well.”

System Characteristics: The most commonly identified factors were related to resources. The participants identified limitations related to time, mentorship, pressured caseloads, vacancies of positions, and funding, which influenced the ability for staff and organizations to provide mentorship or extended periods of orientation.

“Everything costs for them, so, you know, trying to maintain their family... and a job, while going through those extra hoops, you know…”

Additional Considerations: Participants recognized that IEOTs experience additional forces outside of the workplace, which influence integration in an organization. These aspects included family and jobs, and additional costs associated with transitioning into practice.

Limitations

This study represents a small portion of the Canadian practice context. Due to difficulty with recruitment, data collection was quite limited and therefore saturation of data was not achieved. Furthermore, the sample was quite heterogeneous, making data analysis challenging. Due to logistical and time constraints, respondent validation was not performed.

Conclusion

From the perspectives of employers, supporting IEOTs and international SOTs in the workplace represents many considerations. OTs seeking to practice internationally must be well-prepared for novel environments, practice contexts, and cultures. Thus, supporting stakeholders with knowledge translation materials may enhance engagement and facilitate smoother integration in international practice.

Recommendations

For expanding this pilot into other countries:

1. To consider studying the experiences of IEOTs and international SOTs as separate and distinct phenomena
2. To critically examine who may best be able to describe this phenomenon when deciding upon a sample

For advancing internationalisation of OT:

1. Increased marketing, visibility and accessibility of resources available to support employers, IEOTs and SOTs in global transitions
2. Increased transparency of policies and procedures involved in entering an international practice context (e.g. costs, resources, and time)
3. Consider self-reflection on the ability to support, and adapt to internationalisation as either an employer or an IEOT
From the Ground Up: Supporting Indigenous Access to Healthcare
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Introduction
Significant disparities exist between the health of Indigenous persons in Canada and the general Canadian population. These disparities are the result of limited access to healthcare, poorer quality of care, and broader forms of inequity, each of which is rooted in the lasting impact of oppression and colonialism. In 2016, a needs assessment conducted by the Nokiiwin Tribal Council in the Robinson Superior Treaty area identified healthcare coordination as community members’ greatest need. With student occupational therapists (OTs) and student Physiotherapists (PTs) from McMaster University completing role emerging placements with Nokiiwin, a decision was made to explore how OTs and PTs can contribute to meeting this need in communities of Northwestern Ontario.

Research Questions
1. What is the role of physiotherapy and occupational therapy in addressing health service provision and access issues for persons living on reserve in northern Ontario?
2. In what ways can interprofessional collaboration be used to address the complex needs of the communities and to improve overall access to care?

Scoping Review
Objective: The scoping review was conducted to gain an understanding of the available literature on the topic of rehabilitation professionals’ role in contributing to Indigenous healthcare access.
Methods: The databases AMED, CINAHL, iPortal, OVID Medline, OVID ePub, Pimatsiwin, Scholar’s Portal, and Social Sciences Abstracts were searched for literature addressing the role of frontline healthcare providers in increasing access to healthcare for Indigenous populations. In addition, specific Indigenous journals, journals for each profession, and journals from countries with similar colonial histories (i.e. Australia and New Zealand) were searched. Grey literature from professional associations were sought out, and databases of grey literature were search; however, no grey literature met the inclusion and exclusion criteria for the scoping review. Eight published studies were met the inclusion and exclusion criteria, and were analyzed for themes. A-priori themes were developed based on students’ placement experiences, and inductive codes were developed based on themes that emerged from the literature.
Results/Findings: The majority of the literature pertaining to the role of healthcare providers in increasing Indigenous access to healthcare is not specific to occupational therapy or physiotherapy, instead focusing on interprofessional teams as a whole or healthcare providers more broadly. The thematic analysis revealed facilitators and barriers to Indigenous healthcare access, and answer the research questions by highlighting the role of healthcare providers in enabling these facilitators and overcoming barriers. Facilitators highlighted in the research are physical location, cultural safety, and collaboration. Barriers to Indigenous healthcare access are geographic isolation, jurisdictional constraints and confusion, and the lasting impact of colonization.
Clinical Implications: Recommendations were made based on the needs identified by clinicians and community members within the six Nokiiwin Tribal Council communities. These recommendations include to: (a) increase awareness of services available in the communities, (b) use a healthcare navigator to help First Nations access to the healthcare system and (c) continue advocacy work addressing political barriers impacting access.

Model Development
This model was developed through a collaborative process involving two student OTs and two student PTs, with input from the disabilities coordinator at Nokiiwin Tribal Council. The purpose of this model is to provide a framework that Nokiiwin Tribal Council can use with their six unique Indigenous communities to improve access to services in northern Ontario. Components of the model were selected based on student clinical experience and the accompanying scoping review.

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**Conclusion and Implications**

The overall goal of the model was to reflect the need for health coordination for Nokiiwin’s member communities, and to apply recommendations based on the scoping review and based on our knowledge of the communities gained from our clinical experiences. We anticipate this model to grow and evolve much like a tree would, as it experiences internal and external changes with each passing season.

**Model Components**

**Model overview:** The tree represents the dynamic nature of healthcare access.

**Soil:** The soil represents the values, beliefs, and traditions of Nokiiwin’s member communities.

**Roots:** Each root represents one community.

**Rocks:** The tree grows around rocks, which make it stronger. This represents the process of reconciliation.

**Trunk:** The trunk represents the process of healthcare navigation.

**Branches:** The branches represent the organizations that provide healthcare services to these communities.

**Leaves:** The leaves represent the individual healthcare providers. Their presence is sometimes transient, with some remaining far from the communities and others becoming more deeply entrenched.

**Wind:** The wind represents the role of Nokiiwin Tribal Council. Each of Nokiiwin’s programs can play a role in increasing communication and collaboration between various parts of the tree. This may involve creating opportunities for networking between healthcare providers (blowing the leaves into each other), or between providers and the community (blowing leaves to the ground).

**From the Ground Up:**

A Model for Supporting First Nations Access to Healthcare

As healthcare service delivery continues to develop, it is the authors’ hopes that this model can grow and develop further as well. With advancements in healthcare delivery and the passing of time, the shape of the tree will change. As the tree grows, the branches will intertwine with each other representing collaboration and integration of services at the organization level. This will improve mobilization of services and reduce some of the inter-jurisdictional challenges in providing healthcare services to First Nations communities. As the tree matures and the branches become intertwined, the leaves will be more plentiful and densely packed. This represents the increased interaction between healthcare providers within and between organizations to support First Nations access to healthcare.

**References**


**Abstract:** The Mental Health Strategy for Canada has called for increased access to multidisciplinary and specialized mental health programs (MHCC, 2012). This call has been met by the Anxiety Treatment and Research Centre (ATRC) at St. Joseph’s, West 5th Campus in Hamilton, Ontario, which recently implemented occupational therapy (OT) as a core treatment service. There is theoretical and empirical evidence which supports inclusion of OT on such healthcare teams, although this evidence is limited. The present study is a program evaluation of OT services within the ATRC. We had two main aims: to characterize use of OT services using analyses of client demographics and referral forms; and to evaluate service effectiveness using analyses of pre and postintervention measures of occupational goal achievement and symptom intrusiveness, and surveys of client and clinician perceived value of OT. Overall, we found OT services were perceived positively by clinicians and clients, and were effective at increasing clients’ engagement in meaningful activity. However, we found there was a lack of diversity in reasons for OT referral, and uncertainty about the full scope of OT among clinicians. We have therefore made recommendations which address these barriers to OT service use.

**Methods**

To characterize OT services in the ATRC and determine client perspectives of these services, we prospectively collected data from ATRC patients who accessed OT between August 2016 and June 2017. This data included demographic information (specifically, age, gender, and relationship status) that was anonymized by identification number. We collected data on the length of OT services, dropout rates, and the nature of referral to OT services from ATRC referral forms. We also conducted frequency analyses for demographic factors, length of time in therapy, reasons for referral, and referring professions. To comment upon the effectiveness of OT services, we used paired t-tests to compare pre and posttreatment scores on the Canadian Occupational Performance Measure (COPM). This identified differences in participation and satisfaction with performance of meaningful activities following OT intervention. Similarly, we used the Illness Intrusiveness Rating Scale (IIRS) to identify the degree to which anxiety symptoms and treatment interfered with participation in daily living. These measures were administered by the treating OT at each client’s first and final session. Finally, we developed surveys to evaluate clients’ and clinicians’ perceived value of OT services. The treating OT administered a paper satisfaction survey to clients at their last session, while an online platform was used to administer clinician surveys. We conducted frequency analyses to identify the most common responses to survey questions.
Results

Service Characteristics: A total of 70 ATRC clients were referred to OT services between August 2016 and June 2017. At the time of data analysis, 38.6% (n = 27) of these individuals had completed therapy, 35.7% (n = 25) had dropped out prior to completing therapy, 15.7% (n = 11) were still actively attending appointments, and 10.0% (n = 7) were referred, but did not attend their first OT appointment. There was no statistically significant difference in demographic factors between clients who completed OT, dropped out of OT, or never attended OT. The average number of sessions for those who completed therapy was 3.92 (SD = 4.01) and number of sessions ranged from 1 to 18. Of the 56 referrals made to OT, 42.9% (n = 24) were made by psychiatrists in the ATRC and 33.9% (n = 19) were made by psychologists. The remaining referrals were proportionately distributed among social workers, nurses, psychotherapists, and students in the unit. Most referrals were for productivity goals (80.8%, n = 42).

Effectiveness of OT: Three clients completed the COPM at both pre and postintervention, for a total of six goals to be analyzed. There was a statistically significant difference in mean scores on the performance subscales of 2.66, $t(5) = 4.78, p = .005$, 95% CI [1.23, 4.10]. There was also a significant difference between satisfaction scores pre and postintervention of 3.17, $t(5) = -5.84, p = .002$, 95% CI [1.77, 4.56]. Nine clients completed the IIRS at both baseline and their final OT session, and were included in data analysis. With the exception of “relationship with spouse”, all items trended towards decreased symptom intrusiveness following OT intervention. We observed significantly significant decreases in the extent to which symptoms interfered with clients’ work, financial situation, sex life, and self-expression. Perceived Value of OT: Finally, eight clients completed the treatment satisfaction questionnaire and rated various components of OT services favorably, with an average rating of 6.67 (SD = 0.58) out of 7 for clients’ overall satisfaction with OT services. Based on frequency analyses for responses on the clinician survey, we determined that 60.7% (n = 17) respondents reported they had some experience with OT, and 46.4% (n = 13) reported they could describe some components of OT services. Clinicians reported they refer to OT about the same as they refer to other disciplines (46.4%, n = 13). The majority of respondents rated OT services as highly valuable within the ATRC (67.9%, n = 19).

Conclusion and Practice Implications

The results of this program evaluation characterize how OT is currently delivered and being used, and indicate potential targets of change for improving service effectiveness. Referrals to OT are evenly and proportionately distributed among individual clinicians and disciplines at the ATRC. This may be related to the finding that ATRC clinicians generally perceive OT as valuable. Similarly, clients rate OT as valuable to their mental wellbeing, and COPM and IIRS scores reflect that OT effectively helps this small sample of clients meet their occupational goals. The majority of OT referrals were received for issues with productivity, and so it appears that OT is effective in meeting work and school related goals from an objective and perceived value perspective. However, the limited diversity in reasons for referral, combined with ATRC clinicians’ reported uncertainty of the OT scope, implies that the full breadth of OT services may not currently be utilized. As such, we propose an educational session for the ATRC clinicians regarding the role of OT and the impact of occupation on mental health. We also identified that many clients do not follow up on their referral to OT. Although this is typical for the setting, this may be a result of referring clinicians not adequately explaining the service to clients, or may indicate a barrier to OT accessibility. This may also indicate a need for clinician education and removal of barriers to accessing OT services, such as limitations in hours of operation, length and number of appointments, or setting of service delivery. This investigation was limited by small sample sizes for measures of pre and postintervention measures—this implies that perhaps administering the COPM and the IIRS is too burdensome in this context, with this client population, and that an alternative method of outcome evaluation is required. The lack of client satisfaction questionnaire responses may also be a result of a lack of anonymity in administration. This points to the need for increasingly standardized and feasible data collection for the OT service in this setting.

References


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