



## Welcome to the 2019 Evidence-Based Practice Conference

The School of Occupational Therapy extends a warm welcome to our participants and guests of the 2019 Evidence-Based Practice Conference.

We have hosted the Barbara Sexton Lectureship since 1999 during which time we have had a variety of distinguished speakers provide thought-provoking and action-oriented talks, which have inspired our students, faculty, staff and the Western community. We are delighted to present Dr. Jan Polgar, (BScOT, PhD., FCAOT, Professor Emerita, School of Occupational Therapy) as the 2019 Barbara Sexton Lecturer, who will provide a talk titled *"From Activity to Occupation: Reflections on 40 Years in the Occupational Therapy Profession"*.

At the completion of the Barbara Sexton Lecture, the Evidence-Based Practice poster session will allow our second year MScOT students to share their exciting and innovative research projects. Their topics represent the diversity of the Occupational Therapy profession, with client populations across the lifespan.

A number of our students' research projects have been submitted or accepted for presentation at the 2019 Canadian Association of Occupational Therapists (CAOT) conference (Niagara Falls, ON). Moreover, a number of student groups have submitted or plan to submit their work for peer reviewed publication. This displays the quality, diversity, and ingenuity of the work undertaken by our students and their respective project supervisors. We are very proud of their hard work and accomplishments. Congratulations!

On behalf of the School of Occupational Therapy, we thank you for sharing in our celebration of scholarship.

A handwritten signature in black ink, appearing to read "Jessie Wilson".

Dr. Jessie Wilson  
Course Coordinator,  
OT 9695

A handwritten signature in black ink, appearing to read "Angie Mandich".

Dr. Angie Mandich  
Director,  
School of Occupational Therapy


## ACKNOWLEDGMENTS

We would like to express our appreciation for the expertise, enthusiasm, and time so generously dedicated by each of the project supervisors and co-supervisors. The quality and diversity of the student research projects would not have been achieved without this ongoing guidance and support.

These research projects are based on the foundational research knowledge these students ascertained throughout the curriculum. Therefore, we would be remised to not acknowledge Dr. Debbie Laliberte Rudman who taught the Foundations of Research (OT 9541) course, Dr. Colleen McGrath who taught the Evidence-Informed Practice (OT 9595) course, and the Western University Librarians, who assisted students with database searching.

Finally, the School of Occupational Therapy would like to thank Lisa Ouellette, Taylor Mooney, and Jess Bechard whose support contributed to the success of the 2019 Evidence-Based Practice Conference.

With thanks,

A handwritten signature in black ink, appearing to read "Jessie Wilson".

Dr. Jessie Wilson  
Conference Chair and Course Coordinator

# **Evidence-Based Practice Conference**

## **School of Occupational Therapy**



**Elborn College**

**Western University · Canada**

### **Agenda – April 12, 2019**

8:30-9:00	Registration & Coffee	Room 1534
9:00-9:20	Welcome & Award Presentations	Room 1330
9:20-10:20	Barbara Sexton Lecture	Room 1330
10:30-11:45	Poster Session	Room 1300
11:45-12:00	Closing Remarks	Room 1300



## **THE BARBARA SEXTON LECTURESHIP**

The School of Occupational Therapy at Western University annually invites a distinguished visitor to give a public presentation for the Barbara Sexton Lectureship at the Evidence-Based Practice Conference. The Barbara Sexton Lectureship was established in 1999 to reward innovation and excellence in occupational therapy teaching and to foster professional enrichment.

Professor Sexton dedicated her career to the profession of Occupational Therapy and its advancement, both nationally and internationally. Following a successful career as a clinician, Professor Sexton joined the faculty at Western in 1973, just one year after the inception of the School. Thus, she was involved in the education of every graduate in Occupational Therapy from Western prior to her retirement in 1995. Barbara's specialty was mental health with an emphasis on interviewing and small groups. She worked hard to ensure that every graduate of this program was not only educated in the relevant theories of the discipline, but also in the clinical skills required in the day-to-day practice of the profession. During her tenure at Western, Professor Sexton served in many capacities and on many committees, both internal and external to the University. Most notably, she was the Assistant Dean in the Faculty of Applied Health Sciences from 1990 to 1994. She served as a member of the Review Board of the Canadian Journal of Occupational Therapy for nine years. She was actively involved with the World Federation of Occupational Therapists for 12 years, serving as an executive of the Federation for eight years. While functioning in this role, she served not only the World Federation, but also acted as an ambassador for Canadian Occupational Therapy. The University awarded her the status of Professor Emeritus in 1995. Professor Sexton had numerous publications in professional journals, made numerous presentations at scientific and professional meetings, and is the author of the widely used textbook, "Small Groups in Therapy Settings: Process and Leadership" which is in its fourth edition. Professor Sexton received the Life Member Award from the Ontario Society of Occupational Therapists and the Canadian Association of Occupational Therapists, and was an Honorary Fellow of the World Federation of Occupational Therapists. All of these honors recognize her major contribution to these Societies and to Occupational Therapists in general. Professor Sexton's academic career was marked by dedication to the profession, to the University, and most notably to her students.

# 2019 BARBARA SEXTON LECTURESHIP

## Dr. Jan Polgar

BSCOT, PhD, FACAOT, Professor Emerita School of Occupational Therapy



Dr. Jan Miller Polgar was a full-time faculty member in the School of Occupational Therapy at Western University from 1983 to 2018. Her research focused on mobility technology (wheeled mobility and vehicular technology) involving users across the lifespan. Her research included product development and technology transfer, product evaluation at both the conceptual stage and after technology transfer, and evaluation of different aspects of assistive technology use and outcomes. Her work also investigated consumers' perspectives on technology use (both assistive and vehicular technology). She is the co-author of the last two editions of *Assistive Technologies: Principles and Practices*, the leading textbook on the subject, globally. With her co-author, Dr. AM Cook, she refined the Human, Activity, Assistive Technology Model (HAAT) that is used to guide assistive technology development, evaluation and service delivery.

Dr. Miller Polgar taught in the Occupational Therapy and the Health and Rehabilitation Sciences programs. She was the Associate Dean: Graduate and Postdoctoral Programs in the Faculty of Health Sciences from 2009-2014. One of her greatest pleasures was watching students mature as occupational therapists and following their achievements after graduation. She is well known as Dr. Mandich's teacher!

## Poster #s, Titles, & Authors

- #1 **The Emotional Impact of Parkinson's Disease on Occupational Engagement**  
*Karl Boyes, Hilda Chmait, Lindsay De Melo, Ruth McLean, Carlye van der Woerd, Payton Wallman & Dr. Jeffrey D. Holmes*
- #2 **Exploring Work-Readiness Programs for Youth with Autism Spectrum Disorder: A Scoping Review**  
*Rheanna Bibby, Samantha Bondy, Daniel Burdo, Anita Chou, Karyn Li, & Dr. Jessie Wilson*
- #3 **Cannabis Effects on Fitness to Drive and Driving Performance in Young Adults**  
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*Krystin Elson, Celina Everling, Rachel Mason, Muneeba Shabbir, & Dr. Jeffrey Holmes*
- #10 **Canadian Healthcare Programs' Responses to the Truth and Reconciliation Commission**  
*Andrea Aarssen, Curtis Hiemstra, Michelle McGinnes, Rachel Looker, Jasmine O'Halloran, & Dr. Angie Mandich*
- #11 **Occupational Engagement in Older Adults with Comorbid Dementia and Age-Related Vision Loss: A Scoping Review**  
*Melanie Blue, Mikaela Dunn-Robinson, Mariah Kipfer, Taylor Lyons, Taylor Schmidt, Jasveen Virk, & Dr. Colleen McGrath*

# **The Emotional Impact of Parkinson's Disease on Occupational Engagement**

## **Poster #1**

*Karl Boyes, Hilda Chmait, Lindsay De Melo, Ruth McLean, Carlye van der Woerd, Payton Wallman & Dr. Jeffrey D. Holmes*

### **Background:**

A diagnosis of Parkinson's Disease (PD) can impact participation in self-care, productivity, and leisure, and symptoms including anxiety, depression and apathy can have a great impact on quality of life. Symptoms of anxiety, apathy, fear, and embarrassment can diminish occupational performance and the ability to engage in daily functioning. This loss of meaningful occupation can have a significant impact on individual identity and lead to feelings of frustration and grief.

### **Purpose:**

The purpose of this study was to explore the lived experience of PD focusing on how emotions impact occupational engagement and performance in areas of self-care, productivity, and leisure.

### **Methods:**

This study was a secondary summative content analysis of a visual narrative study completed at Western University by Holmes et al. (2017). Transcripts were coded using line-by-line coding. Consensus on final codes was achieved through a collaborative and iterative process. The final codes were analyzed using QSR International's NVivo 10 qualitative data analysis software to determine the frequency of occurrence and used to develop themes.

### **Findings:**

After exploring the emotions related to the lived experience of PD, eight themes emerged: appreciation, anxiety, frustration, embarrassment, sadness, fear, loneliness, and range of emotion. Appreciation was expressed for engagement in occupation, family, diagnosis, technology, and health care teams. Participants discussed anxiety regarding their future and a decrease in function. Anxiety led to avoiding occupations and was also described as a symptom of PD. Individuals expressed frustration as function was lost or changed. It was also experienced because of the healthcare system and due to a lack of understanding from others. Embarrassment was experienced by participants due to their changing appearance and abilities that accompanied PD. Participants spoke about sadness due to a loss of productivity and leisure. Depression and apathy were also described as symptoms of PD. Fear related to falling was the most common fear among participants followed by fear of an unknown future, social interactions and fear related to their ability to function. Loneliness was experienced as social engagement was reduced and participants experienced a loss of occupation. Participants described having a range of emotions either feeling emotionally labile or not being able to emote due to their PD.

### **Implications for OT Practice:**

This research further informs clinicians of the relationship between the emotions experienced by clients and their occupational engagement. A decrease in function in self-care, productivity, and leisure due to PD can lead to emotions of anxiety, frustration, embarrassment and fear while engagement in productivity and leisure can lead to emotions such as appreciation. Emotions of anxiety, apathy, embarrassment and fear can lead to avoidance and a decrease in self-care, productivity and leisure occupations. Sadness and loneliness can result from a loss in productive and leisure occupations. Finally, depression, anxiety and apathy can be experienced as symptoms of PD. A limitation of this study was that baseline trait tendencies of participants were not measured. Also, the methods did not allow for an iterative process of revisiting participants, limiting the depth and breadth of discussed experience. Future research could explore how individuals cope with the emotional experience of PD.

# Exploring Work-Readiness Programs for Youth with Autism Spectrum Disorder: A Scoping Review Poster #2

*Rheanna Bibby, Samantha Bondy, Daniel Burdo, Anita Chou, Karyn Li, & Dr. Jessie Wilson*

## **Background and Purpose:**

Currently 1 in 66 children and youth live with Autism Spectrum Disorder (ASD) in North America. This group experiences substantial difficulties obtaining and retaining meaningful employment after graduating from high school. Increased supports and transition-based programs for youth with ASD have the potential to increase their quality of life, improve their feelings of self-worth, and support the development of their occupational identity. The purpose of this scoping review was to explore the characteristics and features of work-readiness programs used to teach vocational skills for youth with ASD. Findings are discussed from an occupational perspective.

## **Methods:**

This review used the Arksey and O'Malley (2005) Scoping Review Framework as a guide to exploring the current literature on work-related readiness programs for youth with ASD. Searches were conducted using the following databases available through Western University Library website: CINAHL, Pubmed, SCOPUS, PsycINFO, Medline, Web of Science. The search terms are as followed: Autism Spectrum Disorder OR ASD OR Asperger\* Syndrome AND Adolescence OR Youth OR Teenagers OR Students OR Middle school AND Employment OR Vocation OR Work OR Supported Employment OR Employment of Disabled, job AND Education OR Job Training OR Secondary Education OR High School Education OR Training. Both qualitative and quantitative research was included, however; grey literature was excluded because there was an adequate breadth of scholarly studies that met all inclusion criteria.

## **Findings:**

16 articles were included in this scoping review. Findings revealed six common characteristics and features of work-readiness interventions available for youth with ASD: Mentorship or Supported Employment; Jobsite Training or Modelling; Technology; School Support; Vocational Skill Programs; and Behavioural Modification. The most common characteristic of the programs utilized mentorship or supported employment, and the majority of the studies (15/16) utilized multiple approaches to helping youth with ASD obtain job-readiness skills.

## **Implications:**

Occupational therapists are well-suited to support employers and youth with ASD in developing work-readiness skills by, bringing a holistic and flexible approach to developing skills. In particular, matching the unique needs of the individual to the job demands, and integrating approaches that support the *doing* of a task or an activity that is meaningful to the individual. Future research could include Occupational performance outcomes and longitudinal studies that evaluate the success of youth with ASD gaining and maintaining competitive employment within the Canadian context. Some limitations of the study include: grey literature was not included for this review as information from academic sources was deemed adequate and a few studies were excluded due to limited access to full text article, thus, the breadth of our understanding of the topic could be limited.



# **Cannabis Effects on Fitness to Drive and Driving Performance in Young Adults**

## **Poster #3**

*Caron Chen, Katherine Chippure, Jasleen Grewal, Chris Kimm, Travis Randell, & Dr. Liliana Alvarez*

### **Background:**

Young drivers exhibit the highest rates of cannabis consumption, as well as involvement in motor vehicle collisions. As such, they constitute a high-risk population for impaired driving. Due to the recent legalization of cannabis in Canada, it is critical to establish the impact of cannabis use on driving performance and fitness to drive in this population. Although previous research has examined the effects of cannabis use on driving, there is limited research addressing its impact in young drivers.

### **Purpose:**

The purpose of this evidence-based review was to synthesize and appraise the quality of the available evidence examining the impact of cannabis use on driving performance and fitness to drive in young drivers, aged 18 to 24 years.

### **Methods:**

This evidence-based review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher, Liberati, Tetzlaff, Altman & the PRISMA Group, 2009). The following databases were searched: PubMed, PsycINFO, CINAHL, IEEE, EMBASE, Web of Science, and SCOPUS. Key search terms included "Driving", "Cannabis" and related synonyms. The search yielded 3038 articles. After removing duplicates (N=1311), interrater reliability was achieved prior to title and abstract screening by having all members complete the screen for the same five articles and confirm that there were no discrepancies. After title and abstract screening (N=1289) followed by full text screening (N=22), eight articles were included in this review. An additional article was added through manual search for a total of nine articles. Articles were included if they met the following criteria: (1) evaluated the impact of cannabis use on driving performance (i.e., on a driving simulator) and/or fitness to drive (i.e., on road assessment) (2) published in English; (3) published between the years of 2008 and 2018; (4) included participants within the targeted age range of 18 to 24 years. Articles were excluded if they (1) reported non-primary and/or exclusively qualitative research studies; (2) assessed the impact of other psychoactive drugs without isolating the effects of cannabis; (3) consisted of grey literature. Articles that passed the title and abstract screening were assessed for quality and classified using the American Academy of Neurology (AAN) (AAN) (Edlund et al., 2004). Data was summarized, reported and analysed in order to reveal potential implications of the findings.

### **Findings:**

All nine articles were classified as Class II evidence, thus allowing for Level B recommendations. Sample sizes ranged from N=12 to 85 participants and included participants between 18 to 37 years of age. Each study measured various components pertaining to driving performance or fitness to drive. Summarized data revealed cannabis-impaired driving presents a hazard to road safety as cannabis consumption is likely to reduce mean speed and reaction time among drivers, as well as increase following distance, lane position variability, and collision risk. In terms of useful field of view (UFOV), there was inadequate evidence to test the relationship between cannabis and driving performance. Although a single class II study found significantly decreased performance in UFOV assessments, the AAN criteria requires at least two class II studies to make a Level B recommendation.

### **Implications:**

This evidence-based review indicated that cannabis use impacts the driving performance and fitness to drive of young adults. Limitations of this study were that non-English studies and studies published more than 10 years ago were excluded. Another limitation was that only level B recommendations could be made as a result of small sample sizes in each of the included articles and heterogeneity of outcome variables. These results can help inform the direction of future research, including stable metrics and larger sample sizes on young adult population. Such research can in turn inform legislation and the development of education strategies to reduce impaired driving.

# Services for Indigenous Children and Youth with Autism Spectrum Disorder in Canada: Factors Influencing Access

## Poster #4

*Stephanie Dobozi, Vanessa Hart, Aleisha Labbe, Murphy Macdonald, Colette Schroll, Sara Schugt, & Dr. Jessie Wilson*

### Background:

Autism Spectrum Disorder (ASD) is one of the most prevalent childhood neurodevelopmental disorders in Canada, currently impacting 1 in 66 children and youth between 5 to 17 years of age. Current research highlights a significant under detection of ASD among Indigenous children in Canada, and a lack of subsequent services to meet their unique needs. Understanding the factors contributing to this service gap is critical for occupational therapists to address the needs of Indigenous children and youth with ASD.

### Purpose:

The aim of this scoping review was to explore the extent and nature of literature regarding services for Indigenous children and youth with ASD in Canada, and to critically examine the factors associated with the under detection and subsequent lack of services for this population.

### Methods:

This scoping review utilized Arksey and O'Malley's (2005) framework and incorporated both academic and grey literature. Inclusion criteria: peer-reviewed (academic only), published between 2000-2018, English, Canadian Indigenous populations, ASD diagnosis, and child/youth or family context. Exclusion criteria: Indigenous populations outside of Canada, opinion piece (academic only), and the population of focus includes comorbid diagnosis. Databases searched were: Scopus, CINAHL, Web of Science Core Collection, PubMed, PsycINFO, iPortal, Nursing and Allied Health Database, ProQuest Dissertations & Theses Global, Indigenous Knowledge Portal, The University of Western Ontario's shared library catalogue, and Google Advanced. Search terms included: *Indigenous, Aboriginal, 'First Nations', 'first people', Inuit, Cree, Metis, autism, ASD, 'autism spectrum disorder', autistic, asperger, 'Rett syndrome', 'pervasive developmental disorder, pdd, child\*, youth, adolescen\*, fami\*, and kinship*. Seven academic and nine grey literature sources were included. Themes were identified through two rounds of thematic analysis using both an inductive approach to identify emerging themes through an occupational lens, and a deductive approach to support adequate representation of the views and values of those from diverse cultural backgrounds through an intersectional lens.

### Findings:

The initial round of thematic analysis identified the following themes: geographical access, social access, resource access, and culturally safe access. These themes align with the environmental dimension of the Canadian Model of Occupational Performance and Engagement, highlighting the importance of employing an occupational lens to better understanding these factors. The second round of thematic analysis, informed by an intersectional lens, did not uncover new themes, but rather added depth and reinforced the interconnectedness of the themes.

### Implications:

This review has contributed to the understanding of the multiple and interconnected factors that limit the access to services for Indigenous children and youth with ASD. Limitations include the implicit influence of the Western perspective within which the research was conducted and the lack of consultation with Indigenous peoples. Therefore, it is recognized that interpretations of the results may not encompass Indigenous ways of knowing. Future research needs to shift from deficit-based to a strength-based approach that aligns with Indigenous values, ways of knowing, and perspectives on health and wellbeing. Researchers and service providers should focus on improving collaboration with the federal and provincial governments and key stakeholders in Indigenous ASD communities as it relates to the development and provision of services.

# Exploring “Risk” in the Everyday Lives of Individuals with Parkinson’s Disease

## Poster #5

Balpreet Dhugga, Chan Mi Kim, Alyssa Lawrence, Karen Lee, Samantha Richardson, & Dr. Jeffrey Holmes

### Background:

Parkinson's disease (PD) is a neuropsychiatric disorder. Research indicates that PD affects individuals' independence in completing activities of daily living (ADLs) and instrumental activities of daily living (IADL). It has also been shown that PD can significantly impair an individual's quality of life (QoL). There is a vast amount of research that outlines the risks of living with PD; however, there is currently a limited amount that focuses on how individuals living with PD experience and navigate risks in their daily lives. Studying the risk that individuals with PD experience in their daily lives could help occupational therapists (OTs) working with this population understand how risk influences occupational participation.

### Purpose:

The purpose of this study was to explore the types of risks individuals with PD experienced and how they navigated these risks in their daily occupations. Risk was defined as a goal-directed behaviour with the potential to bring about outcomes that are unwanted or dangerous. For this study, risks in physical, social, and emotional domains were identified.

### Methods:

This qualitative secondary data analysis examined data from the parent study “*Understanding Parkinson's through visual narratives: “I’m not Mrs. Parkinson’s”*”. Using a social constructionist approach with a visual narrative inquiry the transcripts of 19 participants were coded for the types of risks that participants discussed partaking in and how they managed those risks.

### Findings:

Initially, authors identified three types of risk that the participants discussed: physical (66%), social (12%), and emotional (22%) risk. The most common physical risk was falls. Isolation was the most common social risk, and sense of loss was the most common emotional risk. Furthermore, it was also identified that participants managed these risks by adopting one of the following main strategies: modifying the risk (54%), facing the risk (25%), or avoiding the risk (21%). Participants most often preferred to modify their occupations to reduce the physical, social, or emotional risk associated with partaking in them. Modifications were made to either the occupation, the environment or to the individual. Modifications sometimes reduced one type of risk while increasing another type. Risk was faced when participants prioritized occupational engagement over the associated risk of the occupation, or when an individual wanted to avoid an alternative less desirable risk. Participants avoided occupations when they perceived the risk to be too high or when they attributed little importance to the occupation. Some participants who experienced occupational loss secondary to risk avoidance found new occupations that provided similar benefits.

### Implications:

OTs are uniquely positioned to recognize the importance of occupations in the lives of their clients living with PD, as well as the associated risks involved with engaging in them. OTs must work in a holistic, client-centered manner to evaluate risk, educate their clients on the risks of their occupations and suggest harm-reducing modifications whenever possible. It is important for OTs to respect their client's autonomy when it comes to choosing their occupations and to empower them to make educated decisions about the risks they will face. When risky occupations are not seen to be meaningful to the client, cessation of the occupation may be the best solution. If a meaningful occupation can no longer be performed, OTs should think creatively to guide their clients towards new alternative occupations that will provide similar benefits. Through the holistic lens of occupational therapy practice, OTs can empower their clients who are living with PD to find solutions that help navigate risk and promote continued engagement in meaningful occupations.

# **How Does the Use of Technology Influence Children's Physical Performance of Handwriting?: A Scoping Review**

## **Poster #6**

*Liora Chovitch, Grace Gladwell, Dorinda Howland, Lauren Macgillivray, Nicole Zomer & Dr. Angela Mandich*

### **Background:**

Handwriting is an important activity for elementary school students, especially between kindergarten to grade five. The literature highlights that in recent years teachers have noticed a decline in children's handwriting performance; a phenomenon that may be due to less classroom time spent on handwriting and more time spent using technology. This decrease in handwriting ability is especially evident in the field of school based occupational therapy (OT), where the majority of referrals are for handwriting difficulties. Previous research has shown that the activity of handwriting involves six developmental skills: orthographic coding, visual-motor coordination, motor planning, motor programs, motor control, and kinesthetic feedback.

### **Purpose:**

The purpose of this scoping review is to explore how the use of technology influences children's physical performance of handwriting in order to better guide future OT practice.

### **Methods:**

A scoping review was conducted according to Arksey and O'Malley's (2005) framework. The following databases were searched; Scopus, CINAHL, PsycInfo, Pub Med, and Education Database. Search terms included paediatric population synonyms (child\*/youth/ kid\*) and handwriting performance synonyms (handwrit\*/print\*/penmanship). In addition, the reference lists of selected articles were hand-searched. Articles were included if they were written in English, included children aged 4-10/Jr. Kindergarten - grade five, and addressed both handwriting and technology. Articles were excluded if they were published before the year 2000, included children who wrote in languages other than English and French, and addressed other modes of communication and not handwriting. The initial search produced 5328 articles, of which 13 articles were selected for this review; each article was reviewed by a minimum of two group members. A deductive approach was used whereby the six components of handwriting guided the thematic analysis.

### **Findings:**

As identified by previous research, six themes were generated after a thorough review of the 13 articles: orthographic coding, visual-motor coordination, motor planning, motor programs, motor control, and kinesthetic feedback. The different forms of technology investigated in the studies included an iPad and tablet with the use of both a finger and stylus, a keyboard, a robotic arm and a robotic-assisted stylus. The following gaps in the literature were identified: a lack of research on handwriting from an occupational lens by addressing the interaction of physical, cognitive, and affective components; the use of cognitive load when first learning to use technology; how different types of technology can benefit or impair writing skills for children with disabilities; how technology is introduced into the school curriculum; and how physical handwriting skills translate over to functional school performance.

### **Implications:**

The findings of this review can assist OTs when deciding how to integrate technology into interventions for handwriting. Rather than using technology to replace pen and paper, it is recommended that practitioners prescribe technology that mimics graphomotor skills that are essential for the development of handwriting. Additionally, it has been expressed that as a result of undeveloped motor programs in young children, practitioners must consider the child's age when making decisions about how to incorporate technology into therapy. As demonstrated by the results, it is crucial for practitioners to understand that even though technology may increase the engagement in handwriting tasks, it is vital to provide a balance of activities whereby the child continues to have exposure to handwriting. In addition, practitioners need to always remain client-centred, and in particular cases where clients are limited in their abilities to create text, technology may be an integral tool to help them participate in school.

## **Virtual Reality as an Assessment Tool for Children with Acquired Brain Injury Poster #7**

*Carl De Guzman, Aiden Huynh, Boris Potoyants, Jason Ramsumair, Aamir Shaikh, & Dr. Jessie Wilson*

### **Background:**

Acquired brain injury (ABI) is the leading cause of disability and death in children (Anderson, Spencer-Smith, & Wood, 2011). Early assessment of ABIs in childhood is necessary for optimal functional recovery (Andruszkow et al., 2014). The complexities of everyday tasks make it difficult for assessments to simulate real world situations.

### **Purpose:**

The purpose of this scoping review was to identify factors supporting or refuting the use of VR as an assessment tool in children with ABI. A scoping review is warranted as very there is limited research on VR being used as an assessment tool in children.

### **Methods:**

A scoping review was conducted using the Arksey & O'Malley's (2005) framework to identify gaps in the literature and map key concepts related to reasons supporting or refuting the use of VR as an assessment tool in children. Relevant literature was located via five databases: PUBMED, CINAHL, EMBASE, SCOPUS, and the Nursing and Allied Health Databases. Search terms included relevant synonyms of children, assessment, and VR. The initial search yielded 178 articles. After removing 49 duplicates, 129 citations were screened based on the title and abstract. Of these 129 articles, 9 were included based on specific inclusion criteria: The article must be published in English, utilize VR as an assessment tool, and participants in the articles had to be age 19 or younger with an ABI. Exclusion criteria included: conference articles, grey literature, inaccessible, or utilized VR as a treatment but not an assessment tool. Inductive thematic analysis was utilized by all researchers and their supervisor to establish codes, which were then grouped under overarching themes. An inductive thematic analysis was utilized to identify these themes and interpretation was provided by the researchers to extract analytical insights. Agreement was achieved amongst the research team on codes and subsequent themes.

### **Findings:**

Three themes supported the use of VR: motivation, use of VR environments to facilitate participation in occupations, and clinical utility. Clinical utility was further broken down into subcategories: accessibility and low cost, ease of use, meaning, sensitivity, reliability, and validity. Three themes refuted the use of VR in ABI: side effects, generalizability, and the just right challenge.

### **Implications:**

Gaps identified were related to a lack of higher-level academic literature on VR as an assessment tool, a lack of occupational based assessments, and a lack of clarity in differentiating the severity of ABI. The supporting and refuting factors highlighted in this scoping review can help clinicians determine the appropriateness of VR as an assessment tool in children with ABI. Limitations of this study include that it only reviewed English articles, did not include grey literature, and did not assess quality of articles. Future higher-level studies should further investigate the quality of the articles to determine the efficacy of VR as an assessment tool. VR shows promise as an emerging assessment tool because it is meaningful and ecologically valid.

# Exploring the Lived Experience of Care Partners of People with Parkinson's Disease

## Poster #8

*Emily Brooks, Rebecca Ferguson, Sarah McMullin, Dana Roth, Merissa Scott, Alysha Zandarin, & Dr. Jeffrey Holmes*

### **Background:**

Parkinson's Disease (PD) is an all-encompassing condition that impacts daily functioning, and often involves additional assistance from a care partner. Emotional, physical and cognitive challenges may arise when caring for a loved one with PD. Current research focuses primarily on experiences of burden associated with the care partner role, however, changes in care partner occupational profiles and the lived experience associated with caregiving is not well documented.

### **Purpose:**

The purpose of this study is to explore the lived experience of care partners for individuals with PD, in order to obtain an occupational perspective of their role and identify potential needs for support.

### **Methods:**

This study was a secondary analysis of qualitative data, using a conventional content analysis approach based on Hsieh and Shannon (2005). A total of seven interview transcripts from a previously-conducted parent study by Holmes et al. (2017) were divided for analysis among six student investigators. The parent study was a visual narrative inquiry aiming to describe the lived experience of individuals with PD. English-speaking individuals with idiopathic PD were recruited to participate in the parent study from a movement disorders clinic, PD support groups, and PD conferences in Southwestern Ontario. Care partners became interested in being involved in the study and were added to the parent study following revised ethics approval. Interview transcripts from the parent study were included if they contained dialogue from a PD care partner. Six of the transcripts were derived from interviews with both the client with PD and their care partner, and one transcript was derived from a focus group session with three PD care partners in attendance. Coding was completed in an inductive and iterative manner, with a specific focus on identifying content within the transcripts related to the PD care partner experience. Codes were then combined into meaningful clusters reflecting the overarching themes of the phenomenon. QSR International's NVivo 11 qualitative data analysis software was used throughout the coding process to aid with data organization and analysis.

### **Findings:**

Five female and one male care partner participated in interview sessions with their loved one with PD, and two female and one male care partner participated in the focus group. Five primary themes emerged, with one theme comprising subthemes: Change in Care Partner Occupations, Social Support Networks, Impact on Care Partner Wellbeing (including subthemes of Care Partner Stress, Need for Independent Occupations, and PD in the Background), Unmet Support Needs Experienced by Care Partners, and Acknowledging Care Partner Identity. The identified themes illustrate a shift in the care partners' daily routines, the positive impact of social supports, and how being a care partner impacts their overall well-being in relation to stress. Further, the themes illustrate the care partners' current unmet needs regarding access to and awareness of community supports, and how they identify with the care partner label.

### **Implications:**

The findings have implications for health care practice, education, and research. Practicing health care professionals should consider referring care partners to other health services that better address the unique needs they experience throughout their journey. Further, care partner perspectives should be included in school curriculums to equip health care workers to deal specifically with care partners' needs and daily experiences. Limitations of the study included the small sample size, and an inability to distinguish between individual care partner dialogue within the focus group transcript. Future research should explore the current availability of support services for PD care partners in Southwestern Ontario and determine the best resources to address any unmet support needs.

## Exploring the Effect of Compression Vests on Balance for Individuals with Post-Concussion Balance Impairments

### Poster #9

*Krystin Elson, Celina Everling, Rachel Mason, Muneeba Shabbir, & Dr. Jeffrey Holmes*

#### **Background:**

Balance impairments are a common symptom of post-concussion syndrome. Persistent balance impairments may inhibit individuals' ability to engage in meaningful daily occupations. Compression vests have been used in other populations to address issues with balance and anxiety and are currently being used by some healthcare practitioners in Ontario to address concussion-related balance impairment. However, current literature supporting this approach is sparse.

#### **Purpose:**

The primary purpose of this study is to explore the effect of wearing a compression vest on balance for individuals post-concussion. The secondary purpose of this study was to identify the effect of wearing a compression vest during balance tasks on self-reported anxiety post-concussion.

#### **Methods:**

A secondary data analysis was conducted using data collected from a larger, longitudinal project that sought to investigate novel treatments for concussion recovery. Fifty-four individuals between the ages of 12-18 who had experienced a concussion within the last 90 days were selected from the primary research study based on the availability of balance and anxiety-related data. Participants had previously been randomized to a compression vest group ( $n = 20$ ) or a no-vest control group ( $n = 34$ ) in the parent study. Participants completed tasks from the Modified Clinical Test of Sensory Integration of Balance while standing on a Biodex Biomechanical Balance System, which generated a measure of stability. Nine of the participants completed the Generalized Anxiety Disorder 7-item (GAD-7) scale before and after engaging in balance tasks while wearing the compression vest. A between-subjects ANOVA ( $p < .05$ ) was conducted to analyze if donning a compression vest led to improved balance task performance. A paired t-test was conducted to analyze the change in GAD-7 scores to determine if wearing a compression vest affected anxiety.

#### **Findings:**

Balance did not significantly differ for participants that wore the compression vest during balance tasks compared to those in the no-vest control group, suggesting that wearing the compression vest did not affect participants' balance. Participants that wore the compression vest experienced significantly reduced anxiety after completing the balance tasks while wearing the compression vest as indicated by reduced overall scores on the GAD-7.

#### **Implications:**

The results of this study indicate that use of compression vests to remediate balance impairment post-concussion may not be effective. However, the use of compression vests to target anxiety post-concussion was supported by the findings. Occupational therapists are encouraged to exercise caution when using compression vests as a means to improve balance and anxiety post-concussion, as the literature supporting this approach remains sparse. Limitations of this study included that participants were not recruited on the basis of having a post-concussion balance impairment. The outcome measures used to assess balance and anxiety in the parent study were also not well aligned with the research purpose, which may have affected the overall results. Future research should include more ecologically valid and occupation-focused outcome measures to better understand the effect of compression vests on balance and anxiety in the daily lives of participants.

# Canadian Healthcare Programs' Responses to the Truth and Reconciliation Commission Poster #10

*Andrea Aarssen, Curtis Hiemstra, Michelle McGinnes, Rachel Looker, Jasmine O'Halloran, & Dr. Angie Mandich*

## **Background:**

After consultation with more than 6500 Indigenous people, Canada's Truth and Reconciliation Commission (TRC) published 94 "Calls to Action" to redress the legacy of Canadian residential schools and progress reconciliation efforts. The TRC's 24th "Call to Action" referenced the need for medicine and nursing schools to educate their students on Indigenous health issues. It is critical that this and other calls to action for health and education be addressed by all healthcare professions.

## **Purpose:**

The purpose of this scoping review was to examine how Canadian university healthcare programs have responded to the TRC's calls to action for education and health. As colonization is considered a social determinant of health, it is important that healthcare professionals, including occupational therapists, are well-equipped to provide culturally competent care to Indigenous clientele.

## **Methods:**

A scoping review was conducted using Arksey and O'Malley's (2005) Scoping Review Methodological Framework to explore how Canadian healthcare programs are responding to the TRC's calls to action. The following databases were searched through Western University's Library website: CINAHL, Education Database, Nursing and Allied Health, PubMed, Scopus, iPortal: Indigenous Studies and Research Tool, and Dissertations and Theses. Grey literature reports on responses to the TRC from Canadian university healthcare program websites were also included. Search terms referenced education (e.g., education, curriculum, university), healthcare programs (e.g., health professional\*, occupational therap\*, nurs\*, medicine), and the TRC ("Truth and Reconciliation Commission"). English language articles published from 2008 to 2018 were included to reflect the authors' language fluency and the inception of the TRC. Articles were excluded if they were not situated in the Canadian Indigenous context, if they did not reference healthcare education, or if they were university-wide responses rather than specifically those of healthcare programs or faculties. The initial search produced 488 documents, of which 12 grey literature reports and 2 peer-reviewed articles were deemed relevant for the review. Four researchers collated the data in a spreadsheet and identified key themes that spanned the literature in an iterative manner.

## **Findings:**

Six themes emerged from the data regarding steps that are being implemented by healthcare programs in response to the TRC: recruitment and retention, partnering with Indigenous communities, integrating Indigenous knowledge, postcolonial educational content, staff and faculty resources, and experiential learning.

## **Implications:**

This scoping review identified several efforts that Canadian healthcare programs have made in response to the TRC's calls to action for education and health. Findings suggested that the majority of reconciliation efforts reflected the visions of Indigenous inclusion and reconciliation indigenization within Gaudry and Lorenz's (2018) framework for indigenizing the academy. Healthcare programs in Canada are encouraged to respond to the TRC's calls to action in ways that move healthcare education toward the vision of decolonial indigenization. Future research is needed to track the progress of current indigenization initiatives as well as to identify programs that have yet to respond to the TRC. Moving forward, Western University's OT department can also use the research from this scoping review, together with input from Indigenous stakeholders, to ground their response to the TRC.



# **Occupational Engagement in Older Adults with Comorbid Dementia and Age-Related Vision Loss: A Scoping Review**

## **Poster #11**

*Melanie Blue, Mikaela Dunn-Robinson, Mariah Kipfer, Taylor Lyons, Taylor Schmidt, Jasveen Virk, & Dr. Colleen McGrath*

### **Background:**

Dual diagnosis of dementia and age-related vision loss (ARVL) among older adults is a common occurrence; however, there is minimal literature describing its impacts on occupational engagement.

### **Purpose:**

The purpose of this scoping review was to explore how co-occurring dementia and ARVL impacts the occupational engagement of older adults.

### **Methods:**

A scoping review was completed using the Arksey and O'Malley (2005) framework to determine gaps in the literature pertaining to the influence of dementia and ARVL on occupational engagement among older adults, and to review the current literature on this topic. Searched databases included: Pubmed, Cumulative Index to Nursing & Allied Health Literature (CINAHL), Scopus, Embase, Allied and Complementary Medicine Database (AMED), Medline, and PsychInfo. Search terms were: older adults (elder\*, seniors, geriatrics, aged, old people), vision-loss (glaucoma, macular degenerations, diabetic retinopathy, age-related vision loss, vision impairment, visual deficit), dementia (Alzheimer's, lewy body, lewy bodies, frontotemporal dementia, mixed dementia, vascular dementia, demented, cognitive impairment) and occupational engagement (participation, activity, socialization, recreation, leisure, self-care, productivity, activities of daily living [ADLs], instrumental activities of daily living [IADLs]). Inclusion criteria was as follows: written in English, used occupational engagement as an outcome measure, was available through the Western University Library website, and participants in the study were 65+ years old with a comorbid diagnosis of dementia and ARVL. 9 articles met inclusion criteria for this scoping review, after title, abstract, and full-text screens of the initial database search. Grey literature was also searched, and 4 sources meeting inclusion criteria were included. Articles and grey literature sources were coded using thematic analysis.

### **Findings:**

Five trends were found to impact older adults' engagement in meaningful occupation while living with a dual diagnosis of dementia and ARVL including: (1) pragmatic factors, (2) preoccupation with safety and loss of independence, (3) appropriate use of compensatory strategies, (4) coping, dependence, and caregiver distress, and; (5) institutional challenges with access to quality care.

### **Implications:**

The authors identified multiple solutions to rectify the barriers to occupational engagement listed above. (1) Attend to an individual's sensory needs by optimizing visual inputs, verbally communicating in a clear manner, and allowing individuals to stay in familiar environments. (2) Increase joint working across areas of practice to allow them to develop necessary skills when working with individuals with dementia and vision loss. (3) Enable individuals with this dual diagnosis to collaborate with developers of assistive technology to allow them to understand the challenges experienced by these individuals. (4) Encourage participation in meaningful occupation to decrease the risk of further cognitive decline. (5) Enable joint working between vision professionals and dementia professionals which would facilitate sharing of best practice, knowledge, and skills in order to improve overall quality of care and facilitate occupational engagement.

The results of this paper identified minimal occupation-focused literature that exists on older adults with dementia and ARVL, identifying the need for further research on this topic. Additional literature would provide further solutions to the challenges identified and would contribute strategies to improving older adults' occupational engagement in their daily lives.