<table>
<thead>
<tr>
<th>PROJECT TITLE</th>
<th>PROJECT SUPERVISORS</th>
<th>STUDENT PRESENTERS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child &amp; Youth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluating Adherence to Return to School and Return to Activity Guidelines in Children Following Mild Traumatic Brain Injury</td>
<td>Carol DeMatteo</td>
<td>Samantha Anders</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Chia-Yu Lin</td>
<td>Kristen Johnson</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brent Lord</td>
<td></td>
</tr>
<tr>
<td>Exploring Occupational Therapists Activities Within the Partnering for Change (P4C) Model</td>
<td>Nancy Pollock</td>
<td>Ashlyn Dufresne</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Wenonah Campbell</td>
<td>Sarah Howse</td>
<td></td>
</tr>
<tr>
<td>Program evaluation of the expansion of the Partnering for Change service model in two Community Care Access Centres (CCACs)</td>
<td>Debra Stewart</td>
<td>Erin Godkin</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Susan Wynes</td>
<td>Kaitlyn Edwards</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frank Woodhall</td>
<td>Holly Brogan</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sharon Smith</td>
<td></td>
</tr>
<tr>
<td>An Evaluation of Parents' Satisfaction of CDRP's &quot;Short Term Goal Pathway&quot; Service Delivery Model</td>
<td>Sandy Gaik</td>
<td>Andrea Tsang</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Julia Lockhart</td>
<td>Susannah Mathews</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ryan Graham</td>
<td></td>
</tr>
<tr>
<td>Mind.me: Piloting a technology-friendly youth mental health program</td>
<td>Sandra Moll</td>
<td>Krystin Donais</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sarah Hobbs</td>
<td></td>
</tr>
<tr>
<td>The Developmental Profile of Children with Prenatal Substance Exposure</td>
<td>Brianna McGuire Holt</td>
<td>Dani Moulton</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Michelle Cardy Hall</td>
<td>Rachel Conway</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Melanie Read</td>
<td></td>
</tr>
<tr>
<td>24 Hour Postural Care: Literature Review and Parent Education Module</td>
<td>Lowana Lee</td>
<td>Shawn Lee</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Lindsay Bray</td>
<td>Stephanie Pueschel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lindsay Jarvis</td>
<td>Heidi Groh</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nicole Procopovici</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult &amp; Older Adult</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developing Partnerships to Improve Client Flow: An Environmental Scan &amp; Stakeholder Analysis</td>
<td>Susan Strong</td>
<td>Jaclin Whaley</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tabitha Hamp</td>
<td></td>
</tr>
<tr>
<td>Client and provider experiences with the self-help tool: My Back-Up Plan</td>
<td>Susan Strong</td>
<td>Aliya Satani</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Isiri Herath</td>
<td></td>
</tr>
<tr>
<td>A Business Case - The Value of an OT on a Community Mental Health Team</td>
<td>Susan Strong</td>
<td>Matt Harrigan</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jill Wyman</td>
<td></td>
</tr>
<tr>
<td>Using FITBIT® to Increase Walking Activity in Individuals with Schizophrenia</td>
<td>Gord Hirano</td>
<td>Amanda Buschau</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Andrew Reddick</td>
<td></td>
</tr>
<tr>
<td>Application of the “Do-Live-Well” concept in an inpatient mood disorder clinic: Advancing an occupational perspective to health promotion</td>
<td>Rebecca Gewurtz</td>
<td>Amie Mathews</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>(primary)</td>
<td>Brittany Nolan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sandra Moll</td>
<td>Emma Saaltink</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lori Letts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Authors</td>
<td>Pages</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>From homelessness to housing: How single women with a history of homelessness establish patterns of daily activity</td>
<td>Rebecca Gewurtz, in partnership with Deirdre Pike at the Social Planning and Research Council (SPRC) of Hamilton Ramya Bakaraju Valerie Balboa</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Program Evaluation of YWCA Encore</td>
<td>Anne Marie Collingwood Marnie Warman Julie Mogk Sabrina Pieczewski</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>The steps to engaging in neighbourhood activities for those with Age Related Vision Loss: A Critical Ethnography Study</td>
<td>Colleen McGrath Michelle Palmer Mara Fontana Maital Falkovitz</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Occupational Therapist Fitness to Drive Practices</td>
<td>Jennifer Michetti Maria Gera Trish Medeiros Katie Speers Joanna Wojcik</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Optimizing the vehicle environment for older drivers to promote safety behind the wheel</td>
<td>Brenda Vrkljan Julie Entwistle Sheila Garrett Jessica VandenBussche Colin McAskile Ghazal Bandeh-Bahman Kelsey Dickson Alex Giles</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Towards an age-friendly Hamilton: promoting aging in rental units</td>
<td>Lori Letts Jeffrey Zeuner Holly Robson</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>A scoping review of workplace accommodations and associated measures of the work environment for adults with autism spectrum disorder</td>
<td>Briano Di Rezze Ruxanda Pop Madiha Sultan Zonera Sharif Tony Wang</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td><strong>Interprofessional Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV &amp; Rehabilitation: Implementation and Evaluation of an Online Interprofessional E-Module</td>
<td>Sandra Moll Bonny Jung Rachel Schooley</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Geriatrics is the new black: Changing Student Attitudes, Learning Interprofessionally</td>
<td>Bonny Jung Annie Mo Alex Willox</td>
<td>48</td>
<td></td>
</tr>
</tbody>
</table>
Evaluating Adherence to Return to School and Return to Activity Guidelines in Children Following Mild Traumatic Brain Injury

Authors: Samantha Anders, Kristen Johnson & Brent Lord
Supervisors: Carol DeMatteo & Chia-Yu Lin
Institutional Affiliations: CanChild & McMaster University

Abstract
Objective: The objectives of this study were to explore the rates and predictors of adherence to Return to School (RTS) and Return to Activity (RTA) guidelines for children diagnosed with concussion.

Methods: Children aged 5-18 diagnosed with concussion followed longitudinally for up to 6 months in a prospective cohort. Children self-reported PCSS concussion symptoms, stage of RTS and RTA guidelines, cognitive and physical activity, were collected every 48 hours. At study completion the children and parents completed quiz evaluating knowledge of guidelines and study personnel rated their perception of child’s adherence and child and parent’s knowledge of guidelines. Pearson correlations were used to examine total concussion symptoms score versus RTS and RTA stage of guidelines. A logistic regression was used to determine which factors significantly predicted to adherence.

Results: Significant negative correlations were found between concussion symptoms and RTS and RTA guidelines, \( r = -0.448, p < 0.005 \); \( r = -0.389, p < 0.005 \). More than 50% of children adhered to each guideline. Children's scores on the knowledge quiz at 1 week for the RTS guidelines was the only variable able to significantly predict adherence.

Conclusion: Children are able to adhere to the RTS and RTA guidelines. No factor could consistently predict adherence to either the RTS or RTA guidelines for children following concussion.

Introduction/Literature Review
At present, mild traumatic brain injury (mTBI), or concussion, is rapidly becoming a serious public health issue, with increasing incidence and recognition of its effects in paediatric populations (Langlois, Rutland-Brown, & Wald, 2006). While children present with similar symptoms as adults, several investigators have pointed to a need for a conservative approach for children recovering from concussion due their unique physiological make-up (Purcell, 2009).

Based on the need for a more conservative approach, researchers at School of Rehabilitation Science and CanChild at McMaster University developed RTS and RTA guidelines for children under the age of 18 diagnosed with concussion (DeMatteo et al., 2015).

A key component of evaluating the effectiveness of these guidelines is being able to determine if children are adhering to recommendations. Several challenges have been identified in the literature regarding the measurement of adherence, such as low response rates from children, inaccuracy of parent reports, selection bias, inaccurate estimates from self-report measures, and gender differences in activity (Gagnon, Swaine, & Forget, 2009; Moor et al., 2015). The primary purpose of the following analysis was to explore children’s adherence to CanChild’s RTS and RTA guidelines. The investigators had three main hypotheses:

1. As symptoms decreased, stage of guideline (both RTS and RTA) would increase
2. Approximately 60% of children would adhere to each guideline
3. Various factors, such as age, gender, mechanism of injury, time since injury, history of previous concussions, total symptom scores, and child’s knowledge of the guidelines are factors that will influence children’s adherence to the RTS and RTA guidelines.

Methods
Children and youth aged 5 to 18 from Hamilton, Ontario who sustained an impact to the head or body, with a diagnosis of concussion within the last 12 months, and were symptomatic at time of recruitment were included. Children were excluded if they had a confirmed significant brain injury requiring resuscitation, admission to a pediatric critical care unit, or surgical intervention. Participants were recruited between November 2014 and March 2016. 85 participants were included in analyses initially.

Participants were asked to fill in surveys every 48 hours to report their symptoms, current stage on each guideline, and cognitive and physical activity. Study coordinators reviewed participants’ responses and provided a rating of adherence for each child on a seven point grading scale.

SPSS Statistics 23.0 was used for all analyses. Concussion symptoms and stage of guideline reported on the 48-hour surveys completed at recruitment, 1 week, 1 month, and 3 months were compared to evaluate the relationship of those variables over time for each guideline. A Pearson correlation analysis was used to investigate the relationship between participants’ symptom scores and corresponding stage of guideline, with a significance level of \( p < 0.05 \).
Participants were considered to have adhered to each of the RTS and RTA guidelines if the study coordinator rated them as having adhered to each guideline. Study coordinator’s ratings of adherence to the RTS and RTA guidelines were chosen as the dependent variable to be entered into the regression analyses. A binomial logistic regression was used for each guideline at recruitment, 1 week, 1 month, and 3 months to determine which factors significantly contributed to adherence at each time point.

Results
The correlation between total symptom score and stage of RTS guideline indicated that lower symptom scores were correlated with higher stages on the RTS guidelines ($r=-0.448$, $p<0.005$). Similarly, the correlation between symptoms and stage of RTA guideline indicated that decreased total symptom scores were correlated with higher stages on the RTA guidelines ($r=-0.389$, $p<0.005$).

Overall, approximately 50% of children adhered to each guideline. This proportion appeared to increase with time. More children appeared to have adhered to the RTA guideline than the RTS guideline.

Only children's scores on the knowledge quiz at 1 week was a statistically significant predictor of adherence to the RTS guidelines. For every one point improvement in children's scores on the knowledge quiz, the odds of a child adhering to the RTS guidelines at 1 week increased by a factor of 1.995 ($p=0.049$, 95% CI= 1.004 to 3.965).

Discussion
For both guidelines, the correlations indicated that concussion symptoms tended to decrease as children advanced through the stages of the guidelines. These correlations were the starting point for demonstrating that children may be adhering to the RTS and RTA guidelines, since the guidelines indicate that, for the most part, symptoms should resolve before children move on to the next stage.

The proportion of children who adhered to each guideline was less than what we originally hypothesized; this is an interesting finding given that we used a more conservative estimate than the adherence rates found in other literature (Gagnon et al., 2009; Moor et al., 2015). No one factor was consistently able to predict adherence to either the RTS or RTA guidelines.

Conclusions
The current study has limitations, so the results should be interpreted cautiously. However, the results nonetheless have important implications for clinical practice. While it appears as though at least half of children who receive the RTS and RTA guidelines adhere to them, thus far there are no factors that health care practitioners can use to identify which children are at risk of non-adherence.

References
Purcell, L. (2009). What are the most appropriate return-to- play guidelines for concussed child athletes? British Journal of Sports Medicine, 42(suppl 1), i51-i55.

Acknowledgements: The authors would like to thank the families for participating, the research team for data collection, and Carol DeMatteo and Chia-Yu Lin for their guidance during this research project.
Exploring Activities of Partnering for Change (P4C) Therapists
Ashlyn Dufresne and Sarah Howse, M.Sc. (OT) Candidates 2016, McMaster University
Supervisors: Wenonah Campbell, Ph.D. and Nancy Pollock, M.Sc. OT (Reg.) Ont.

Purpose: To explore how individual occupational therapists (OTs) delivering a new model of school-based service delivery called P4C allocated their time, and what factors may have influenced their use of time. Methods: Participants were 22 OTs practicing in 40 schools within the Peel, Hamilton Wentworth Catholic, and Halton school boards. OTs completed electronic logs consisting of time spent performing each of 10 P4C-related activities for each day they were in a school. Logs were analyzed to determine the percent of time each OT spent performing each activity. In addition, the log data were examined according to several factors that might have impacted OTs’ use of time, including: health care agency; school board; school; length of waitlist; school size; grade division; and individual OT. For each factor, the OT activity logs were summed and corresponding graphs were developed. Results: Overall, the graphs consistently showed that OTs spent more time working with small groups and individuals than they did whole classes. Of the factors considered, only the individual OT, size of waitlist, and grade division appeared to influence how OTs spent their time. Conclusion: An individual OT’s practice pattern is an important factor in understanding how time is spent within the P4C service delivery model. Size of waitlists and grade also appear to have an impact.

Introduction
Partnering for Change (P4C) is an innovative, evidence based, three tiered model, utilized by occupational therapists (OTs) delivering school based services (Missiuna et al., 2012a). Following the model, services are delivered at three levels, universal design for learning (UDL) (whole class), differentiated instruction (DI) (small groups), and accommodation (individual). Activities also include building educator and parent capacity through a range of activities and completing documentation (CanChild, 2015). Goals of P4C include early identification of students with special needs, building parent and educator capacity to manage student's needs, preventing secondary consequences and facilitating self and family management, and improving student's ability to participate successfully in school and at home (CanChild, 2015). The researchers sought to answer the following overarching research question: “How did individual occupational therapists delivering P4C spend their time, and what factors may have influenced their use of time?” Several sub-questions were posed to address this broader question.

Methods
During the P4C research project, 22 OTs were integrated into 40 school settings within the Peel, Hamilton Wentworth Catholic, and Halton school boards and delivered services one day per week across two school years. OTs were expected to record their activities in electronic logs for each day that they delivered P4C in a school. The activities documented in the activity logs were analyzed by factors that may have influenced OTs’ use of time including: health care agencies, school boards, schools, waitlists, school size, grade divisions, and OTs. Once categorized, descriptive statistics were completed for each factor using statistical software. The total time and mean time spent (in minutes) conducting each P4C-related activity was calculated for each factor. Because OTs varied in how many days per week they provided P4C, time spent was converted into percentages. For each factor, a corresponding graph (bar or line) was developed to illustrate findings in the clearest manner.
**Results & Discussion**

Factors that appear to influence how OTs spent their time include the individual OT, the number of students on the school’s waitlist, and grade divisions. It appears that individual OT practice styles are accountable for the largest proportion of variability in time spent conducting activities. OT practice patterns appear to be largely individual and did not appear to vary a great extent based on external factors. The relatively high proportion of time spent on DI as compared to UDL was unexpected since the P4C model places an emphasis on UDL. However, a possible explanation for these results may be that activities at the accommodation and DI level often require multiple sessions and therefore more time overall. Results also demonstrated multiple factors that did not appear to influence the amount of time OTs spent completing various P4C activities. These factors include the health care agencies, school boards, schools, and school sizes.

**Limitations**

Although this research project provided insight regarding how OTs spent their time, it is not without limitations. Despite the protocol developed, the description for each activity category in the electronic log may not have been clear enough to ensure that all OTs used the log entries in the same way. Therefore, each OT may have interpreted and documented time spent on activities differently. In addition, the logs did not necessarily encompass all time spent conducting P4C activities. The logs included an “other” category that was not quantifiable. Every activity category had an open text box where OTs could document time spent on activities that were not defined in the activity categories listed. This text was not analyzed within this project. The OT activity logs represent the percentage of time documented by OTs. Therefore, the total time spent by OTs, including undocumented time, remains unknown.

**Conclusion & Future Directions**

Implications of this research project include examining training and mentorship to ensure individual OTs are receiving the knowledge and support required to follow the P4C model. In addition, this research project identifies the importance of ensuring fidelity to the P4C model and therefore consistency. Regarding waitlists times, it is suggested that an emphasis be placed on educating OTs regarding the importance of following the P4C model regardless of the number of students waiting for school health services. By staying true to the P4C model OTs are able to address the needs of all children and optimize their time spent at the accommodation level for students with complex needs.

**Acknowledgment**

Thank you to Nancy Pollock and Wenonah Campbell for their time and mentorship. We would also like to thank Cindy DeCola and Leah Dix who generously took the time to review and assist us during the data analysis process. Finally, we would like to thank the other members of the P4C team who provided additional insight and recommendations.

**References**


Program evaluation of the expansion of the Partnering for Change (P4C) service model in the Central West (CW) and Hamilton Niagara Haldimand Brant (HNHB) Community Care Access Centre’s (CCACs)

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Faculty Supervisor: Debra Stewart, MSc. OT Reg. (Ont.), Associate Professor in the School of Rehabilitation Science at McMaster University
Onsite Supervisors: Susan Wynes, CW CCAC and Leslie Gaffney, HNHB CCAC

ABSTRACT: This program evaluation was conducted for CW CCAC and HNHB CCAC’s P4C and Occupational Therapy for Consultation (OT4C) school service model respectively. Semi-structured interview guides were utilized to interview key stakeholders. A directed content approach guided data analysis by using the three emerging themes from Lei, Wong and Stewart’s (2015) report. Interviews were transcribed and coded for the themes of quality, accountability and outcomes. Key recommendations for both regions emerged from this program evaluation.

BACKGROUND
An evidence-based innovative model was created- the Partnering for Change (P4C) model- in response to concerns about the traditional OT services in schools. The P4C model focuses on the collaborative relationship between therapists, educators, parents and students. Lei, Wong & Stewart (2015) conducted an initial P4C model program evaluation within CW CCAC and concluded that quality, accountability and outcomes were critical elements.

Although the original P4C model is currently not funded for the 2015-2016 academic year, the CW and HNHB CCACs expanded the model in different ways. The CW CCAC implemented an expansion of the P4C in 170 schools, completely eliminating the OT waitlists. The HNHB CCCAC created a hybrid model- Occupational Therapy for Change (OT4C)- that incorporates P4C principles and individualized care plans.

The purpose of this project was to expand on Lei, Wong & Stewart’s (2015) recommendations for program evaluation for the expanded P4C and OT4C models within the CW and HNHB CCACs, respectively. This summary outlines the similarities and differences within the three themes between CCAC sites and the lessons learned in the process.

METHODS
A qualitative approach for program evaluation and directed content analysis research design was chosen to strengthen the understanding of the models in both CCACs. The semi-structured interview guide was developed by the authors and Debra Stewart and was based on Lei et al.’s (2015) findings. Interviews were conducted in-person or via phone.

Maximal variation methods were used for purposeful selection of key stakeholders. Subsequently, interviews were conducted and audio-recorded after consent was obtained. The audio-recordings were transcribed and directed content approach for data analysis commenced. Hsieh and Shannon (2005) explained the goal of a directed approach to content analysis as validating or building upon earlier findings. First, key concepts were identified as initial codes, and then operational definitions were developed for each concept (Hsieh & Shannon, 2005). Next, coding consistency was required prior to independent data extraction by each author. This involved having the authors reach 75% coding agreement. Finally, all examples from the audio-recordings were arranged into thematic categories within overarching key concepts.

Limitations of direct content analysis include potential bias from researchers looking for particular themes, possible influence on participant responses and being blinded to contextual factors, all due to the focus on predetermined categories (Hsieh & Shannon, 2005). In order to overcome these limitations and increase the credibility and trustworthiness of the results, the authors implemented an audit trail and had the supervising researcher review the directed content analysis approach.

FINDINGS
The stakeholders and the number of participants that were interviewed for each in CW and HNHB CCAC respectively were: school board (3 & 10), OT (4 & 2) and CCAC (3 & 2). The findings below are organized by the areas of program evaluation: quality, accountability and outcomes. Additionally, results are compared between the CW and HNHB CCACs.

Quality: Teachers appreciated the increased access to OT services within both CCAC regions. This was more difficult in larger schools, as the OTs were required to prioritize their schedules while facing increased workloads. This was particularly pertinent in the CW CCAC due to the elimination of waitlists. In both organizations OTs targeted primary grades. It was noted in some CW and HNHB schools, the consistency of OT services was foundational to positive relationship building and knowledge translation. In CW CCAC, new P4C schools were still learning about the model and relationships were continuing to develop; unlike OT4C which was implemented in the same schools as the previous P4C project. In CW CCAC, the P4C model was introduced at the beginning of the school year to the school boards and schools, influencing the increased work expectations for the OTs. HNHB participants reported that more education about the OT4C model is needed. Within the HNHB schools, the OTs appreciated being in the classroom and providing strategies to fit the needs of the students, and many school
board participants reported on the collaborative input towards goals. A barrier that HNHB CCAC faced was caused by the delayed start in January for OT4C due to management turnover and system challenges.

**Accountability:** Across all schools in both CCAC regions, good communication was reported, leading to positive knowledge translation between OTs and teachers. The CW participants commented on knowledge translation extending to care coordinators, Special Education Resource Teachers (SERTs) and principals, while HNHB reflected on uncertainty between CCAC, schools and OT agencies. A component of accountability that was difficult to implement was the three tiers in the P4C model. For CW CCAC this was directly related to the elimination of waitlists that elicited more individual accommodations. HNHB participants reported that the bottom tier in the OT4C model, universal design for learning, was not commonly implemented because of the schools’ limited understanding of this tier. CW OTs stated that knowledge translation manifested through lunch and learn and mentorship meetings with OTs, compared to the HNHB which used informal OT-school meetings. The CW OTs addressed the need for specified roles that required them to be accountable for their intervention approaches.

**Outcomes:** Participants in both CCAC regions were satisfied with this new school-based delivery model. Specifically, the OTs in CW CCAC agencies were satisfied with the mentorship meetings. Both CW and HNHB CCACs found capacity building to be regularly occurring as participants stated it was evident through teachers beginning to utilize strategies provided by the OTs and the teachers beginning to identify children who require support. The models were associated with early identification across both organizations. CW OTs also saw an increase in student participation and self-esteem, while HNHB participants reported on increased confidence in students. CW CCAC participants commented on parental satisfaction with the removal of the waitlist and the use of differentiated instruction and universal design for learning in the classroom so older students did not feel singled out.

**DISCUSSION**

The findings suggest there are some similarities and differences across CCACs regarding their experiences with the expanded P4C and OT4C models. Both models are an extension of the P4C model and therefore have similar principles. Despite different methods used for implementation, both led to the emergence of the same themes and sub-themes in this program evaluation. These findings support ongoing program evaluation for continued implementation of these models of service delivery.

A key learning point from this evaluation was the importance of relationship building. Building strong positive relationships provides a foundation for knowledge translation and effective communication. Having an OT consistently in the schools and the opportunities for the OT to collaborate with school board representatives contributed to relationship building. These relationships are critical for the sustainability of the P4C and OT4C models in the school.

Relationship building, access and consistency of OT services, all contribute to the quality of the models. Once quality has been addressed, stakeholders can be held accountable. Increased accountability will encourage the use of all the tiers in the model. OTs can use all tiers and teachers can assist in implementing universal strategies. Teachers are more aware of the OTs’ scope of practice and are better able to identify children who could utilize OT services. This was more evident with the CW CCAC as a result of their strong relationships with the school board and teachers, education sessions, and OT mentorship meetings. Within HNHB CCAC, the change to a hybrid P4C model and the late start in this school year means that more communication is still needed among stakeholders to gain a better understanding of the OT4C model.

Quality and accountability together contribute to outcomes. The schools were satisfied in both CW and HNHB with the models, although HNHB participants had concerns with the implementation process this year. While HNHB participants commented on improved self-esteem, CW has began noticing improved participation in students. It was noted that parents were satisfied with CW’s expanded P4C model and with the idea that the children were not being singled out, but rather receiving services in small group settings when appropriate. Parent satisfaction, in turn, reduced the complaints fielded by the CW CCAC intake workers. Noticing participation and satisfaction from parents takes time and are future goals for the HNHB.

**FUTURE DIRECTIONS & LIMITATIONS**

The findings of this evidence-based project should be examined in light of certain limitations. In this qualitative study, a purposeful sample was selected which comes with potential participant bias. In turn, the background and experiences of this sample may not be representative of all stakeholders involved in the expanded P4C model. The primary objective of this project was to explore and evaluate individual experiences with the expanded models and was not to generalize the results to other settings. To confirm or extend the findings from this project, future research should use a larger sample, include parents, and invite all OTs (via surveys) to share their experiences. Future research is needed to evaluate the true implementation of the tiered approach, as it was difficult to accomplish this in the first year of implementation.

**ACKNOWLEDGEMENTS**

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**REFERENCES**


An Evaluation of Parents’ Satisfaction of Children Developmental Rehabilitation Program’s “Short-Term Goal Pathway” Service Delivery Model

INTRODUCTION

Children Developmental Rehabilitation Program (CDRP) developed the Short-Term Goal Pathway (STGP) service delivery model in response to tackle the issue of long wait times for pediatric rehabilitation services. STGP is an expedited pathway for children (<18 y.o) with occupational performance issues. Occupational therapists (OTs) collaborate with parents and children to develop meaningful occupational goals using the Canadian Occupational Performance Measure (COPM)\(^1\). In STGP, children receive up to six months of treatment, with a check-in point at 3 months using COPM as an outcome measure. Measuring consumer satisfaction is an important pragmatic component in the delivery of healthcare services, as it provides input for the advancement of quality and efficiency of care, which enables patient-focused healthcare\(^2\). This study aims to examine parents’ satisfaction of CDRP’s STGP as a service evaluation.

METHOD

This study employed a mixed methods cross-sectional design via a survey to collect both quantitative and qualitative data. Three student OTs consulted with both the existing literature and expert opinion feedback from CDRP’s OTs for the development of a parent satisfaction survey.

Participants were parents whose children had completed STGP. CDRP’s OTs carried out initial contact to obtain preliminary consent, and subsequently, student OTs contacted potential participants to provide the consent form and survey.

Quantitative analyses consisted of examining response frequencies and average Likert scale ratings. Paired t tests were utilized for statistical analysis of average response frequencies. Constant comparative analysis was carried out during thematic analysis. Student OTs independently developed codes, and then collaboratively developed categories and themes.

RESULTS

Response rate = 45% (41 out of 80)

Quantitative analyses

The number of ‘agree’ versus ‘did not agree’ responses were calculated for each participant and averaged. Across all three domains, significantly more parents agreed than disagreed with survey items. Parents consistently agreed on the OTs explanation of services, usefulness of goal setting and that they felt included in the therapy (Items 1-3). Parents were less agreeable that length of OT services was sufficient (Item 4). Considerable variance in the response ratings was observed for a few of the survey items.

<table>
<thead>
<tr>
<th>Survey Items (#)</th>
<th>Average Response Frequency / Participant</th>
<th>P value</th>
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<tbody>
<tr>
<td>OT Services (9)</td>
<td>‘Agree’ 7.67, ‘Did not agree’ 1.33</td>
<td>&lt; 0.0001***</td>
</tr>
<tr>
<td>Child’s Progress (5)</td>
<td>‘Agree’ 4.06, ‘Did not agree’ 0.94</td>
<td>&lt; 0.01*</td>
</tr>
<tr>
<td>Overall (14)</td>
<td>‘Agree’ 11.72, ‘Did not agree’ 2.28</td>
<td>&lt; 0.0001***</td>
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</table>

Table 1. Average response frequency of ‘agree’ versus ‘did not agree’ items of participants. Paired t test, *p < 0.01 statistical significance

Figure 1. & 2. Average rating of satisfaction survey items amongst parents. \(n = 18; \text{mean} = 4.27; \text{median} = 5; \text{mode} = 5; \text{range} = 4\)
RESULTS

Qualitative analyses
Five main themes emerged from analysis of the survey comments related to both OT services and child’s progress towards identified goals.

1) OT’s approach to practice (Seven participants)
   • “…OT was very passionate, understanding and helpful with providing exceptional care...”
   • “…OT was always prepared to answer any questions...”

2) Discontentment with length of service (Four participants)
   • “…length of service was too short.”
   • “…we would prefer to have OT on board for longer time frames with no need for re-referrals.”

3) Goal setting issues (Four participants)
   • “…I think we set the wrong goals…”
   • “…however the outcomes, as measured by the goal setting were not strong...”

4) Ongoing development (Eight participants)
   • “My child continues to use all of the methods the therapist taught...”
   • “…my child is more receptive to trying things since therapy.”
   • “…we now have more insight into the why...”

5) Ongoing challenges (Seven participants)
   • “…my child still struggles with writing”
   • “…some goals have backtracked to where she was before treatment...”

DISCUSSION & CLINICAL IMPLICATIONS

Based on the study findings, it is critical that OTs continue to embrace therapeutic use of self and to provide services in a collaborative and inclusive family-centred manner, as establishing rapport with children and their parent(s) is clearly the cornerstone of a solid therapeutic alliance. Secondly, it is essential that therapists proactively ensure that parents acknowledge the length of service offered by STGP, to enable informed decision making and realistic expectations in terms of progress and goal attainment. This will also touch upon the possibility of STGP reenrollment. Thirdly, therapists should educate parents on the minimal clinically important difference (MCID) of the COPM and review such when outcome measures are obtained, so parents are aware of the meaning behind the scores. This would further allow parents to reflect on their expectations for change, and to perhaps reconsider assumptions. Other assessments, such as Perceived Efficacy and Goal Setting System (PEGS) and Goal Attainment Scale (GAS) can supplement the COPM, to facilitate effective prioritization of goals. Finally, therapists should remain cognizant of the transferability and longevity of recommendations to ensure that strategies or techniques are long lasting, as many parents reported gaining insight into their child’s capabilities via suggestions.

FUTURE DIRECTIONS

This preliminary research study provides foundation for additional research studies of the STGP, and set the stage for a formal program evaluation in the future. It is also recommended that the OTs of STGP invite parents involved in therapy to focus groups, to further investigate parental satisfaction and other aspects of the service delivery model. To increase response rate, surveys should be completed by parents as a procedural part of STGP, which will increase sample sizes. Lastly, additional analyses of participant and child characteristics is proposed, to determine any correlations between survey responses and participant characteristics, such as child’s diagnosis and amount of change demonstrated on performance and satisfaction ratings of the COPM during treatment.

REFERENCES

Abstract
In the past decade, youth mental health has become a healthcare priority in Ontario. Two occupational therapists therefore developed mind.me: a program designed to increase youth wellbeing, mental health literacy, and confidence by combining psychoeducation with online mental health resources. This program was piloted in partnership with staff at a community-based youth drop-in centre. Objectives: This program evaluation seeks to answer three questions: 1) Does mind.me impact participants' mental wellbeing and/or stigmatized beliefs? 2) What are the key ingredients of program implementation that need to be considered? and 3) Is it feasible to continue mind.me? Methods: A pre-post, non-randomized single group study design (N=12) was adopted in this program evaluation, using quantitative standardized tools and qualitative feedback. Pre-post quantitative data was explored using interpretative statistics. Qualitative data was coded to identify key aspects of program implementation. Results: There were no statistically significant differences in participants' wellbeing, stigma or confidence. Qualitative data revealed four key tensions in program implementation: 1) The strengths and pitfalls of e-mental health resources, 2) The richness and challenges of having diverse participants, 3) The importance of youth engagement, and 4) The need to consider the program's environmental context. Conclusion: Six recommendations are made to inform future iterations of the mind.me program.

Introduction and Literature Review
Neuropsychiatric disorders are the leading cause of global disease burden for young people (WHO, 2003). Despite this prevalence, only a fraction of youth affected by mental illness receive treatment (Government of Canada, 2006). A literature review identified 19 unique mental health programs aimed at youth living in developed countries (see additional handout for more information). While there are several such programs in Canada, there is a lack of research on programs conducted in non-academic community settings. In order to address this gap, two occupational therapists (OTs) developed mind.me: an 8-week program combining group psychoeducation with links to e-mental health resources including mobile apps, video games, and websites incorporating cognitive behavioral therapy. Two initial pilot programs were co-led by an OT and a youth leader at a culturally diverse youth drop-in centre in a mid-sized urban city in southwestern Ontario between October 2015 and April 2016. This study evaluates the pilot implementation of mind.me by addressing 3 questions: 1) Does mind.me impact participants' mental wellbeing and/or mental health stigma? 2) What are the key ingredients of program implementation that need to be considered? and 3) Is it feasible to continue mind.me?

Methods
Design: A pre-post, non-randomized single group study design was adopted, using both quantitative standardized tools and qualitative feedback to capture the study's process and outcomes from the perspectives of participants, facilitators and evaluators.
Participants: The target group for the program was English-speaking youth (ages 16-25). Although the target sample was 8-10 participants per group, recruitment was challenging, therefore each session of mind.me began with 6 participants (N=12).
Data Collection: Participants completed pre- and post-group surveys during the first and last sessions. The surveys included 5 sections: 1) Demographics and mental health experience; 2) The Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) (Taggart, Stewart-Brown & Parkinson, 2016); 3) The Opening Minds Anti-Stigma Scale (MHCC, 2015); 4) A scale asking participants to rate their confidence in helping individuals with mental health problems on a 1-7 Likert scale; and 5) Open-ended feedback questions. Qualitative data sources also included researchers' field journals and an interview with program developers.
Data Analysis: Pre- and post-group data from the WEBWMS and Opening Minds Anti-Stigma Scale was compared at the individual and group level. If assumptions were met, paired t-tests were used to analyze the difference in pre-to-post scores. For participants' confidence scores, a Wilcoxon Signed Rank test was used to analyze this difference. Statistical significance was set at p<0.05. For qualitative data, an interpretive description approach (Thorne, Kirkham, & McDonald-Emes, 1997) informed the iterative process of inductive coding and identification of key themes.
Ethics and Consent: Approval was received by the Hamilton Integrated Research Ethics Board and informed consent obtained from all participants.
Results
The average age of participants was 22.75 (range=19-29). Eleven of the 12 youth reported they had experienced a mental health issue. Pre- and post-surveys were available from 8 of 12 participants.
The quantitative outcome data showed no evidence for a statistically significant change. For the WEBWMS, the pre-group mean was 41.13 and the post-group mean was 42.75 ($t=0.67, p=0.52, n=8$). For the stigmatizing attitudes subscale of the Opening Minds measure, the pre-group mean was 22.63 and the post-group mean was 20.50 ($t=1.65, p=0.14, n=8$). For the stigmatizing behaviours subscale, the pre-group mean was 19.00 and the post-group mean was 17.75 ($t=0.92, p=0.39, n=8$).

Lastly, the pre-group confidence score was 3.88 and the post-group 4.63 ($z=-1.41, p=0.16, n=8$).

The following 4 implementation themes emerged from the qualitative analysis of participants' responses to open-ended questions, researchers' field journals, and an interview with developers:

**Theme 1:** The strengths and pitfalls of combining e-mental health resources with mental health promotion: despite the value of e-resources, access to computers and wifi was challenging at times for both facilitators and participants.

**Theme 2:** The richness and challenges of having a diverse group of participants: differences among participants meant that they could learn from each other, but those with lower literacy struggled with the content at times, describing it as “a wall of words.”

**Theme 3:** The importance of youth engagement: feedback from participants suggested that there be more opportunities for experiential learning and discussion rather than an emphasis on teaching content.

**Theme 4:** The need to consider the environmental context in which the program is delivered: the closed 8-week group format was challenging to implement, for example, in a drop-in centre.

Feasibility issues for *mind.me* included: recruitment challenges, inconsistent attendance, and high attrition (33% for each group).

**Recommendations**

The mixed methods approach informed 6 recommendations for *mind.me* which are aligned with the principles of youth engagement (MHPS, 2010): 1) The study design of future program evaluations should include a control group and ideally random assignment; 2) Developers of *mind.me* should reflect on the primary goal of the program and whether it is education-focused or intervention-focused; 3) Facilitators should consider how to structure *mind.me* to cater to all learning styles of participants; 4) *Mind.me*’s developers should allow the youth more time to discuss the material and engage in conversation; 5) *Mind.me*’s developers should consider their goals for integrating e-mental health into the program, measuring progress towards those goals, but also experiment with other formats of sharing information; 6) Developers should consider altering the program's delivery to match the host organization's philosophy and ensure stakeholder involvement from the earliest stages of program development.

Strengths of this study include its mixed methods design, an approach that supplied context to a lack of statistical significance, and researchers' prolonged engagement with *mind.me* as participant-observers. Limitations to this study include its lack of statistical power due to its small sample size, lack of comparison group meaning no causal conclusion can be drawn, and significant attrition.

**Conclusion**

This program evaluation did not find evidence that a youth mental health promotion program incorporating e-mental health technologies had a significant impact on participants’ wellbeing or stigmatized beliefs. Lessons related to program implementation will inform future iterations of the program and may be of interest to other clinicians working in mental health with youth in Ontario. The program is not feasible in its current format, but further program evaluation should be conducted after the recommendations above are implemented.

**Acknowledgements**

Thank you to the McMaster School of Graduate Studies’ Student Proposals for Intellectual Community & Engaged Scholarship (SPICES) Program for funding the pilot implementation of *mind.me*. We are grateful to Mariko Kai-Brown and Jordanna Laman (Ngen Youth Centre), Nosheen Akhtar, Ramanjit Garcha, Carol DeMatteo, Dr. Sandra Moll, and all of the participants of *mind.me* for their engagement.

**References**


Abstract:

**Purpose:** The aim of this scoping review was to improve our understanding of how PSE impacts the development of infants and young children over the first six years of life with the goal of establishing a developmental profile for exposed children. **Methods:** The Arksey and O’Malley (2005) scoping review framework was used to conduct a comprehensive review of literature in response to our research question “How does prenatal exposure to alcohol and illicit drugs impact the development of infants and children, 0-6 years?” **Results:** Results indicate children with PSE most frequently demonstrate heightened stress reactions, sensory processing challenges, and difficulties learning from experience. Challenges increase with respect to the occupational demands and perceived developmental expectations of each age and stage. **Conclusion:** The brain-based difficulties exposed children experience lead to a variety of presentations observed through children’s daily occupations. Increasing the awareness of the challenges that exposed children aged 0-6 years experience, will serve to not only support earlier identification and diagnosis, but will also ensure their success throughout childhood.

**INTRODUCTION**

Prenatal exposure to alcohol and illicit drugs can significantly impact the biopsychosocial development and associated functioning in children. Early intervention for this population has been highlighted in the literature as a key protective factor for positive long-term outcomes (Olson & Montague, 2011). In order for early intervention to be appropriately targeted, earlier identification of these children is imperative. Unfortunately, these children are currently not being identified until school age, as their challenges become more noticeable with increasing environmental demands and decreasing external support (L. Scott, personal communication, May 6, 2016). Early identification of prenatal substance exposure (PSE) relies on the awareness of common presentations in young children. This is an evident gap in the literature and is the emphasis of this scoping review. The purpose of this scoping review was to improve our understanding of how PSE impacts the development of infants and young children over the first six years of life. The ultimate goal was to establish a developmental profile of infants and young children with PSE. The resulting profile will be part of a larger provincial project working to develop an evidence-based service delivery framework that will meet the unique needs of young children with PSE and their families.

**LITERATURE REVIEW & METHODS**

The Arksey and O’Malley (2005) scoping review framework was used to conduct a comprehensive literature review in response to our research question “How does prenatal exposure to alcohol and illicit drugs impact the development of infants and children, 0-6 years of age?” Databases, including Cochrane Library, DynaMed Plus, CINAHL, and PubMed, as well as OVID-EMBASE, OT Seeker MEDLINE and PsycINFO were accessed to identify articles related to the outcomes of exposure. Limits narrowed the search to English language and human subjects. Inclusion and exclusion criteria were identified post hoc, based on specifics of the research question and new learning that occurred throughout the scoping review. Inclusion criteria included pediatric samples of children ages 0-6 years exposed prenatally to alcohol or illicit drugs with the expectation for independence. Notably, in spite of the challenges, these children also have many strengths, which are also described in Table 1.

**RESULTS & DISCUSSION**

Development of the brain and central nervous system is significantly compromised by PSE. As a result, challenges experienced by children with PSE are often referred to as ‘brain-based difficulties’ (Olson & Montague, 2011). Results from this scoping review indicate these challenges most frequently present as heightened stress reactions, sensory processing challenges, and difficulties learning from experience. Challenges in these areas lead to difficulties with adaptive functioning – the ability to function day to day, by independently adjusting to the environment and regulating oneself to effectively engage and meet behavioural expectations. The manifestations of these challenges vary at each age, depending on the occupational and environmental demands of that developmental stage. Typical occupations for children ages 0-6 years include feeding, sleeping, and interacting/playing with others. As children progress through each stage the task demands of each occupation increase along with the expectation for independence. Table 1 outlines a profile of presentations that caregivers and clinicians may observe in children with PSE, from infancy to school-age. Notably, in spite of the challenges, these children also have many strengths, which are also described in Table 1.

<table>
<thead>
<tr>
<th>Table 1: Age-Related Presentations of PSE</th>
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<tr>
<td><strong>Infancy</strong></td>
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<tr>
<td>• Increased irritability, frequently fussy, and difficult to soothe</td>
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<tr>
<td>• Hypersensitive to light, touch and sound; take longer to habituate to sensory stimuli</td>
</tr>
<tr>
<td>• Variable tone, tremors, and abnormal reflexes</td>
</tr>
<tr>
<td>[seminal references: CPS, 2016; Healthy Child Manitoba, 2010]</td>
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</table>

**Abstract:**

**Purpose:** The aim of this scoping review was to improve our understanding of how PSE impacts the development of infants and young children over the first six years of life with the goal of establishing a developmental profile for exposed children. **Methods:** The Arksey and O’Malley (2005) scoping review framework was used to conduct a comprehensive review of literature in response to our research question “How does prenatal exposure to alcohol and illicit drugs impact the development of infants and children, 0-6 years?” **Results:** Results indicate children with PSE most frequently demonstrate heightened stress reactions, sensory processing challenges, and difficulties learning from experience. Challenges increase with respect to the occupational demands and perceived developmental expectations of each age and stage. **Conclusion:** The brain-based difficulties exposed children experience lead to a variety of presentations observed through children’s daily occupations. Increasing the awareness of the challenges that exposed children aged 0-6 years experience, will serve to not only support earlier identification and diagnosis, but will also ensure their success throughout childhood.
• Difficulty establishing routines:
  o SLEEP:
    ▪ Unpredictable sleep patterns
    ▪ Difficult to soothe to sleep
    ▪ Difficult to re-settle upon awakening
  o FEEDING:
    ▪ Increased distractibility
    ▪ Increased oral-hypersensitivity and subsequent gagging
    ▪ Delayed oral-motor development; insufficient suck patterns, decreased activity tolerance
    ▪ Engage in shorter feeding sessions

Toddlerhood
• Fragmented sleep patterns
• Increased time spent in deep, non-REM sleep
• Reduced sleep duration
• Absence of stranger anxiety
• Resistant to new tastes and textures
• Delayed transition to self-feeding & solid food
• Persistent delayed oral-motor development

Preschool-Age
• Delayed development of executive functions: decreased attention span, difficulty following directions
• Increased responsive behaviours associated with transitions
• Prolonged tantrums
• Language:
  o Strong expressive, but delayed receptive skills
  o Excessively talkative & intrusive
  o Difficulty establishing & maintaining friendships:
    ▪ Difficulty reading nonverbal cues
    ▪ Difficulty respecting personal space
    ▪ Overly friendly
  o Excessive need for affection
  o Difficulty learning new skills
• Delayed development of motor coordination: difficulty kicking & catching a ball, etc.
• Appear to always be “on-the-go”
• Disrupted sleep pattern, increased bedtime resistance, higher rates of sleep anxiety & night awakenings, reduced sleep duration, difficulty re-settling
• Challenges with self-feeding & transition to solid foods
• May present as sensory seeking and/or avoiding

School-Age
• Delayed development of executive functions: working memory, attention span, impulse control, emotional regulation
• Difficulty with transitions
• Hyperactive
• Uninhibited
• Overly inquisitive
• Difficulty with fine and gross motor control
• Poor satiety control, constantly snacking, demonstrate frequent texture refusals
• Continued need for naps

As children progress through each stage, the task demands of independence. In early childhood years, parents serve as the child’s “external brain”, constantly providing guidance and adapting the environment to a) meet the child’s needs, b) keep them safe, and c) ensure they succeed (L. Scott, personal communication, May 6, 2016). While this is a natural progression, it can mask some of the difficulties experienced by children with PSE in their early developmental years. Upon entering school-ages, the external brain is slowly removed, and children with PSE become more noticeable, as they continue to rely on that external support to adapt their environment and enable appropriate and meaningful occupational engagement (Olson & Montague, 2011). However, as evidenced by the presented profile, there are many characteristics that children with PSE may demonstrate in early stages of development. It is anticipated that increased awareness of this profile may promote early identification amongst caregivers, teachers and primary healthcare practitioners.

CONCLUSION & FUTURE DIRECTIONS

High quality evidence related to children aged 0-6 with PSE is severely limited. Further research is required to fully understand the developmental profiles of exposed infants and young children. However, extensive clinical experiences, combined with the available moderate to strong evidence indicate that these children have difficulty with greater stress reactivity, sensory processing, and learning from experience. These challenges lead to a variety of presentations observed through children’s daily occupations. In the early stages of childhood, the challenges and presentations highlighted above may be masked due to low occupational and cognitive expectations and high levels of external support. Therefore, increasing the awareness of the challenges that exposed children aged 0-6 years experience, will serve to not only support earlier identification and diagnosis, but will also ensure their success throughout childhood.

ACKNOWLEDGEMENTS

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REFERENCES


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Title: Literature review and parent education module: 24 hour postural care

Abstract

Children with neuromuscular disorders have changes in muscles tone and voluntary movement and have difficulties re-positioning themselves. When spending a prolonged period in one position, they may develop contractures, negatively impacting occupational performance. Therefore, it is important to consider the postural alignment of the child over a 24 hour period in standing, sitting or sleeping. The objective of this study is 1) to review existing literature on 24 hour postural care for children with neuromuscular conditions and 2) to create a web module to guide parents and caregivers of children with postural care needs. A literature review was conducted and the results showed a lack of high quality evidence in the existing literature. However, there is a growing body of evidence to support the use of 24 hour postural care. The results of the literature search were analyzed and compiled into a list of key findings with clinical relevance. The findings were utilized to create a web module for parents and caregivers through the perspective of the biomechanical model.

Introduction

Children with cerebral palsy and other neuromuscular disorders often experience altered muscle tone as a result of spasticity or hypotonia. (National Collaborating Centre for Women's and Children's Health (NCCWCH), 2012). Unlike their typically developing peers, children with non-progressive brain disorders have difficulty in repositioning themselves. Being in one position for an extended period of time increases the risk of developing contractures (Rodby-Bousquet, Czuba, Hägglund & Westbom, 2013). Rodby-Bousquet et al. (2013) found that in young adults with cerebral palsy, asymmetrical positioning in childhood led to an increased risk of developing upper and lower extremity contractures, hip dislocations, scoliosis and difficulty repositioning. These issues led to problems with motor movement and decreased ability to participate in occupations of self-care, productivity and leisure (Rodby-Bousquet et al., 2013). Based on this identified need, Occupational Therapists and Physical Therapists have a critical role in implementing postural care programs in children with spasticity, to reduce the risk of developing contractures which negatively affects function later in life (NCCWCH, 2012). As children are in many different positions throughout the day including both wake time and sleep, it is important to consider their postural alignment over a 24 hour period. Twenty-four hour postural management programs considers the all the positions a child is in, including sitting, lying and standing. Often, positioning aids and/or positioning systems are used to optimise postural alignment in these positions. A literature review was conducted to identify, appraise and summarize the existing evidence on the topic of 24 hour postural care. The key findings of the literature review were utilized in creating a web module for parents and caregivers of children with postural needs.

Methods

As a preparatory step for the literature search, a PICO (population, intervention, comparison, outcome) question was formulated to encompass the essence of the objective. The population was children 0-18 years old with neuromuscular conditions; the intervention was 24 hour postural management programs; and the outcome of interest was reduction of contractures and pain, body alignment, sleep quality, and functional ability. Only some of the PICO components were selected to formulate our search terms to ensure an extensive and exhaustive search, as there is currently limited evidence in the literature. However, the entire PICO components are reflected through our inclusion and exclusion criteria. Databases and websites were searched using the “6S pyramid”, beginning with the highest levels of evidence and moving down the hierarchy (Straus et al., 2011). An electronic search was conducted of the following sources: National guideline Clearinghouse, NICE, CMA, Clinical key guidelines, Cochrane, Health Evidence, Pubmed, ProQuest, Medline, CINAHL, EMBASE and OTSeeker.

The inclusion criteria were studies that had a focus on postural care for children (0-18 years old) with an underlying neuromuscular or neuromotor condition. Both qualitative and quantitative studies
were included as both study designs can contribute to the development of an evidence-based postural care program. All interventions for postural care were included, such as postural care programs, commercial or non-commercial positioning systems/devices, and orthotics. Studies with a variety of outcomes were also included, such as musculoskeletal changes, mobility, hip migration, sleep quality, functional abilities, etc. As the population of interest is children with neuromuscular and neuromotor condition(s), studies focused on positioning in healthy children were excluded. Furthermore, studies were excluded based on publication before the year 2000 to ensure that the evidence retrieved was up-to-date. Key findings from the literature review were used as basis for the creation of a web module using the software Articulate Storyline 2. Knowledge translation principles from the Canadian Institute of Health Research were applied in creating the module. The module highlights the importance of postural care and provides recommendations for positioning children in standing, sitting, and lying. The module includes lay language, pictures and questions to ensure understanding among parents and caregivers.

Results

A variety of research topics were found through the literature search. Some of the major topics that emerged were positioning systems for standing, seating, night-time, and hip placement. Other research focuses included interventions that addressed spasticity, gait, respiration, and continuous postural care. The retrieved articles also included existing literature reviews, a best practice guideline, and a consensus statement on topics related to postural care. A total of 19 articles met inclusion criteria. The selected articles included the following number of articles per category: standing frames: 2; adaptive seating systems: 1; hip placement: 2; night-time positioning: 7; spasticity: 1; respiration: 1; gait: 1; 24 hour postural programs: 2; best practice guidelines: 1 and consensus statement: 1. While the literature review found that there is limited high quality evidence on 24 hour postural care, existing literature indicated:

- Posture management equipment supporting hips and pelvis reduced hip subluxation and dislocation (Pountney, Mandy, Green, & Gard, 2009).
- No significant difference was found in sleep quality or pain with the use of night-time positioning systems compared to sleeping unsupported (Blake et al., 2015; Hill, Parker, Allen, Paul & Padoa, 2009)
- Standing frames increased hamstring length, the ease of ADL completion and transfers (Gibson, Sprod, & Maher, 2009).
- Children as young as three had the ability to communicate their feelings on the comfort of postural equipment (Humphreys et al., 2012).
- Respiration should be considered when finding optimal positions, especially during sleep to ensure the child is getting adequate oxygen throughout the night (Hill et al., 2009).
- Each program should be individualised based on pain, sleep assessment, hip migration percentage, prognosis and activity level (Gericke, 2006).
- None of the literature found adverse effects as a result of postural care.

Conclusion

Currently, there is limited evidence on the topic of postural care and there is an apparent need for further research in this area. This literature review found a limited number of studies with varying levels of evidence supporting the use of a night-time positioning system, adaptive seating system and continuous postural care (Angsupaisal et al., 2015; Blake et al., 2015; Gough, 2009). A clinical guideline and multidisciplinary consensus statement suggested that postural management strategies should be highly individualized, child-centred, and include comprehensive caregiver training (Gericke, 2006; NCCWCH, 2012). While a 24 hour postural care program should be individualized to the child, there are essential principles that should be considered and implemented for all programs. Furthermore, a 24 hour postural care program requires parental involvement in the execution of strategies and equipment usage. Therefore, it is beneficial to translate the existing evidence into a comprehensive web module for parents.
References


An Evaluation of the Service Delivery of the Adolescent Program at the George Jeffrey Children’s Centre. Review of Effectiveness: Part Two

Authors: Heidi Groh (Student Occupational Therapist), Erin Phillipps (Student Occupational Therapist). Supervisors: Scott McBean MSc. OT Reg. (Ont.), Lindsay Jarvis MSc. (PT), and Nicole Procopovici MSc. (SLP). Project Supported through clinical placements at the George Jeffrey Children’s Centre (GJCC).

Introduction: The transition from adolescence to adulthood is a dynamic experience that presents many challenges (Stewart et al., 2010). The transition may be especially difficult for adolescents with disabilities and their caregivers, who face a number of unique barriers to participation (Stewart et al., 2002). In a previous evaluation of the Adolescent Program at GJCC, Woodruff & Schulz (2015) analyzed goal attainment, caregiver satisfaction, and waitlist management. The purpose of the current project was to build on the recommendations of Woodruff & Schulz (2015) by analyzing the effectiveness of models of service delivery and investigating whether the trends observed in Woodruff & Schulz (2015) have over to the following year. Additionally, this study evaluated change in program effectiveness following changes made to service delivery in 2015.

Literature Review: Research on the transition to adulthood for youth with disabilities has grown over the last decade (Stewart et al. 2010). However, much of this research is conceptual in nature and does not capture the practical issues experienced by individuals in transition. Research cites the powerful influence of environmental factors on the transition process, suggesting that “the effectiveness of services and supports also need to focus on the influence of the environment, including service providers, community members and legislation, and person-environment interactions” (Stewart et al., 2013).

Methods: Youth and caregivers involved in the goal attainment evaluation and caregiver satisfaction analysis included all youth who received services from January 2015-December 31, 2015. Total and discipline-specific mean wait times and transitions for this time period were also evaluated. Outcome measures used to quantify goal accomplishment were the Canadian Occupational Performance Measure (COPM) and the modified Goal Attainment Scale (GAS). The Measure of Processes of Care-20 (MPOC-20) was used to measure caregiver satisfaction with family centered services (King et al., 2004). A paired t-test was used to evaluate the statistical significance of changes in mean goal scores for satisfaction and performance COPM scales for individual clients.

Results & Discussion:

Goal Achievement: The mean change scores for performance and satisfaction were 3.10 (SD = 1.33) and 3.43 (SD = 1.56), respectively. The paired t-test for performance was t (43) = 15.48 (p<0.001). The paired t-test for satisfaction was t (43) = 14.58 (p<0.001). Changes in the pre-post test scores for both satisfaction and performance were statistically significant. For goals measures using the modified GAS, 79% of goals were either met or exceeded expectations. For all goals in 2015, 69% were achieved versus 31% not achieved.

Caregiver Satisfaction: The caregiver response rate for the MOC-20 was 36.8%. Mean scores for each domain fell within two points of the maximum score. Standard deviations were fairly low for all domains (range 0.82-0.88) representing a low variability in scores. Based on these results, it appears as though families are largely satisfied with all domains related to the family centered care they received through the Adolescent Program. Providing youth and caregivers with educational sessions, access to important information and collaborating with clinicians and families to coordinate care are all likely factors that contribute to the high scores seen on the MPOC-20.

Waitlist/Transitions: In 2015, a total of twenty-nine (n=29) youth were picked up off of the waitlist. Overall, the combined average wait time for all disciplines was 1.162 years. In the year 2015, a total of fifty requests for service were made to the Adolescent Program. Occupational therapy accepted the greatest number of transitions (N=24), followed by SLP (N=18), and PT (N=8). In 2015, occupational therapy and speech language pathology accepted a greater number of transitions than physiotherapy services, which may explain why those two disciplines are experiencing a longer wait time.
**Service Delivery:** The type of service delivery which had the highest percentage of goals achieved was group (81.8%), followed by consultation (71.3%), consultation and group (70%), consultation and other (57.1%), consultation and education (50%), other (50%), and direct service (40%). There was a greater proportion of goals achieved for groups than for consult and direct modes of service delivery. The relative success of groups may be understandable considering that groups merge elements across Rosenbaum & Gorter’s (2011) six ‘F’ words of childhood disability. Due to the focus of goals and limited time restrictions, it is not always feasible or necessary to address all areas within consultative or direct sessions. Secondly, according to the literature, some goals are better achieved in a group format (Wiegerink et al. 2010). Consultation allows youth to practice goals in the intended context, promoting generalization and likely contributing to an increased level of success. It may be reasoned that direct therapy requires more of the client, caregiver, and therapist’s time in a structured, therapeutic environment. While very structured learning of a new skill can be reasoned to be a great way to initially teach a skill, this mode of service delivery may reduce the overall generalizability of the skill across environments.

**Comparison to data from Woodruff & Shulz (2015):** Overall, data regarding goal achievement, caregiver satisfaction and waitlist/transition is largely similar to findings from Woodruff & Schulz (2015). Program data reflecting goal achievement for the year 2015 saw slightly more statistically significant change with lower p values for COPM performance and satisfaction scores. Perhaps of most notable change from last year is the overall decrease in standard deviations across most domains in MPOC-20 scores.

**Conclusions/Future Directions:** Following results from this report, the authors suggested several recommendations to enhance services provided through the Adolescent Program: 1. Reexamination of intake and discharge procedures to ensure that youth’s needs are being met 2. Re-evaluation of the inactive pathway to ensure efficiency 3. Expansion of staffing resources to decrease wait list times 4. Additional measures to provide general information to youth and caregivers 5. Review how changes made to the implementation of the GAS have affected goal accomplishment 6. Consider alternative methods to administering MPOC-20 to increase response rate 7. Open lines for communication and knowledge sharing with other children’s rehabilitation centers 8. Continue with the program changes implemented in 2015 and 9. Explore means of addressing youth on the waitlist.

**References:**


Abstract: The incoming Haldimand-Norfolk ACT manager recognized his team had been receiving relatively few referrals, and has maintained a subgroup of stable clients. Through discussions with stakeholders, it became clear that they may not be aware of availability of ACT services. An environmental scan and stakeholder analysis was conducted to investigate concerns regarding client flow. Seventeen community partners were interviewed from ten organizations in the region. Stakeholders had a range of past experiences with ACT; while many positive interactions were noted, a few stakeholders’ past negative experiences have created perceptions of rigidity and subjectivity. Stakeholders view ACT as having expertise in crisis intervention, relapse prevention, and capacity building, and reported a need for more formalized communication and further education regarding serious mental illness. These stakeholders are ready and willing to partner with ACT going forward.

Introduction

A twenty-year-old Assertive Community Treatment (ACT) team serving the rural Haldimand-Norfolk region identified concerns regarding client flow. This ACT team is looking to improve client access to services and ensure community stakeholders are aware of the availability of ACT services. The ACT manager identified a subgroup of stable long-term clients with the potential to be transitioned to a less intensive mental health service. A working group composed of the Haldimand-Norfolk ACT manager, S. Strong, and two occupational therapy students, set out to:

- Understand experiences, perceptions, expectations, and needs of community stakeholders regarding working with: a) individuals living with serious mental illness, and b) Haldimand-Norfolk ACTT.
- Identify stakeholders interested in moving forward to work with ACTT.
- Identify the rural community needs, challenges, and resources for ACTT services in Haldimand-Norfolk County.
- Describe strategies from the literature and stakeholder analysis to support transitioning stable clients to a less intensive mental health service.

Literature Review

ACT is an evidence-based community mental health treatment model for clients with serious mental illnesses (CPA, 2005). Rural ACT teams have a different set of strengths and barriers than their urban counterparts. In general, rural ACTT greater challenges with stigma, travel distances, and availability of mental health resources and regulated health care professionals (Meyer & Morrissey, 2007; Siskind & Wiley-Exley, 2009). However, strengths include stronger client social support networks, and lower cost of living and crime rates (Siskind & Wiley-Exley, 2009). Strong community partnerships, levels of service intensity matching client needs, and negotiated transitional planning improve client flow and client care (Bond & Drake, 2015).

Transition and discharge from ACT is a new area of research; ACT has historically been perceived as a life-long intervention (OHA, 2013). Community health care providers report various facilitators and barriers to the transition process for clients living with serious mental illnesses regarding client readiness, presence of resources or supports, and organization-level factors (Filia et al., 2012; Finnerty et al., 2015; Noseworthy, Sevigny, Laizner, Houle, & La Riccia, 2014; Forchuk et al., 2013). Aligning with mandates of mental health care reforms (OMH, 2002), collaborative care is a promising approach to transition ACT clients. Shared care models and strategies have been proposed within rural Canadian contexts (Fleury, Imboua, Aubé & Farand, 2012; Forchuk et al., 2013; Ungar, Goldman & Marcus, 2013). However there is a relatively small pool of research that exists regarding transition from ACT. Facilitators and barriers to implementation must be addressed to support successful shared care.

Methods

A stakeholder analysis program development approach was used to meet objectives. Seventeen stakeholder interviews were conducted with individuals from ten organizations across Haldimand-Norfolk County. Participants included managers and frontline staff of mental health organizations, family physicians, pharmacists, and community health organizations. Key informant audiotaped interviews were conducted with the use of a semi-structured interview guide. The working group completed a field note upon conclusion of each interview. The group alternated listening to audiotapes and writing a summary report detailing interview discussions. Stakeholder profiles were then developed, wherein key findings from interviews, as well as recommendations to improve client flow and strengthen partnerships, were highlighted. Analysis meetings were held to discuss findings and ensure team members had an opportunity to provide their reflections and input.

Results

Findings from interviews identified key components contributing to partnership, with potential for action to address client flow:

- **Experiences with ACT**: Historical relationships...
impact current and future level of commitment to partnership and evaluation of ACT services. Stakeholders reported limited experiences with ACT in some cases. Positive interactions were reported, however, stakeholders recalled negative past experiences due to miscommunication, personality or stakeholder mandate conflicts, and limited numbers of accepted referrals. Historically, these experiences have created perceptions of rigidity, subjectivity, and lack of willingness to partner.

- **Expectations & Evaluations**: ACT is responsive, reliable, and has expertise in crisis intervention, relapse prevention, and capacity building. ACT provides psychiatric and clinical services to clients, and is able to go into clients’ homes to facilitate a more accurate assessment of clients’ current level of functioning.

- **Client Needs & Service Gaps**: Limited community mental health resources, staff training and expertise regarding SMI, system navigation knowledge, understanding of ACT role, availability to take on new clients, and level of support provide challenges when working with complex clients with mental illness.

- **Commitment & Future Vision**: These stakeholders are ready and willing to partner with ACT and transition clients. Stakeholders are also interested in facilitating their own client flow, and view partnership as potentially mutually beneficial in this regard.

- **Connections Between Findings & Literature**: Unstandardized/informal processes of communication and care planning impact effectiveness of treatment and establishment of provider roles. Partnerships have previously consisted of few informal communications, but stakeholders report interest in increasing informal communication opportunities and using formalized communication tools regarding mutual clients and transitions.

Changes were also noted by stakeholders as a result of this project, accredited largely to the efforts of the incoming ACT manager. Stakeholders noted that communication and transparency regarding referrals had also improved recently. It is anticipated that ACT’s new direction will facilitate positive relationships, which will benefit current and future mutual clients.

### Discussion

There is a clear need to address challenges faced by organizations providing services within rural communities, such as the isolation of staff, difficulty accessing mental health resources, and the presence of increased stigma. Specifically, successful transitions can be accomplished through addressing barriers to shared care; therein building upon common themes amongst stakeholder mandates and respecting their shared interests and practice contexts. A shared mental model of agreements can also be constructed by articulating a shared vision of the roles and expectations of all stakeholders, in part by addressing misperceptions of one another. Further, infrastructure can be designed and implemented, supporting formal and informal communication, increasing accessibility to resources, and engaging stakeholders in respectful and transparent partnerships to facilitate appropriate care to support clients’ recovery.

### Acknowledgements

The authors would like to acknowledge Mark Fellin, manager of Haldimand-Norfolk ACT, for initiating the project, identifying and engaging stakeholders, booking interviews, and participating in analysis. Thank you to Dr. Susan Strong for offering her guidance and providing us with the opportunity to participate in this project. We would also like to extend our gratitude to the community partners for giving their time and making this project possible.

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Client and clinician experiences with the self-help tool:
My Back-Up Plan

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Supervisor: Susan Strong, Ph.D., OT Reg. (Ont.), OT(C), Schizophrenia and Community Integration Service, St. Joseph’s Healthcare Hamilton

**Objectives:** My Back-Up Plan is a one page, self-help tool designed to support clients living with serious mental illness (SMI). The purpose of this study is to evaluate the tool through understanding 1) the experience of the use of My Back-Up Plan and 2) its value to both clients and clinicians in practice. **Methods:** Clinicians within the Schizophrenia Community Integration Service (SCIS) who had been introduced to My Back-Up Plan were recruited. Seven clinicians, with experience implementing the tool at least once, and two clients of the schizophrenia service were included in the study. Semi-structured interviews were then conducted, audio taped, transcribed and manually coded to identify emerging themes for analysis. **Results:** Use of tool: Overall, clinicians had a positive experience with using the tool, despite several challenges and used a variety of facilitation techniques to deliver the tool. The client perspective of the tool varied as well: one client felt that she had adequate self-awareness into her illness and did not find the tool helpful, while the other client found the tool helped her link her symptoms to an action. Value of tool: The major benefits of My Back-Up Plan was that the tool: 1) helped the client self-assess, 2) enabled knowledge translation, 3) promoted continuity of care, 4) facilitated proactive planning and a sense of security, 5) promoted health literacy/self-management. **Discussion:** Successful implementation of My Back-Up Plan depends on the clinician’s ability to facilitate the tool while considering the client factors, such as their motivation, cognition and their unique life situation. It also requires the clinician to have an understanding of wellness and self-management, and their ability to transfer this knowledge to the clients through facilitation. Lastly, it requires the clinician to recognize that there is value in the process of completing the tool, to both the client and the clinician. **Limitations:** Study sample captured only two perspectives of clients who were stable and were long-standing users of mental health, outpatient services.

**Introduction:** There is a growing body of evidence showing a positive relationship between client empowerment, and health, occupational and quality of life outcomes through teaching client self-management (Aulakh et al., 2012, Schrank et al., 2012). My Back-Up Plan is a one page, self-help tool designed for this purpose: to help clients living with serious mental illness (SMI) know when and where to seek help from healthcare. It aims to promote self-management, where self-management is defined as the ability to manage the impact of illness living well with one or more chronic health conditions within the context of one’s day to day life. The tool also aims to facilitate a therapeutic relationship between the client and the clinician and enhance continuity of care as clients transition between services. Therefore, the purpose of this study is to understand: 1) clients and clinicians experience with using of My Back-Up Plan and 2) its value in clinical practice. **Methods:** This research project follows a phenomenological, qualitative study design in order to explore the depth of experience of using the tool. Ethics approval was sought from the Hamilton Integrated Research Ethics Board (HiREB). Clinicians who had been exposed to the tool and were from inpatient or outpatient services within the Schizophrenia Community Integration Service (SCIS) were contacted through email. Seven clinicians, who had completed the tool at least once, agreed to be a part of the study. Two clients were recruited from one of the clinician participants. Semi-structured interviews were then conducted, audio taped, transcribed and manually coded to identify emerging themes for analysis. A coding guide was developed through an iterative process to label key themes that emerged from the data. This informed the findings as described in the descriptive and interpretive analyses. **Study sample:** The study sample consisted of seven clinicians (two inpatient and five outpatient clinicians from Nursing, Occupational Therapy and Social Work) and two clients receiving outpatient services from the Schizophrenia Outpatient Clinic. **Results:** The descriptive analysis revealed that clinicians had varied experiences with using the tool, but facilitation of the tool and challenges encountered were common elements influencing the overall experience of the tool, particularly for clinicians. **Clinician perspective:** While there were individual differences in the facilitation styles between clinicians, they chose to thoroughly explain the purpose of the tool and what each zone entails during the completion of the tool. In addition to explaining the purpose and benefits of the tool, clinicians found that providing choice to the clients and completing the tool in a collaborative manner was important for gaining client buy-in. Clinicians tried to use as much of the client’s words as possible when filling out the tool, as this enabled the client to take ownership of the tool. All
seven clinicians felt that prior knowledge of the client enabled them to identify client motivators and engage the client in the creation and continuous use of the tool.

**Challenges:** One of the major barriers to completion of this tool was the lack of engagement and motivation from clients. Some clinicians explained that clients felt it was “just another tool” and agreed to complete it “because you’re asking them to do it and were not quite convinced that they would use it.” Furthermore, clinicians needed to understand wellness themselves (eg, that wellness can exist within illness) in order to explain it to clients. Sometimes, their lack of willingness and inability to recognize issues relevant to their illness were also barriers highlighted by clinicians particularly in the inpatient units. Lastly, time constraints due to clinicians’ existing responsibilities were also cited as a barrier to implementation.

**Evaluation:** Despite the challenges, most clinicians had a positive impression after using the tool. Every clinician agreed that the coloured zones was a strength of the tool and was an excellent way to visually represent the transition from wellness to crisis. The clinicians also saw value in the process – it allowed them to learn strategies on how to best facilitate the tool and it also helped the client begin to self-reflect and engage in the process. Inpatient clinicians found it useful to complete the tool a few days prior to discharge, particularly when the client was going home on day passes. In the outpatient setting, some of the clinicians found the tool useful for existing clients with whom they had a longstanding relationship with, while another did not think added value to relationships with existing clients.

**Client experience with tool:** Both clients had a long-standing relationship with their clinician and collaborated with them as they completed the tool. One of the clients stated that although she took the tool home with her, she did not think it was personally beneficial to her, as she knows her illness and symptoms very well. The second client found the tool helpful, stating that it provided her with cues of what to look for and linked it to a direct action. However, this client identified as mainly being in the green zone and had not used the tool during a time of crisis.

**Value of the tool:** The following were found to be the main benefits of the tool:

1) **Promote self-assessment/monitoring:** A unique aspect of the tool is the different zones, which helps client monitor themselves and identify when they’re transitioning from wellness to crisis.

2) **Enable knowledge translation and learning:** While the information on the tool may not be new, the tool helped formalize and organize the information to link clients to a direct action.

3) **Team communication and families:** The tool can facilitate communication about the client’s care plan with other clinician team members involved in the

4) **Enable proactive planning and promote sense of security:** The tool can reassure clients with information to guide them towards appropriate action in the event of a future crisis.

5) **Promote health literacy/self-management:** The clinician can help the client develop self-management skills by redirecting client questions back, and asking them to reflect on their own strengths, skills and strategies.

**Conclusions:** Successful facilitation of My Back-Up Plan draws upon the clinician’s ability to engage the client, as well as their ability to accommodate for client factors (eg. motivation, cognition, executive dysfunction, symptoms) that may pose as challenges to completing the tool. Therefore, a high degree of skill in facilitating the tool is necessary. Furthermore, the suitability of the tool for clients will depend on each client’s understanding of the self-management process and their willingness to participate in it. These factors will impact the client’s ability to integrate the tool in their daily life, as well as in the long-term. Successful implementation of the tool also requires the clinician to have an understanding of wellness and self-management, and their ability to transfer this knowledge to the clients as they collaboratively complete the tool with the client. Lastly, there is value in the process of completing the tool, not just the final product. My Back-Up Plan is therefore a working document, which can be revisited and revised as the clinician and the client learn more about each other and how the tool fits in their day-to-day life.

**Limitations:** A significant limitation is that the study sample captured only two perspectives of clients who were stable and were long-standing users of mental health, outpatient services. Furthermore, perspectives of clinicians/clients who faced significant challenges in completing the tool may not have been inclined to participate in this study.

**Future directions:** To modify the tool in accordance with clinicians’ recommendations, including the creation of a portable tool, examples on the tool and incorporating guiding arrows. A guide for clinicians and a list of community resources were also recommended to facilitate the use of the tool. Further recruitment of clinician and client participants is necessary to explore a greater range of experiences.

**Acknowledgements:** We would like to thank our supervisor, Susan Strong, for her continuous guidance, dedication and mentorship throughout the process.

**References:**

**A Business Case: The Value of OT on a Community Mental Health Team**

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**Executive Summary**

Occupational therapists (OTs) are often included as a core health care provider on a community mental health team (CMHT) that supports individuals living in the community with severe and persistent mental illness. However, the value that OTs offer to a CMHT is not well communicated or understood, and thus OTs may not be used to their full scope of practice. Semi-structured qualitative interviews were conducted with eight regional managers in Hamilton, Ontario to explore their perspectives regarding the utility and value of OT in a CMHT setting. A business case was developed through analyses of the interviews employing principles of brand equity, and using a stakeholder analysis design within a qualitative emergent framework to guide the process. The emergent themes revealed key products that OTs can deliver to CMHTs, as well as a bottom line offering that can be used to succinctly communicate the value of an OT on a CMHT. As generalists equipped with specific expertise to enable occupation through meaningful engagement and participation, OTs provide unique value to clients, inter-professional teams and hiring managers alike that elucidates their defined role on a CMHT.

**Introduction**

Quality care delivery is a particularly important deliverable in the current healthcare system, as budget restrictions result in growing demands on hiring managers to employ value added services. In order to promote hospital flow, healthcare policy changes have placed increasing emphasis on shifting resources to community living settings, as well as integrating recovery-oriented services and chronic disease management to support individuals with a myriad of health conditions (Rosen et al., 2007). Thus, building client capacity is essential to promote self-efficacy, assist in recovery and reduce the intensity of services for individuals with severe and persistent mental illness living in the community (National Institute of Health, 2010). On CMHTs, OTs complete generalist roles, as well as provide specialized OT services to improve engagement and participation in occupations and promote health and well being (Krupa et al., 2002). CMHT program standards mandate multidisciplinary staffing, planning and communication (MOHLTC, 2005). However, the literature reveals that OTs often experience role blurring and role ambiguity (Hughes et al., 2001). This phenomenon not only threatens an OT’s scope of practice and hiring potential, but also reduces the efficacy of client care provided by the CMHT. By clearly communicating the differentiating value that OTs offer to a CMHT, managers will be more informed regarding scope of practice for hiring purposes, and allow OTs to remain competitive in the current job market.

**Methods**

Objectives: (1) To establish brand equity of the OT profession within the context of CMHTs; (2) To develop a business case and a bottom line offering; (3) To provide recommendations on how OTs can improve their brand equity on a CMHT.

Design: A stakeholder analysis design within a qualitative emergent framework was used to guide the method procedures of this research project.

Literature Review: Scholarly and grey literature was reviewed to appraise the OT role on CMHTs, current OT branding concerns, as well as business marketing concepts.

Key Informant Interviews: A questionnaire was developed and distributed to all key informants prior to interviews. This provided managers an opportunity to communicate their familiarity with OT, perceived value of the profession, and ascribe certain attributes of the role within a multidisciplinary healthcare team. Using the Brand Dynamics Pyramid (Millward Brown, 1996; as referenced in Dyson, Farr & Hollis, 1996), open-ended interview questions were organized via components of the pyramid (presence, relevance, performance, advantage and bonding) to elucidate hiring managers’ perspectives regarding the OT brand. Interviews were conducted by two student OTs. Field notes, audio transcriptions and stakeholder profiles were completed sequentially and reviewed during team meetings.

SWOT Analysis: Interview responses were grouped according to the SWOT matrix, used to
identify internal strengths and weaknesses as well as external opportunities and threats.

**Brand Equity Analysis:** Based on findings from the literature review, qualitative interviews and SWOT analysis, a business case was developed to identify the products and services delivered by OT in a CMHT setting. Within the business case, an offering was established for marketing purposes to communicate the differentiating value of OT on a CMHT. The offering is broken into a **bottom line** statement conveying the overall value of an OT on a CMHT; **products** represent what OTs deliver to CMHTs; and **services** represent how OTs will deliver these products.

### Results

**Bottom Line:** OTs engage and support clients to participate in things they want to do and need to do in order to live healthy and meaningful lives.

**Products:** OTs consistently and effectively contribute to quality care delivery, client flow, risk management and efficient resource utilization.

**Services:** OTs can function as generalists by utilizing rehabilitative approaches to initiate, activate and mobilize OT-specific resources to support clients in capacity building and community re-integration. To complement their generalist skillset, OTs bring specific expertise to help clients engage, activate and pursue recovery across complex situations. Recognizing that occupation is central to health and well being, OTs develop a strong therapeutic alliance that facilitates collaboration with clients to identify, negotiate and successfully achieve personally meaningful goals. OTs conduct dynamic functional assessments to inform treatment plans, adjusting their approach to meet evolving client needs. Provincially registered, OTs possess Masters-level education to support an evidence-based approach to clinical practice.

**Life experiences:** OTs possess professional attributes highlighted in the profile of occupational therapy in Canada to assist in client care and delivery of the products. Additionally, life experiences and personalities influence the therapeutic alliance developed between OTs and clients, to aid successful delivery of the products.

### Conclusions

**Critical Issues:** Based on the weaknesses and threats identified by the hiring managers in the SWOT analysis, a prevailing misperception exists surrounding the definition of *occupation*. This is compounded by a distinct lack of OT self-promotion skills to communicate their role and value on CMHTs. Skills mixing, wherein unregulated health professionals replace regulated professions due to current financial restrictions necessitates that OTs demonstrate their value and utility in delivering long term positive client and team outcomes. Furthermore, hiring managers perceive newly graduated OTs as being generalists with limited mental health experience.

**Recommendations:** OTs need a common voice to communicate the business offering of their added value to a CMHT in the current economic environment. Student OTs must advocate for more mental health experience and knowledge integrated in MSc. OT programs to augment our skillset and improve employability outcomes. Lastly, future studies examining the economical value of an OT can quantify the products described in this business offering to verify OTs as a value added service for CMHTs.

### References:


### Acknowledgements:

We would like to thank our supervisor Susan Strong for providing us with this tremendous opportunity and ongoing guidance. We are grateful to the regional CMHT hiring managers who provided their insight, support and expertise throughout this project.
Using the FITBIT® to Increase Walking Activity in Individuals with Schizophrenia

Amanda Buschau, Andrew Reddick, Gord Hirano (OT Reg.(Ont.)), Dr. Jocelyn Harris (PhD, OT Reg.(Ont.))

Abstract

**Background.** Schizophrenia spectrum disorder (SSD), a severe mental illness categorized by positive and negative symptoms, impacts engagement in physical activity (PA).

**Purpose.** To determine feasibility/utility of a walking program by tracking participants step count (SC) over seven weeks.

**Method.** Twelve outpatient participants were involved in a one-group, pre/post test, mixed-methods study using FITBIT® Flex to track SC. Facilitators, barriers and attitudes towards PA were explored during weekly check-ins.

**Results.** Ten participants completed the study. Six participants demonstrated small increases in SC. Significant differences in Canadian Occupational Performance Measure (COPM) domains were demonstrated by all. Participants described the FITBIT® as motivating. Medications side effects are described as the greatest barrier to PA.

**Implications.** The results demonstrate FITBIT® is a feasible tool to track and encourage SC in those with SSD by providing sensory and visual feedback. Linking SC to daily occupations was a key factor in weekly goal-setting sessions.

**Background:** Schizophrenia spectrum disorder (SSD) is a range of severe mental illnesses categorized by positive and negative symptoms impacting an individual engagement in physical activity. Effective interventions for aiding individuals with weight management are of interest to multidisciplinary teams working with this population (Beebe & Harris, 2013). Increasing walking activity is a feasible intervention for weight management that may improve negative symptoms experienced by this population (Firth et al., 2015). Further, tracking and documenting physical activity is imperative in physical activity programs amongst this population (Beebe & Harris, 2012; Beebe & Harris, 2013; Beebe et al., 2013).

**Purpose:** The purpose of this study was to determine the feasibility/utility of incorporating the FITBIT® Flex into a walking program by tracking the participants step counts (SC) over a period of seven weeks.

**Methods:** Twelve participants were involved in a one-group, pre/post test, mixed-methods study that used the FITBIT® Flex to track SC. After ethics approval was granted, participants attended a pre-study education session. Twelve participants completed the following pre-test components: questionnaire pertaining to attitudes towards physical activity and the FITBIT®, four worksheets from *Action Over Inertia* (Krupa et al., 2010), a modified COPM (goals directly pertaining to step count and physical activity) (COPM; Baptiste et al., 1999), and body composition (e.g. height, weight, waist circumference). During pre-test, clients were assigned a numbered FITBIT® with feedback features inactivated in order to obtain a natural SC baseline. During weeks 2-6, vibration features were activated and individual SC goals were set at the past week total plus 5%. During study weeks 2-6, participants were provided with a bar graph the of past week’s SC. During week 7, post-tests were administered which consisted of the same assessments at pre-test. Upon completion of study participants were presented with a $15 Tim Horton’s gift card for their contributions. Throughout the study (e.g. weekly check-in meetings), participants were asked to describe perceived facilitators, barriers and attitudes towards PA which were explored through thematic analysis by both student researchers. Quantitative data (e.g. weekly step counts, COPM scores) were imported into Microsoft Excel where statistical analysis (e.g. one tailed, paired t-test, demographics, step count frequencies) was carried out.
**Results:** Ten of twelve participants completed the study in its entirety (17% attrition rate). 60% of participants that completed the study demonstrated increased step counts. No significant difference in body composition was detected. Significant differences in COPM domains of performance (p = .002 < .05) and satisfaction (p = .0003 < .01) was demonstrated by all participants that completed the study. Participants described the FITBIT® as a motivational tool perceived to increase walking activity. Medication side effects (e.g. drowsiness) were described as the greatest barrier to performing physical activity.

**Discussion:** This study demonstrates the FITBIT® Flex is a feasible tool to easily collect participant weekly SC. 10/12 participants were able to complete the full seven weeks in full. Participants describe small increases in SC to be “small victories” and being praised for achievements led to increased satisfaction and performance in PA. Study strengths include: utilizing a familiar case management for weekly check-in meetings, framing study objectives in terms of occupation (e.g. walking to the bank), creating a positive physical activity culture amongst participants, and a study attrition rate of only 17%. Study limitations include: using a convenience sample, weather, legal and ethical implications of using FITBIT®, cost of device, and setting an arbitrary goal of 5% increase in SC per week.

**Implications:** The results demonstrate FITBIT® is feasible tool to track and encourage increasing SC in those with SSD by providing sensory and visual feedback. Linking SC to daily occupations played a vital role during weekly goal-setting sessions with participants.

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First we want to thank Gord Hirano for the project’s inspiration and taking us as his students to conduct this study. Second, many thanks to Dr. Jocelyn Harris for continuous support with statistical analysis and encouraging us to write for publication. Third, to our student volunteers, Nina and Neha, who helped immensely during the data collection process. Fourth, to thank Hamilton Program for Schizophrenia for providing us with all resources and support required to conduct the study. Finally, the researchers would sincerely like to thank all participants that spent their time and story with us. Without you, this study would not happen.

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**References**


Background: “Do-Live-Well” (DLW) is an evidence-based health promotion framework developed by occupational therapists. It is based on a broad occupational perspective that maintains that everyday experiences and activity patterns shape a range of health and wellness outcomes. **Purpose:** To apply the DLW concepts in the context of an in-patient mood disorder clinic by developing a brief reflective tool based on the DLW concept. The aim of the tool was to engage patients admitted to the in-patient unit in a discussion about their daily activity patterns. **Method:** Three student occupational therapists worked in conjunction with an occupational therapist and interdisciplinary colleagues. The tool was in the form of a guided reflective interview that was used with patients on the in-patient mood disorder unit to gather information about daily activity patterns across six dimensions of experience. The occupational therapist gathered information on activity patterns of patients on the unit and the students gathered information about the tool’s utility on the unit through observation and consultation with clinicians and patients. **Findings:** Themes that emerged were twofold: 1) Evaluation of the clinical utility of the tool by clinicians and patients, and 2) activity patterns of the patients on the unit. The tool was viewed as a useful method of formalizing the process of, and gathering information related to patients’ activity patterns, but requires additional refinements to improve its clinical utility. Meaningful activity decreases, and ways of engaging in activity changes when patients experience episodes of mental illness. **Implications:** The DLW reflective tool has potential as a method of gathering information about daily activity patterns among individuals on an in-patient mood disorder unit that could be useful to members of a multi-disciplinary team.

### Health promotion principles align with the values of occupational therapy (OT) and are gaining increased attention as a key component of OT practice.

**Introduction**

The purpose of this project was to develop and pilot a reflective tool for an in-patient mood disorder unit grounded in the DLW framework that would promote an occupational perspective on health and well-being.

1. Develop a reflective tool about daily activity patterns grounded in the DLW framework.
2. Pilot the tool in an in-patient mood disorder clinic.
3. Consult with patients and multi-disciplinary clinicians about the utility of the tool in practice.

**Purpose**

**Research question:** How can the DLW concept be translated into a reflective tool that will gather useful, interdisciplinary information on an in-patient mood disorder unit?

**Design:** An integrated knowledge translation project.

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<tr>
<th>Step</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>The team explored how DLW applies in the context of the in-patient mood disorders unit through staff input and a literature search.</td>
</tr>
<tr>
<td>Do</td>
<td>Brief discussions with clinicians and patients allowed student OTs to gather feedback on the tool.</td>
</tr>
<tr>
<td>Study</td>
<td>The OT on the unit piloted the tool with patients. Student OTs refined the tool based on emerging activity patterns and tool utility.</td>
</tr>
<tr>
<td>Act</td>
<td>Knowledge translation through a poster presentation, final report, and in-service.</td>
</tr>
</tbody>
</table>

**Participants:** An OT on a mood disorder unit recruited clinicians and patients for interviews. Patients were nearing discharge at the time of their involvement. Specific eligibility criteria were used to select participants:

1. An identified mood disorder
2. Not currently experiencing acute psychosis
3. Able to participate in a 30-minute narrative interview

**Analysis:** Both the content of the data gathered using the tool and the feedback provided were analyzed by identifying recurrent themes and points of agreement/disagreement.

**Findings**

**Tool Utility - Clinicians**

1. A central way of tracking changes in activity patterns.

Staff from across disciplines gather information related to patient activity patterns in different ways, at different times and share this information with the team.
4. Overall just asking patients what they are interested in and what they like to do and try and help keep them activated while they are in hospital, and what activities they were doing outside of hospital."

2. Improved understanding of the importance of patterns of everyday activities.

An understanding of activity patterns when patients are well and unwell could assist in identifying stressors and warning signs that may result in periods of unwellness and possible readmission.

"Patient information about their friends, family, and productive activities can help the social worker coordinate some of these aspects with the patient."

- Social Worker

3. Formalizing the process of gathering information on activity patterns.

The DLW tool was seen as a way to obtain information specifically related to activity patterns in a formal way.

"The DLW tool expands on Keys to Discharge – it has a really well laid out distinction by well and unwell."

- Social Worker

4. Ongoing Limitations.

Jargon language, the length of time it takes to administer the tool, and confusion about who should administer the tool were seen as barriers to its use and uptake in a clinical setting.

"...it would be very challenging for [some clients] to answer the questions [because of the wording]... it might even look overwhelming to some of the clinicians, certainly from a nursing perspective”.

- Registered Practical Nurse

### Tool Utility- Patients

1. The DLW tool helped patients reflect on activity patterns and covers all necessary areas of information.

"[The questions] made me think about what I enjoy doing. It’s easy to forget about what is important and makes you happy”

2. The interview format allows patients to expand on answers if they feel inclined.

"The questions were easy to answer, and [the clinician] made it really clear what was being asked”

### Discussion

The DLW tool demonstrated a dual purpose: 1) the tool could be used as a way to obtain information within a multidisciplinary team. Inter-professional feedback highlighted the importance of gathering information on activity patterns across disciplines; 2) completing the DLW tool was seen as an empowering exercise for patients to reflect on their activity patterns and how they change over time. Insights gained from completing the tool may be used to identify early warning signs for changes in mood and mental status.

### Considerations for future implementation:

1. Consider the best time to implement the tool, during periods of illness versus wellness.
2. Include prompts for challenging topics (i.e. sexuality).
3. Revise the language and readability of the tool for patients and clinicians.

### Limitations

This project drew on a small sample size, limiting the generalizability. The tool was refined over the course of the patient interviews, thus each patient completed a slightly different version of the tool.

### Acknowledgements

Thank you to Deborah Weusten-Smith and the interdisciplinary team for their participation. Thank you as well to the DLW team for their guidance on the project.

### References


Title: From homelessness to housing: How single women with a history of homelessness establish patterns of daily activity

Authors: Ramya Bakaraju & Valerie Balboa (student occupational therapists), Rebecca Gewurtz (McMaster University), Deirdre Pike (Social Planning Research Council of Hamilton), & Katherine Kalinowski (Good Shepherd Centres)

Abstract: Housing First programs have been launched in Hamilton in order to support the growing needs of persons experiencing homelessness. Due to limited research in this area, this study aims to understand the daily activity patterns of single women who have a history of homelessness and are now housed. Through a qualitative study based on grounded theory, five women with lived experience and three service providers were recruited and interviewed. Themes such as patterns of activity, financial factors, personal factors, quality of connections, and isolation, emerged. This study adds to the scant literature on this topic and provides avenues for further exploration.

Introduction: Homelessness and housing instability is a growing issue in Canadian society and within Hamilton. According to the Homeless Hub, there were 5653 individuals using emergency shelters in Hamilton in 2013 ("Hamilton|The Homeless Hub", 2016). Efforts to address homelessness in Hamilton led to the launch of Supporting Our Sisters (SOS), a Housing First program to support women experiencing chronic or episodic homelessness.

Literature Review: The central vision of the Do-Live-Well framework – that what you do everyday matters and has an important impact on health and wellbeing – is particularly relevant to people in transitions (Moll, Gewurtz, Krupa, & Law, 2015). Individuals transitioning from homelessness to housing often need assistance establishing daily activity patterns that support health, wellbeing, community integration, and housing stability (Polvere et al., 2013; Raphael-Greenfield & Gutman, 2015).

Purpose: There is limited literature on the daily activity patterns of single women with a history of homelessness, and how they draw on community and services to establish meaningful patterns of daily activity. Insight into what women have found helpful, ongoing needs, and what can be improved could inform ongoing efforts to support women in their transition and maintenance of housing. The overall research question is: How do single women with a history of homelessness establish meaningful patterns of everyday activities?

Methods: After ethical approval from the Hamilton Integrated Research Ethics Board, a convenience sample of women with lived experience (n=5) and service providers (n=3) were recruited using flyers and emails to relevant organizations. One hour semi-structured interviews were conducted by both student researchers. Interviews were transcribed, coded using Dedoose, and analyzed using a grounded theory approach to develop themes.

Findings: Thematic analysis of the data has led to the development of a model which shows the dynamic interaction between five key factors: 1) patterns of daily activity, 2) financial forces, 3) person factors, 4) quality of connections, and 5) isolation. These factors can be both barriers and facilitators to participation; therefore according to the Do-Live-Well framework (Moll et al., 2015), these factors can also affect their health and well-being. Many participants described how
affordability of housing, as well as a lack of finances directly impacted the ability to engage in activities because there was not enough money left over in the month for activities. As participants established routines in their housing, giving back to others was one activity that most of the women implicitly engaged in but was not recognized by the service providers. Participants also described how their personal journey can be facilitated or hindered by person factors, such as health issues, self-efficacy and self-confidence. Service providers described how increased engagement can contribute to developing a social network that could cultivate self-efficacy. Within formal support services, the establishment of rapport and the sense of being welcomed and accepted was described as paramount by the women and influenced their decision to access community services. Prominent among their experiences was the sense of isolation that emerged as they established themselves in their housing after living with others. This isolation was described as being one of the most challenging aspects of establishing stability within the housing. However, isolation can also be self-imposed as a means to avoid negative behaviour, re-group and support their capacity to maintain their housing.

Discussion/Future Directions: The findings have direct implications for occupational therapy services within a housing program by increasing our awareness of the barriers and facilitators in participation. Occupational therapists can cultivate self-efficacy through the participation in meaningful activity. The dimension of Contribution to Community & Society can be emphasized as small acts of giving back to others in order to develop a sense of self-confidence, which could then lead to greater participation and connections within the community. This preliminary study is unique in that it draws on the experiences of single women, a population for whom there is scant data. This study adds to our understanding of the barriers and facilitators to participation and highlights possible areas of intervention. Limitations include a small sample size and lack of member checking. Further study exploring occupational balance for this population may be beneficial in determining where to focus occupational goals and services. There is also insufficient literature to describe occupational therapy interventions and their effectiveness directed at populations who experienced homelessness and are now housed. Current evidence is mainly directed at populations who are still experiencing homelessness.

Acknowledgements: We would like to thank Rebecca Gewurtz (EBP supervisor, McMaster University), Deirdre Pike (Social Planning Research Council of Hamilton), and Katherine Kalinowski (Good Shepherd) and Lori Matwychuk (Good Shepherd Women’s Services) for their passion, contributions and support.

References:
Program Evaluation of YWCA Encore

Authors/Student Researchers
Julie Mogk, MSc Occupational Therapy Candidate (Year 2)
Sabrina Pieczewski, MSc Occupational Therapy Candidate (Year 2)

Abstract
YWCA Encore was developed as a 8-week program for women to participate in, following breast cancer treatment. The writers were given the opportunity to perform a qualitative program evaluation involving previous participants of the Hamilton and Burlington sites. The overarching goals of the project were to: understand participant perspectives of the program, to provide key stakeholders with a resource about the program (including evidence), and to provide a means of conducting future quantitative research.

Introduction and Literature Review
Breast cancer represents 26% of all new female cancer cases in Canada. Women are faced with invasive surgery and treatment, which can cause physical and psychological side effects including: reduced strength and mobility of the shoulder, pain, swelling, fatigue, weight gain, muscle stiffening, depression, reduced quality of life, and fear. Rehabilitation programs have been developed for women who have undergone breast cancer treatment, to target these side effects, and often include physical exercise, education, and social support. YWCA Encore is a rehabilitation program that incorporates these three elements, but there is limited research into the effectiveness of the program and the into the participants’ perspectives of their experiences.

Methods
Participants were recruited via email. The authors’ supervisor sent an email to all past participants of YWCA Encore at the Hamilton and Burlington sites, that described the purpose, potential risks, and potential benefits of the proposed program evaluation. They were offered the opportunity to participate in a focus group, a telephone interview, or an online survey. Two reminder emails were sent, following the original invitation. The data was collected and analysed independently by each student researcher. The student researchers independently looked for trends in the data and held discussions until consensus was reached regarding the main themes.

Results
There were 11 respondents to the online survey. Unfortunately there was no expressed interest from participants to attend a focus group or have a telephone interview. Four themes emerged from the online responses: psychological well-being, physical well-being, social well-being, and education. Further, respondents indicated that physical and psychological side effects of treatment were alleviated to some extent. Specific examples included: improved mood, decreased fear and anxiety, increased strength and flexibility, alleviation of lymphedema, and increased range of motion. Respondents also felt less isolated, more socially connected, and more informed with tools, information, and advice to bring into daily life, ultimately increasing function and engagement in meaningful occupations.

Discussion
The results of this program evaluation are consistent with the existing literature regarding perspectives from other YWCA Encore program sites. There is a strong literature base that describes the detrimental physical and psychological effects that can occur as a result of going through breast cancer treatment. The need for rehabilitation programs to help address these debilitating side effects and symptoms, post-breast cancer treatment, cannot be understated. This has been demonstrated in the current program evaluation, as well as previous research.

Limitations
First, there were some unforeseen personal circumstances that pushed some of the project timelines back, which may have had an effect on the number of participants that were recruited. There were also no willing participants for a focus group or telephone interviews. This potentially decreases the quantity, quality, and overall “richness” of information that may have been obtained. Further, the overall response rate is quite low and some questions were left blank. However, the questions that were answered provided insightful and informative responses that contributed to our findings. In order to participate in this
program evaluation, participants were required to have access to email (and Internet). Thus, those currently without access would have been excluded from this evaluation unintentionally.

**Conclusions**

This program evaluation provides insight into the psychological, physical, and social benefits, as well as the education that women perceive from their participation in the Hamilton and Burlington YWCA Encore programs post-breast cancer surgery.

**Future Directions**

Research is needed to thoroughly explore the benefits of the Encore program through quantitative data and additional qualitative data (i.e. larger sample sizes, focus groups, in-person/telephone interviews). Quantitative data allows for an exploration of program effectiveness while more in-depth qualitative data can provide supporting data for the perceived benefits of the program. Implementation of the package, created by the authors, is important, as it will allow for consistent data to be gathered at the beginning and end of each 8-week exercise program. This collection of data will allow for future quantitative evaluation of the program, even if future researchers are not present during the program delivery. Furthermore, additional qualitative data collection will be beneficial through the use of focus groups and individual interviews. This will allow for more in-depth discussion and information gathering regarding women’s experiences and perspectives during and after participation in the program. Finally, this information can be used to promote the YWCA Encore program to women with breast cancer, those who have undergone treatment, and healthcare professionals (i.e. for recommendation purposes). The use of this information and promotion of the program will demonstrate a need, and have the potential to increase funding for the Encore program to allow for additional sessions to be implemented throughout the year.

**Acknowledgements**

This work was supported by the MSc Occupational Therapy program at McMaster University and Hamilton YWCA. The authors would like to acknowledge the YWCA Encore supervisors, Anne Marie Collingwood and Marnie Warman, the women who participated in the survey, and Bonny Jung, the academic supervisor who helped make the completion of this program evaluation possible.

**References (Seminal)**


The Steps to Engaging in Neighbourhood Activity with Age Related Vision Loss (ARVL): A Critical Ethnography Study

Students: Maital Falkovitz, Mara Fontana, and Michelle Palmer
Supervisor: Colleen McGrath, PhD, OT Reg. (Ont.)

Abstract: In this secondary analysis, data from a critical ethnographic study was used to examine the effect of environment on neighbourhood engagement for 10 older adults with ARVL. Critical Disability and Critical Gerontology theory framed findings. The Steps to Neighbourhood Engagement Model was designed by the researchers to understand decisions made by participants. An adapted Carspecken's\(^1\) approach for critical ethnography was used for data collection and analysis. Findings revealed environmental facilitators and barriers to neighbourhood engagement: Social Support vs. Social Misunderstandings, Existing Infrastructure vs. Accommodating Design, and Institutional Supports vs. Under Servicing. Previous research on environmental supports and barriers to neighbourhood engagement is limited; this study provides a new lens into understanding the relationship between environment and neighbourhood engagement for those with ARVL and challenges the current social and political status quo, advocating for supportive neighbourhood features for individuals with ARVL.

Introduction: ARVL is defined as “…a permanent loss of vision that cannot be corrected by eyeglasses, contact lenses, medication or surgical intervention”\(^2\). The three most common types of ARVL are age-related macular degeneration, glaucoma, and diabetic retinopathy. By age 80, 15% of adults with ARVL report difficulty with one or more activities of daily living\(^3\). Although existing literature suggests that living in areas with reduced mobility barriers, increased security features, and access to local services is associated with higher levels of community engagement\(^4\), few studies exist which examine neighbourhood design and its impact on community engagement of those with ARVL. This study analyzed this topic using both critical disability and critical gerontology theories. Critical disability theory looks at injustice and power differentials within society\(^5,6\), examines inequalities created by the socially constructed concept of disability, and suggests that the true barrier is society’s attitude towards disability\(^6\). Critical gerontology investigates inequality and disadvantage with a focus on aging issues\(^7\), considers context, such as demographic, historical and economic factors in which societal values are created, and how individuals may use personal strengths to overcome socially created barriers\(^8\). The Steps to Neighbourhood Engagement Model is visual guide of the process individuals with ARVL must take in order to decide whether neighbourhood engagement will take place (Figure 1). The steps are sequential, but can be skipped. They are as follows: environmental facilitators and barriers which support or limit engagement; personal strategies necessary to accommodate to the environmental limitations; and a risk-benefit analysis to weigh safety against neighbourhood engagement.

Methods: A critical ethnographic approach was utilized for this study. The goal of critical ethnography is to identify injustices and offer solutions to eliminating them\(^9\). Carspecken’s\(^1\) five-stage approach to critical ethnography was modified to direct data collection and analysis. Ethics approval was obtained and written consent was provided. There were ten participants with an average age of 83.3 years, a diagnosis of ARVL, and a self-identified functional impairment. A narrative interview, participant observation session, and a semi-structured in-depth interview were completed with each participant. Data was coded by applying low level codes to verbatim transcripts. Codes were compared across and within participants to develop categories which were divided by facilitator and barrier to create contrasting themes.
**Findings: Social Support vs. Social Misunderstanding:** Participants described social experiences as both barriers and facilitators to neighbourhood engagement. Older adults with ARVL had to develop a personal strategy of trusting others over their own instincts. Strangers were often seen as helpful especially when engaging in potentially risky tasks. Less often, strangers were a barrier to engagement through provision of unsolicited help. Therefore, vulnerability was often a component of risk-benefit analysis. Some friends and family provided sighted guide and orientation; however, misunderstandings risked participant safety. Other family and friends inhibited neighbourhood engagement through visits, and bringing purchases to participants. **Existing Infrastructure vs. Accommodating Design:** Participants reported existing municipal infrastructure was a barrier to engagement in their neighbourhood. Street/sidewalk design, traffic and intersections, transportation, and physical building features were discussed by participants as influencing neighbourhood engagement. Crossing intersections presented issues such as signals that did not allow enough time to cross and audible crossing signals that lacked consistency in signal sounds. Transportation was another common issue. The public bus system was used by many participants; however, challenges, such as route numbers that were unreadable when waiting at bus stops, were encountered. **Institutional Support vs. Under Servicing:** Neighbourhood facilitators to engagement were offered by government, charitable and commercial institutions. Participant reported that these often fell short of meeting their needs. Accessing vision care services, was a challenge as specialists were located outside of participants neighbourhoods. Many participants received financial assistance from social security, although this was not enough to support participation when fee-for-service or vision aids were required. Additionally, participants reported relying on charitable organizations, such as the CNIB, as well as commercial services that offered assistance to participants such as a grocery shopping support program or a seniors only bank line.

**Discussion:** The themes uncovered in this critical ethnographic study demonstrate how social and political environments influence neighbourhood aspects which act as facilitators and barriers to neighbourhood engagement for those with ARVL. Whereas previous research has a primary focus on personal strategies when interacting with the environment, the present study found that personal strategies are a component of engagement based on environmental facilitators and barriers. Previous research investigates the influence of physical environment on participation, whereas the primary focus of this paper is neighbourhood engagement, which is seen as a component of aging in place. **Limitations:** Limitations of this study were as follows: participants were recruited from one urban municipality, the original study design was focused on how various aspects of the environment shape disability for older adults with ARVL and not on neighbourhood components, and current research on this topic is rare.

**References:**

Challenges of Forced Migration:
Enabling & Building New Lives with Kurdish Refugees in Hamilton
Victoria Liao, Andrea Rinker, Sarah Tisi, & Sarah Villiger,
MScOT Candidates 2016, McMaster University
Supervisor: Sue Baptiste, McMaster University

Abstract Purpose: The overall aim of this project was to determine what is known about refugee settlement and community capacity building in Canada and apply these findings to a local Kurdish refugee community, a family health centre, and a non-profit community centre that offers services to refugees and immigrants in Hamilton. Background information: Service providers at Stonechurch Family Health Team noticed that Kurdish refugees receiving care in the Hamilton Mountain area have outstanding health and settlement needs. A needs assessment has been conducted (Rios et al., n.d), however, Kurdish refugees in Hamilton continue to face barriers integrating into the broader community. Many Kurdish refugees access services at Neighbour to Neighbour Centre (N2N). This project sought to better understand how to engage the Kurdish refugee community and promote integration. Methods: After consulting with key stakeholders in the community, a scoping review was conducted following the framework proposed by Arksey and O’Malley (2005) and enhanced by Levac, Colquhoun, and O’Brien (2010). In consultation with N2N, program logic models were developed and scoping review findings were applied to N2N current service provision. Results: The literature reveals three major themes: creating a new life, enabling the creation of a new life, and building an engaged community. These themes form the basis for recommendations for Stonechurch Family Health Centre and N2N. Conclusion: Community capacity building is a means to successful integration of refugees and the well-being of Canadian communities. N2N is an organization that already addresses many of the topics revealed in the literature. Potential future projects include implementation of recommendations and consideration of how these findings may be applied to Hamilton’s new Syrian refugee community.

Introduction
The Kurdish people are an ethnic minority population originating from the Middle Eastern countries of Turkey, Syria, Iraq, and Iran. Since the 1980s, over a million Kurds have been forced to migrate to other regions in the world due to escalating conflict and violence in the Middle East (Hassanpour & Mojab, 2005). Hamilton is estimated to have over 3000 Kurds living in the area known as the Hamilton Mountain (L. Dykeman, personal communication, December 2, 2015). Around the year 2000, service providers at the Stonechurch Family Health Team on the Hamilton Mountain noticed that the Kurdish refugee patients had many outstanding health and settlement needs. To better understand these needs and how to best meet them, a needs assessment was conducted with the Kurdish community (Rios et al., n.d.). This needs assessment provided insight into service gaps and recommendations for how these could be addressed. However, little is known about how the needs assessment was translated into practice. Despite the needs assessment, the Kurdish population continues to face a number of barriers towards integration in broader Canadian society (L. Dykeman, personal communication, December 2, 2015). Many Kurdish refugees access services at N2N, particularly the foodbank and settlement services. To better understand how to engage this population and community, a scoping review was conducted to examine best practices in refugee settlement and community capacity building, as well as the intersection between these two constructs. Program logic models were developed for N2N’s Family Services and Emergency Food departments. Scoping review results were applied and final recommendations were provided to N2N.

Part 1: Scoping Review
The scoping review was conducted following the framework proposed by Arksey and O’Malley (2005) and enhanced by Levac, Colquhoun, and O’Brien (2010). The research question was “What is known from the existing literature about settlement and community capacity building in a Canadian refugee population?” The search involved electronic databases (e.g. CINAHL, PubMed, Sociological Abstracts) and search engines (e.g. Google), manual search of key journals and websites in the field (e.g. Metropolis, Refuge: Canada's Journal on Refugees), and contacting front-line staff at relevant community organizations in Hamilton (e.g. Stonechurch Family Health Team, Neighbour to Neighbour, Refuge: Hamilton Centre for Newcomer Health, Hamilton Immigration Partnership Council) to identify relevant literature. Search terms included: "best practice", "Canada", "community capacity building", "Hamilton", "health", "Kurdish", "refugee(s)", and "settlement". Authors reviewed 35 pieces of academic and grey literature. Literature was included if it was Canadian, in English, published between 1990 and 2016, and focused on refugees and/or immigrants. 19 articles were selected for final inclusion. Literature was analyzed in two main groupings: settlement and community capacity building. Researchers independently identified themes in the literature, and then agreed upon themes with another researcher. These themes were then discussed and agreed upon amongst all four researchers.
Scoping Review Results
Within the two main literature groups, three themes emerged: 1) creating a new life, which included the subthemes of language, employment, healthcare services, housing, and education; 2) enabling the creation of a new life, which included accessibility, inclusivity, empowering refugees, and building an accepting community; and 3) building an engaged community, which included partnerships, active involvement of refugees, education and skill development of refugees, and education and skill development of the broader community. A significant amount of overlap exists between the literature on refugee settlement and the literature of community capacity building with refugees, however, community capacity building can be differentiated as an intentional process in which needs, goals, and strengths are identified and from which shared solutions arise. Various examples exist of how community capacity building can be used to further refugee integration (Ball, 2008; Clark, 2015; Wong, Wong, & Fung, 2010). Based on the scoping review results, recommendations are provided for Stonechurch Family Health Team, including a strengths assessment of the Kurdish community, create and sustain cultural broker and interpreter positions, and consider training health peer leaders.

Part 2: Application to N2N
Draft program logic models were developed based on a meeting with Narmin Mizouri, Middle East Outreach Worker at N2N, and information from N2N’s website. Researchers consulted with other N2N staff Krista D’Aoust, Director of Family Services, and Denise Arkell, Executive Director, to revise program logic models. Scoping review results support current services provided by N2N, such as interpretation, literacy tutoring, assisting with subsidized housing applications, skill development, and cultural celebrations. Various recommendations for further refugee settlement and community capacity building were made on the areas of 1) partnerships, 2) organization capacity, 3) employee capacity, 4) settlement outreach worker capacity, 5) volunteer or employment opportunities, 6) community events, and 7) access to computers. Examples include regular partnership meetings, conducting a cultural responsiveness audit, and increasing the Middle East Outreach Worker to a full-time equivalent position. A report of findings and recommendations was presented and provided to N2N.

Conclusions/Future Directions
Community capacity building is a means to successful integration of refugees and the well-being of Canadian communities. N2N is an organization that already addresses many of the topics revealed in the literature. Future projects include implementation of recommendations and consideration of how these findings may be applied to Hamilton’s new Syrian refugee community.

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Carol DeMatteo, Associate Professor, School or Rehabilitation Science, McMaster University

Seminal References
Occupational Therapist Fitness to Drive Practices  
Joanna Wojcik and Katie Speers  
Supervisors: Trish Medeiros, Tanya Greve, Jennifer Michetti and Maria Gera

Introduction
Due to Canada’s aging population, the number of older adults driving is on the rise (Vrkljan, Myers, Crizzlere, Blanchard & Marshall, 2013). With this increase in older adult drivers comes an added pressure for health professionals to assess age-related changes to driving (Vrkljan et al., 2013). There is currently no agreed upon screening tool that independently assesses and accurately predicts medical fitness to drive (MFTD) in older adults (Dickerson et al., 2014).

Currently no standardization exists in the assessment tools occupational therapists at Joseph Brant Hospital use with clients when assessing MFTD. The occupational therapists at Joseph Brant Hospital were curious as to if there are standardized processes that exist to assess MFTD in other practice areas within Ontario. Thus, the purpose of the present survey is to describe the current evaluation practices and assessment tools used by inpatient occupational therapists in Ontario. The secondary aim of this survey was to examine the capacity-building needs of occupational therapists related to driving screening and assessment.

Literature Review
A thorough literature review was completed to identify the current body of literature related to occupational therapy and MFTD. Searched: National Guideline Clearinghouse, Clinical Key, DynaMed Plus, UpToDate, Cochrane Library, CINAHL, OVID, Pubmed. Inclusion Criteria: North-America, published within the last 10 years, older adult populations. Exclusion Criteria: Population specific articles (i.e. Parkinson’s), driving simulators.

Methods
Design: Cross sectional survey. 
Inclusion Criteria: Inpatient occupational therapists practicing within Ontario. Exclusion Criteria: Occupational therapists working in the community. Procedure: A literature review was completed to identify commonly used assessments in evaluating MFTD. Researchers in the area of MFTD were consulted to determine additional relevant survey questions. The survey was piloted by occupational therapists at Joseph Brant Hospital to determine the usability of the survey. Convenience sampling was used to recruit survey participants from an existing pool of personal contacts. The survey was circulated to respondents via e-mail and respondents were given four weeks to complete the survey. Sample: 21 occupational therapists responded to the survey; 19 of these respondents met the inclusion criteria. Analysis: Descriptive statistics were generated using an online survey platform. Results were then compared to the current literature.

Results:
The majority of survey respondents obtained a Master’s Degree in Occupational Therapy (79%) within Ontario. Most survey participants reported to have received no formal training for assessing MFTD. Those who did, reported forms of training that include workshops, informal training sessions, independent research, and mentorship from colleagues. Participants included in the survey had a range of experience, with the majority of participants working in their current job for less than 5 years (63.2%). The most commonly reported assessments (reported to be used by greater than 50% of respondents) include the Montreal Cognitive Assessment (MoCA), Clock Drawing Test (CDT), Trails Making Test (TMT) A and B, Motor Free Visual Perceptual Test-Version 3 (MVTP-3), Range of Motion (ROM), Manual Muscle Testing (MMT), Coordination, and Sitting Balance. Survey respondents agreed that paper and pencil assessments are not sufficient in determining MFTD. The physician (89.5%) and occupational therapist (73.4%) most commonly identify the need to assess MFTD. Results are communicated to the referral source most often by means of written reports and discussion with the referral source (63.2%) followed by only a discussion with referral source (26.3%). When relaying information to
the medical team regarding MFTD 51.1% of respondents reported making a yes or no recommendation. All participants reported that the final clinical recommendation regarding MFTD is made by the physician.

Occupational therapists identified a range of educational needs with regards to further developing their competency to assess MFTD. The majority of respondents reported that they would prefer web-based education as opposed to in-person classes or self-study with hard copy resources.

**Discussion**

The results of this survey provide a preliminary view of current evaluation practices and assessment tools used by inpatient occupational therapists in Ontario. Common among the existing body of literature the MoCA, CDT, TMT A and B, ROM, MMT, coordination and sitting balance were the most widely used assessment tools (Dickerson et al., 2014). The present survey revealed that the clinician sample did not feel that paper and pencil assessments alone were adequate in determining MFTD. This is in keeping with previous research, which reports that most office based assessment tools do not have the sensitivity or specificity to accurately predict the outcomes of on-road driving.

Novel information was identified as a result of this survey with relation to communication to the referral source and next steps for the client. The variability among these findings indicates a need for a consistent approach among all occupational therapists when assessing and making recommendations regarding MFTD.

Consistent among previous literature, occupational therapists identified both a need and a want for continuing education regarding the assessment of MFTD. The preference towards web-based modalities of education found in this study is consistent with previous literature, which revealed occupational therapists were two times more likely to consider participating in continuing education if courses were offered through web-based, distance learning than through in-person classes (Korner-Bitensky et al., 2010).

**Limitations**

Convenience sampling was used which increases the risk of sampling bias. The survey may not be reflective of the general population, which limits external validity. The voluntary response bias associated with survey methodology and the small sample size are additional limitations.

**Recommendations for Future Research**

Future research should focus on the creation of a battery of assessments that effectively assess MFTD in combination. Future studies should consider the role of IADL and functional assessments in the assessment of MFTD. Additionally, research should focus on the development and piloting of formalized training modules to increase the competency of practicing occupational therapists that have a role in assessing MFTD.

**References**


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CarFit: Optimizing the vehicle environment for older drivers to promote safety behind the wheel

MSc (OT) Students: Ghazal Bandeh-Bahman, Kelsey Dickson, Alexandria Giles, Colin McAskile
Project Supervisor: Brenda Vrklijan, PhD, O.T. Reg. (Ont.)
Contributors: Sheila Garrett, O.T. Reg. (Ont.), Jessica VandenBussche, O.T. Reg. (Ont.), & Alexandra Mueller, PhD, Post-Doctoral Fellow
Institutional Affiliations: McMaster University, CAOT-CAA, Entwistle Power Occupational Therapy

ABSTRACT: Purpose. To conduct an Car-Fit event for older drivers that assessed their positioning in their vehicles (Car-Fit). Methods: A convenience sample of 10 participants aged 65 and older (71.1 years; 5 males; 5 females) were measured before and after undergoing 12-point checklist alongside other measurements (hip/knee angles). Follow up phone calls were completed ~2 weeks after the event. Results. No significant differences were found pre- and post-CarFit. All measurements obtained were consistent with recommendations from previous studies. Conclusion. This study demonstrates that Car-Fit participants were already aligned with car-fit recommendations as well as the literature. All drivers commented on the value of participating in the car-fit event.

INTRODUCTION: CarFit is a community-based educational program that provides older adults with the opportunity to check how well their personal vehicle “fits” their physical needs (Carlin-Rogers & Rogers, 2011). This program utilizes a 12-point checklist (Stav, 2010). Items include yes/no answers to whether a driver is positioned correctly on the following items: Safety belt use, steering wheel tilt; head restraint setting, positioning to air bag, line of sight over steering wheel, positioning to gas and brake pedals, mirror adjustments, operation of parking brake and ignition key, as well as other vehicle controls. While some data has been collected on attendees at CarFit events, no analyses has been completed to our knowledge in relation to evidence from the literature on optimal driver positioning. A CarFit database created in Florida examined trends of 1400 participants. This report suggested that mirror adjustments were required for 64.5% and 46% received recommendations about their steering wheel position(Carlin-Rogers & Rogers, 2011). A recent literature review by Schmidt and colleagues (2014) indicated that optimal driver positioning has focused on knee and hip joint angles with a range 79°-130° and 84°-147° described as optimal for driving comfort in terms of ergonomic design respectively. CarFit does not currently include these measures (i.e., knee, hip angles) as part of its evaluation. Moreover, there is a lack of research on the positioning of older drivers in terms of age and gender (Park et al., 2016). Hence, this project aimed to address this gap.

PROJECT OBJECTIVES: 1) Organize and run a CarFit event, 2) identify how older adults are positioned in their vehicles and its congruency with the literature on optimal driver positioning; 3) capture the perceptions of our Car-Fit participants and the value attributed to this educational opportunity.

METHODS: Participants. A convenience sample was recruited (5 female, 5 male, M=71.1, SD=5.8, range: 65-81 years). Inclusion criteria: minimum of 65 years of age; a valid driver’s license; own or lease a personal vehicle; fluency in English; and have not been told by a physician they cannot drive. Procedure. Measurements of each participant’s typical driving position in the vehicle were taken before and after administration of the CarFit checklist. Other measurements included: right knee and right hip angles (via a goniometer); and line of sight above steering wheel and distance from chest to steering wheel (via metric tape measure). Follow-up data was collected from all CarFit attendees by telephone or email an average of 3 weeks after the event. Data Analysis. A two-sample t-test determined if there was a significant difference in age when grouped by gender. Where appropriate, paired t-tests were used to compare sample means pre- and post-CarFit for all variables. For variables where the assumptions for a paired t-test did not hold, a Wilcoxon signed ranks test was used. A binomial test was used to determine if there was a significant change in a driver’s ability to see objects in either the passenger- or driver-side mirrors based on adjustments. P-values of 0.05 or less were used to detect significance. Perceptions of participation in the CarFit event were captured verbatim from phone calls and emails.
RESULTS: No significant differences were found in pre- and post-CarFit measures of the participants. However, when results were grouped by gender, female participants displayed a significantly shorter distance from chest to steering wheel (M=1.2 cm, SD=0.8) when compared pre-CarFit (M=33.8 cm, SD=4.1) to post-CarFit (M=32.6, SD=4.1); t(4)=3.2, p<0.05. Moreover, in the pre-CarFit measurements, female right hip angle (M=112.8°, SD=5.8°) was determined to be smaller (M=7.2°, pooled variance=32.1°) than male right hip angle (M=124.0°, SD=5.5°); t(8)=3.13, p<0.05. Similarly, female line of sight above steering wheel before undergoing car-fit (M=9.4cm, SD=4.0cm) was less (M=4.7cm, pooled variance=10.3cm) than male line of sight (M=14.1cm, SD=2.2cm); t(8)=2.32, p<0.05. All participants were able to see objects in their rear view mirror based on their positioning when they arrived at car fit event. As well, 7 of the 10 participants reported they made adjustments to their vehicle during the event of which six indicated they kept the changes during the follow up phone call. The most common recommendation to participants was adjustment of the position of their steering wheel. In our follow up phone calls, participants remarked on the value of particular adjustments, such as lowering the steering wheel: “It made my visibility much better. I did not realize that my steering wheel was so much in the way.” Another participant described how they found the additional Car-Fit education helpful: “No one showed me how to make these changes at the dealership. You explained alot more.”

DISCUSSION: Based on measurements taken from our participants prior to the CarFit event, joint angles of the knee and hip were within the ranges for optimal driver positioning as outlined by Schmidt et al. (2014). While there were some slight changes in positioning of drivers in terms to line of sight above the steering wheel, mirror adjustment, as well as distance of driver’s chest to steering wheel, participants who attended the CarFit were already positioned in accordance with the recommendations outlined by CarFit as well as those in the literature. While this study involved a small convenience sample, no data had been collected on participants in relation to available evidence on driver positioning with this population. Nonetheless, measurements that were taken from participants upon arrival to the event indicated they were already positioned in accordance with CarFit recommendations. Although the number and type adjustments that were recommended to participants were limited, all attendees were extremely positive about their experience and knowledge gained through the CarFit event.

CONCLUSIONS & FUTURE DIRECTION: We are engaged in follow up discussions with the CAOT-CarFit coordinator to create a database of the measurements that were identified as important from the study protocol, which can lead to recommendations on how to best capture information that leads to evidence-based recommendations that ensuring this population is optimally positioned when driving.

ACKNOWLEDGEMENTS: The authors wish to extend their appreciation for the support and guidance of their supervisor Dr. Brenda Vrlklijan as well as Dr. Alexandra Mueller, Jessica Vandenbusche, and Sheila Garrett. The authors would also like to thank the CarFit, CAOT, and CAA organization, as well as McMaster University and Entwistle Power Occupational Therapy staff for their assistance with this event.

REFERENCES:


Towards an age-friendly Hamilton: promoting aging in rental units

Authors: Holly Robson, MSc & Jeffrey Zeuner- MSc. (OT) Candidates 2016
Supervisor: Dr. Lori Letts- McMaster University
Task Group Members: Jeanne Mayo, Linda Strobl, RN, BScN

Abstract: Following the World Health Organizations (WHO) age-friendly recommendations in 2008, Hamilton’s Plan for an Age-Friendly City (HPAFC) was developed in partnership with the Hamilton Council on Aging (HCoA) and the Neighborhood and Community Initiatives Division. Subsequently, a task group was created with members from the HCoA, the City of Hamilton, and McMaster’s Occupational Therapy program. The purpose of this project was to implement Objective 1.4.8 of the HPAFC- encourage landlords to install adaptations (grab bars, modified door handles, etc.) upon request at little or no cost to the tenant. A novel survey was created using input from three standardized home environment assessments in aims of assessing the physical environment of rental units in Hamilton. Thirty older adult participants were recruited through the HCoA, the majority of which completed an information training session, to complete the survey and provide feedback. Through this community based participatory approach an environmental scan was completed, revealing information which led to age-friendly home modification/adaptation recommendations related mainly to the building itself: graspable handrails on staircases, automatic or push button door openers and accessible waste disposal, programs or services. Within the rental unit it is recommended that landlords install grab bars into all rental unit bathrooms upon request of the tenant, and when updating appliances purchase stoves with front controls. Moving forward, members of the HCoA and Public Health will advocate for this reports recommendations in meetings with both the Hamilton and District Apartment Association and the Hamilton Tenants Associations.

Introduction: The population of Hamilton is aging. According to 2011 population statistics, adults over the age of the 55 represent 28 percent of all those living in Hamilton; this number is expected to double over the next two decades (Hamilton Council on Aging & City of Hamilton, 2014). Based on this, the development of age friendly initiatives was identified as a strategic priority in the city’s 2012-2015 strategic plan (Hamilton Council on Aging & City of Hamilton, 2014). In 2013, a partnership was developed – in the interest of making age friendly recommendations to the city - between The Neighborhood and Community Initiatives Division and the Hamilton Council on Aging (HCoA); HPAFC was the result. This plan aligns well with the World Health Organization’s (WHO) initiative of creating a more age friendly world (WHO, 2008).

The HCoA has since developed task groups with community partners to begin implementing recommendations put forward by the HPAFC. One of the recommendations - Objective 1.4.8 is “to encourage landlords to install adaptations (grab bars, modified door handles, etc.) upon request at little or no cost to the tenant”. In the interest of addressing this objective, the HCoA partnered with McMaster’s Occupational Therapy program and the City of Hamilton Public Health.

Currently, research suggests that home modifications are effective at reducing difficulty in performing everyday life tasks, decreasing injuries at home, and supporting older adults aging-in-place (Hwang, Cummings, Sixsmith & Sixsmith, 2011; Safran-Norton, 2010; Stark, 2004; Keall et al., 2015).

The purpose of this project is to gain a better understanding of the physical environment of older adult renters in Hamilton. The focus of this project was not strictly safety, but also improving quality of life through promoting independence into older adulthood. The results of this study will help support action for the HCoA by allowing them to compare the current living conditions of older adults to best practice from an aging-in-place and universal design perspective.

Methods: This project utilized a community based participatory approach with a cross-sectional design to evaluate the physical environment of older adults living in rental units within Hamilton. The task group met regularly to discuss the execution of project components related to environmental assessment, participant recruitment and training, data collection and analysis. Older adult participants were recruited through the HCoA, using information posters at community locations frequented by the older adult population. In order to be eligible, participants had to live in a rental unit in Hamilton and identify as an older adult.

The self-assessment apartment survey (SAAS) was created after the completion of a comprehensive literature search which showed that of the available assessments within the literature, not one addressed specifics related to rental unit environment nor did they meet the needs of stakeholder groups. The content of the SAAS was informed by the following assessments: The Multiphasic Environmental Assessment Procedure (MEAP) (specifically The Physical and

Objective 1.4.8 of the HPAFC - encourage landlords to install adaptations (grab bars, modified door handles, etc.) upon request at little or no cost to the tenant. A novel survey was created using input from three standardized home environment assessments in aims of assessing the physical environment of rental units in Hamilton. Thirty older adult participants were recruited through the HCoA, the majority of which completed an information training session, to complete the survey and provide feedback. Through this community based participatory approach an environmental scan was completed, revealing information which led to age-friendly home modification/adaptation recommendations related mainly to the building itself: graspable handrails on staircases, automatic or push button door openers and accessible waste disposal, programs or services. Within the rental unit it is recommended that landlords install grab bars into all rental unit bathrooms upon request of the tenant, and when updating appliances purchase stoves with front controls. Moving forward, members of the HCoA and Public Health will advocate for this reports recommendations in meetings with both the Hamilton and District Apartment Association and the Hamilton Tenants Associations.
Architectural Features Checklist (PAF) (Moos & Lemke, 1996), Maintaining Senior’s Independence Through Home Adaptations Self-Assessment (Canada Mortgage and Housing Corporation, 2009), and the Home Enabler (Iwarsson, 1999). Participants were required to attend one (of three) community-based training session to learn about the project, the survey as well as their part as participants in the research.

An evaluation of training and assessment procedures was completed by the majority of participants at post-training and after completion of the SAAS, respectively. A total of 30 participant packages were distributed, of which, 20 surveys were returned. Descriptive analysis techniques were utilized to disseminate results from the collected data. All data (post-training, post-assessment, SAAS) were compiled, sorted, and analyzed using Microsoft Office Excel.

**Results:** Eleven of 20 participants reported that the front door to their building was automatic. Only 4 of 20 participants reported handrails on both sides of the staircase, eight participants did not rate this section, and seven reported that they did not have handrails. Ten participants reported that waste disposal facilities were only accessible using stairs.

In the bathroom, only nine of 20 participants reported having at least two grab bars installed in the shower. Of the 12 participants who reported having grab bars installed, only five reported that they were installed when they moved in. Eight of the 12 participants with grab bars installed reported having to independently purchase them. Six of the participants without grab bars indicated that they would like to have them in their unit. Eleven of 20 participants reported that they were unsure if their property owner would install grab bars if requested; five additional participants indicated that their property owner would not install grab bars for them. In the kitchen, 14 of 20 participants reported that they needed to reach over the stove to access the temperature controls.

**Discussion:** The literature suggests the home modifications can improve quality of life and safety for older adults aging-in-place (Peterson, Lilja, Hammel, & Kottrop, 2009). The results of this study, however, suggest that rental units are not setup to best support aging-in-place. Based the findings the following recommendations are suggested:

1) Advocate to landlords to install grab bars into all rental unit bathrooms
2) Advocate for installation of graspable handrails onto staircases
3) Advocate for the installation of automatic or push button door openers
4) Advocate for accessible garbage, recycling and compost disposal, programs or services
5) When updating appliances install stoves with front controls

**Conclusion:** This report shows that this population is currently living in rental units that may not be well suited to support aging-in-place. The environmental scan suggests that age-friendly modifications/adaptations could promote prolonged independence and longevity. Areas of importance, as identified by the SAAS, include front building entrances; building staircases and garbage/recycling/compost disposal as well as bathroom grab bars, kitchen storage and appliances. Moving forward, the task group will report these recommendations in an effort to implement Objective 1.4.8 of HPAFC. Through community-based education and advocacy, all stakeholders must come to a consensus to effectively institute age-friendly recommendations in rental units. For Hamilton to become an age-friendly city, professional bodies must work collaborative to establish policies that will support older adults living in Hamilton.

**References:**


A scoping review of workplace accommodations and associated measures of the work environment for adults with autism spectrum disorder

Authors: Madiha Sultan, Zonera Sharif & Tony Wang

Abstract: Most individuals with ASD have difficulty participating in the labour force due to challenges related to the condition, as well as impact from the work environment. Purpose: to identify types of environmental workplace accommodations reported in the literature and to identify measures used to assess the work environment. Through two independent literature searches, selected articles, based on inclusion/exclusion criteria were reviewed and summarized. Themes were assigned to ICF Framework environment categories based on the nature of workplace accommodations provided. Results: Review 1 included 22 final studies, and found that support from a job coach to employees and support from employers to employees were the most prevalent effective work accommodations. Review 2 included 12 final studies and found that the majority of measures evaluated institutional support at the workplace. Implications: workplace accommodation appear to be effective for a positive work experience for adults with ASD, however more research which describes accommodations and measures in detail is necessary.

Introduction

Autism spectrum disorder (ASD), characterized by social communication and behavioural challenges, has increased in prevalence and thus will be a growing group of individuals in the labour force. Individuals with ASD may have impairments which can result in significant barriers that prevent adults with ASD from being successful in competitive workplace settings. Environmental factors (e.g. light or noise) in the workplace can exacerbate the challenges experienced. The variety of challenges associated with ASD require a wide range of workplace environmental accommodations. Although previous research mentions a variety of employee-focused workplace interventions, previous reviews (Nicholas et al., 2014; Taylor et al., 2012) did not describe environmental accommodations or interventions of the work environment that can be used to support adults with ASD in the workplace to improve job performance and retain employment. It is necessary to assess the work environment to identify potential challenges, and/or evaluate the impact of such changes. Currently, there is a lack of evidence on environmental assessments for the workplace. The aim was to do a review of the literature on environment-focused workplace accommodations and measures that may be used to assess the work environment for adults with ASD.

Methods

- **Research question 1 (RQ1):** What workplace accommodations contribute to obtaining or maintaining employment for adults with ASD?
- **Research question 2 (RQ2):** What are the environment-focused measures used in assessing the workplace for adults living with ASD?

Databases searched: CINAHL, ERIC, PsycINFO, Social Science Abstracts, EMBASE, MEDLINE & AMED. Inclusion criteria for articles: adults (18+) with ASD; English; peer-reviewed journals; articles describing interventions to change work environment (RQ1); and studies featuring an environmental measurement (RQ2).

Keywords (main): Work, environment, ASD, adults, accommodation, measure

Article review process: initial search; title review, removal of duplicates and abstract review based on inclusion/exclusion criteria. Selection of final articles was based on full-text review and reviewed by several researchers. An agreement process (established a priori) was conducted between the researchers for final article inclusion, including consultation with supervisor for an adjudication process for any disagreements.

Data extraction: Workplace environment accommodations found within each article were assigned to 5 categories of environment from the International Classification of Functioning, Disability and Health (ICF) framework using the CanChild Outcome Measures tool (Law et al., 2004). An agreement process was used to finalize categorization of themes.
Results
For RQ1, 22 studies were included in final review; articles published between 1988–2015. The study designs included case studies, delayed RCTs, before and after and cross-sectional design. Participants: primarily adults with ASD, employed in part-time entry-level positions. Each included study was categorized using ICF environment themes as follows:

Support and Relationships: The majority of articles (18) examined supports offered by employers to employees with ASD (e.g. modified schedules, training), as well as direct support to adults with ASD by employment specialists or job coaches (e.g. job task training, behaviour management). Natural Environment and Human-Made Changes to Environment: (6 articles) Accommodations exist in the following areas: physical workplace environment (e.g. distractions minimized, reduced noise), simple environmental changes (e.g. organizers, checklists) and making the workplace more predictable. Technology and Products: (8 studies) technology (e.g. iPod Touch) may be used to reduce the role of an on-going job coach and improve job performance by providing prompts and task breakdown. Services, Systems and Policies: (10 articles) Employers rely on supported employment programs (e.g. TEACCH), and external services to assist in providing appropriate support for their employees with ASD. Attitudes: (5 articles) Though studies mentioned attitudes/stigma from colleagues towards employees with ASD, the reasoning behind negative attitudes were not explored in the literature.

For RQ2, 12 studies with measures or factors that examined the work environment met the inclusion criteria. The primary category mentioned in articles of measures was Support and relationships (10 articles), which indicates the importance of supports from both colleagues and supervisors. On the other hand, service, system and policies and attitudes of family, colleagues and supervisors each have 6 and 5 articles. This demonstrated a strong correlation of institutional support and attitude towards people living with ASD to the performance at workplace. The Natural Environment and Human-Made Changes to Environment also included several factors (e.g. light, sound) mentioned in 5 articles. Technology and Products included ‘employment technological support’ (e.g. electronic training devices) from 1 article.

Conclusions/Future Directions
This review provided an overview of published research on environmental accommodations and measures currently being utilized for adults with ASD in the workplace. From the identified studies (22 related to workplace accommodation & 12 on measures to evaluate in the work environment), all ICF categories of the environment were represented across studies, predominantly within Support and Relationships. This review found evidence of workplace accommodations regarding the use of supported employment programs providing on-site support, modification of physical environment, job tasks and use of technology. Future research directions include exploring more interventions addressing workplace environment attitudes, as well as more rigorous study designs to identify effectiveness of environmental accommodations. To better evaluate the impact of workplace accommodations in future research, more research is required in the development of more complete environment-focused measures.

Acknowledgements: Supervisor: Briano DiRezze; McMaster University
Associate researchers: Ghaidaa Khalifa & Helena Viveiros

Key References
HIV & Rehabilitation: Implementation and Evaluation of an Online Inter-professional E-Module
Rachel Schooley, MSc. OT Candidate. Supervised by: Sandra Moll, PhD, OT Reg. (Ont.)

Abstract Background: Individuals with HIV often experience inadequate healthcare, attributed, in part to stigma, as well as to limited knowledge and lack of collaboration between healthcare providers. Education of future healthcare providers is needed to address these barriers and ultimately improve clinical care. Purpose: The purpose of this pilot study is to implement and evaluate an online inter-professional e-module focused on rehabilitation and HIV using an educational model that integrates service user experiences. The research questions focused on whether participation in the online, module-based IPE experience lead to improved knowledge and reduced stigmatized beliefs about HIV; and if the impact of the program varied depending on the perspective and experience of the facilitator. Method: A pre-post, non-randomized single-group design was used. A mixed methods approach to data collection was adopted, including use of standardized tests, open-ended survey questions and focus group discussion. Health sciences students attended a 4-week course that included a face-to-face orientation session followed by participation online in weekly asynchronous discussions. The students were divided into two discussion groups; one group facilitated by a healthcare provider and one by a health mentor currently diagnosed as HIV positive. Analysis of the survey data compared pre/post group changes in HIV knowledge, attitudes regarding individuals with HIV, and competencies in inter-professional collaboration. Qualitative data from the open-ended survey questions and focus group transcripts were also reviewed and coded to identify themes related to student learning and program implementation. Outcomes: Data analysis demonstrates a significant change in pre- and post- scores, particularly in regards to knowledge and stigma. This is supported by the qualitative data. Implications: Evidence-based approaches are needed to train future healthcare providers, which are based on principles of contact-based education and inter-professional collaboration. This unique experience allowed students from a variety of health programs to learn with, from, and about each other through this interactive e-module guided by a healthcare provider and health mentor.

Introduction and Literature Review Individuals with HIV often experience inadequate healthcare; this is attributed to stigma, as well as to limited knowledge and lack of collaboration between healthcare providers [2]. Stigma can also influence decisions about seeking out health care, may result in mental health issues, and can contribute to social distancing, resulting in a lack of social support [3]. Unfortunately, evidence suggests that not only does stigma impact a person’s decisions surrounding healthcare, it can also impact their healthcare experiences. Stigmatized attitudes can extend to healthcare professionals, and impact the care they provide to individuals with HIV [4], which can ultimately have a negative impact on their quality of life [5]. Education of future healthcare providers is needed to address these barriers and ultimately improve clinical care. Contact-based education works to reduce stigma by means of interpersonal contact between those who are stigmatized, and those who are stigmatizing towards them [5]. Health mentors are the crux of contact-based education. While health mentors have traditionally been patients, this study will also consider the impact of a healthcare provider’s expertise and experience. HIV education for healthcare providers should also be inter-professional in nature in order to build on inter-professional competencies related to HIV care. Inter-professional team collaboration is made possible by team members’ understanding of unique roles and responsibilities [6].

Methods Design: In this pilot study, a pre-post, non-randomized single group design was used to evaluate the impact of an inter-professional educational intervention. The purpose was to evaluate the impact of the course on: A) knowledge about HIV and rehabilitation; B) stigmatized beliefs about individuals with HIV, and; C) knowledge and skill about inter-professional collaboration. We compared if the impact of the program varies depending upon the perspective and experience of the facilitator. Participants: Thirty-four Faculty of Health Sciences students (Medicine, Nursing, Physiotherapy, Occupational Therapy, Midwifery, Bachelor of Health Sciences and Physician Assistant) volunteered to participate as part of the PIPER (Program for Inter-professional Education and Research) curriculum and provided consent to participate. The study was conducted over the course of two sessions, with 20 participants in the first session and 14 participants in the second session. Intervention: The 4-week course included a face-to-face orientation session followed by weekly online modules (information and case studies about HIV and rehabilitation) and participation in asynchronous online discussions. Data Collection: Students completed pre- and post- surveys, including demographic data and self-reports on knowledge and beliefs related to HIV. Additional data included focus groups, facilitator interviews, and observation of online discussions. Data Analysis: Pre- and post- survey data change scores were analyzed using paired t-tests, with statistical significance set at p<0.05. Qualitative data was analyzed using a conventional content analysis approach to identify and describe key aspects of the teaching-learning process [7].
**Results** There was a statistically significant increase in knowledge scores from pre to post test in session 1 (paired $t$-test, $t=9.07$, 18 d.f., $p<0.001$). This increase in knowledge was also reflected in the qualitative focus group responses: “The increase in knowledge of just the day-to-day impact I had absolutely no idea going in of what it looked like to live with HIV... just to know as an individual person what they have to live with every day was pretty intense.” There was a statistically significant decrease in stigma scores from pre to post test in both sessions. In group 1, the mean scores decreased by 3.2 points (paired $t$-test, $t=2.30$, 18 d.f., $p<0.05$), and in group 2, the mean scores decreased by 5.5 points (paired $t$-test, $t=3.16$, 11 d.f., $p<0.05$). This was also reflected in qualitative focus group data: “Just learning the stigma that they’re facing on a daily basis... this is a medical issue and you should be able to talk about this because it relates to your care.” Finally, there was a statistically significant increase in inter-professional competencies, with post- scores averaging 2 points higher than pre- scores (paired $t$-test, $t=8.72$, 18 d.f., $p<0.001$). Focus group data reflects this increase in knowledge of inter-professional roles: “I have this appreciation for what other people can offer in future practice” - Focus Group Participant.

**Recommendations** Future studies may benefit from a larger sample size, as well as a control group. A randomized control study with a waitlist control would increase the credibility and validity of the study. Conducting a longer follow up to the HIV & Rehabilitation IPE would provide a better picture of whether changes are sustained over time. A follow up at 3 or 6 months would be feasible; this may provide information on how their knowledge and beliefs are sustained over time, and provide insight into how these might impact their practice. In terms of outcome measures, it might be helpful to re-visit whether the MHCC Opening Minds Scale for Healthcare Providers tool is the optimal tool to track changes in stigmatized beliefs, or whether there is another HIV-specific tool. In addition, it would be helpful to add an evaluation of behaviour change to assess whether change in knowledge and beliefs translate into improved clinical care. One of the strengths of the current study was the mixed methods approach. Triangulation of data sources and methods provided a richer, more nuanced understanding of both the process and outcomes of the inter-professional learning experience.

**Conclusion** The HIV & Rehabilitation IPE was successful in achieving its projected outcomes of affecting significant change in knowledge, stigma and inter-professional competencies scores. There was no significant difference between the change scores of facilitator groups, and both students and facilitators expressed an interest in future groups having both facilitators involved. There are recommendations to include a longer follow up in future studies, and to further consider the tools and approaches used for evaluation of stigma.

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**References**


Title: Geriatrics is the New Black: Changing Student Attitudes & Learning Interprofessionally  
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Supervisors: Bonny Jung, Pat Miller, & Hee-Jin Kim

Abstract
This EBP project collected and analyzed two stages of data during the second year of the TILEA program. The study used a mixed methods design with repeated measures to determine if students experienced attitudinal changes towards geriatric populations after participating in geriatric-focused learning experiences.

Introduction
The Tri-Stage Interprofessional Learning Experience in Aging (TILEA) provides an opportunity for McMaster students in various healthcare programs to participate in a multi-stage longitudinal learning experience with a focus on geriatrics. The program has three stages that take place over a longer period of time, allowing the opportunity to determine which types of learning experiences are most effective in enhancing students’ attitudes towards older adults. The purpose of this evidence-based project was to review Stages 1 and 2 of TILEA that occurred earlier this year and was a subset of a larger longitudinal study.

Literature Review
The number of Canadians over the age of sixty-five is projected to double over the next 20 years, while those over eighty-five will quadruple. The Institute of Medicine stated that in order to address the complex needs of this growing geriatric population, more training is needed than currently exists for health care providers. (Institute of Medicine, 2008). Many health education curriculums do not include geriatrics as one of its core components, creating a lack of exposure to this population. Furthermore, this lack of training may lead to negative attitudes, stereotyping, and decreased interest in working with older adults amongst all health professional students (Gray et al, 2015). Therefore, it is crucial to provide the knowledge and skills to care for older adults across all disciplines (National Seniors Strategy, 2015) and as occupational therapists, we are one important part of the current interdisciplinary health care system.

Interprofessional education has been supported by the World Health Organization to create healthcare workers that are prepared to practice collaboratively (Montagnini, 2014). However, there has been limited evidence-based guidance on exactly how to structure and implement IPE initiatives. Positive changes in attitude and interest after older adult educational initiatives have primarily been focused on only medical students (Duque et al., 2013; Fitzgerald et al., 2003). Increasing the focus to include other health care programs is important to foster team-based healthcare (Fitzgerald, Wray, Halter, Williams, & Supiano, 2003; Tullo et al., 2015), and enhance the care of older adults.

Some novel strategies that have been implemented with success are the use of health mentors for experiential learning. Health mentors are typically former patients/clients recruited from the community to share their lived experiences and ideas for the health care system (Ruitenberg & Towle, 2015). In the case of geriatrics, seniors in the community have been recruited as informal health educators for students with positive results (Duque et al., 2013; Gray et al., 2015). Therefore, TILEA seeks to improve student knowledge, attitudes and interest in the geriatric population by developing a unique multi-stage learning initiative. This initiative will be
interprofessional to expand from only medical students and will incorporate the element of health mentorship.

**Methods**

A mixed methods design using repeated measures evaluated change in students’ attitude towards older adults. Voluntary participants were McMaster University students enrolled in healthcare programs (Stage 1 n= 15; Stage 2 n=46). Pre and post-intervention attitudinal change was measured and analyzed quantitatively in each learning stage using Polizzi’s Aging Semantic Differential Revised (Polizzi, 2003) and the Geriatrics Attitude Test/Scale (Reuben et al., 1998; Lee et al., 2004). For qualitative data, an in-depth debrief through focus groups was completed for Stage 1 and written student feedback was collected for both stages using the Interprofessional Education Experience Evaluation. To identify key qualitative findings from Stages 1 and 2, conventional content analysis and components of Meaning Generation were used.

**Results**

*Quantitative*

Analysis on SPSS indicated that the attitudes as measured by the Polizzi scale showed a significant change for both Stage 1 and Stage 2 [Stage 1(p=0.014); Stage 2(p=0.000)]. There was no significant change in student attitudes for either Stage 1 or Stage 2 of the GAS [Stage 1(p=0.077); Stage 2(p=0.420)].

*Qualitative*

The main themes identified by the older adults were bi-directional learning, enjoying the paired format, sincerity of the students, and feeling valued as contributors to the interprofessional learning experience. As for the students, experiential learning and enjoyment of interprofessionalism were mentioned as strengths, and they recommended more time allotted for discussion with both their student colleague and with their health mentor.

**Discussion**

Three key points were revealed from the study results:

1. A significant change in attitudes was identified on the Polizzi scale but not the GAS. The reason for these findings may be because of the nature of the items on each scale. The Polizzi measures attitudinal biases with descriptive adjectives that may be more susceptible to change while the GAS measures more explicit beliefs about healthcare that could require more time and experience to evoke core attitudinal shifts.

2. Community volunteers and student participants valued the interprofessional education component of the learning experience. Our findings therefore suggest that it may be important for IPE collaborative efforts to begin in the early stages of professional development, most effectively to target students.

3. Positive feedback was received from all participants regarding the inclusion of health mentors as a part of the learning strategy as it provides opportunity for health service users to with a community voice which could alter the care of future practitioners. The structure of TILEA may therefore be a new educational program that effectively addresses experiential learning goals.
References


