



**School of Rehabilitation Science
MSc(PT) Program**

**Research & Evidence Based Practice
Abstracts**

2017



Presentation Schedule: REBP Symposium
July 25th, 2017

	9:00 -9:10	WELCOME
1	9:10-9:25	Fidelity strategies for community rehabilitation: A scoping review Students: Greg Brown, Tahira Mascarenhas, Matt Nicol, Kaitlyn McLeod Supervisors: Dr. Ada Tang and Dr. Julie Richardson
2	9:25-9:40	Evaluating the reliability of the Ovako Working Posture Assessment System (OWAS) to characterize firefighter injury risk using Dartfish video analysis software Students: Tim Hurley, Kerri Zalan, Jeff Wang, Ewa Habrowski Supervisors: Dr. Joy MacDermid and Dr. Kathryn Sinden with co-investigator Sara Sayed
3	9:40-9:55	A scoping review of musculoskeletal injuries in firefighters: Epidemiology, and primary/secondary prevention Students: Sarah Perruzza, Glen Hempstock, Aislinn Braun Supervisors: Dr. Joy MacDermid and Dr. Kathryn Sinden
4	9:55-10:10	Assessment, risk factors, impact and management of fatigue in cerebral palsy across the lifespan: a scoping review Students: Lea Damata, Kendra Young, Dana Ashbee, & Caroline Beacham Supervisor: Dr. Jan Willem Gorter
5	10:10-10:25	Lifestyle modification interventions for low back pain: a scoping review of the literature Students: Thomas Abbass, Sarmina Baskaran, Saba Mehrabkhani, Kirsten Weber Supervisor: Dr. Luciana Gazzi Macedo
	10:25-10:40	BREAK
6	10: 40-10:55	Relationship Between Self-Efficacy, Self-Report, and Clinician Reported Measures for Patients with Hip and Knee Osteoarthritis Students: Kim Caporicci, Cathy Hare, Kailey Houston, Tyler DiSimoni Supervisors: Stephen Patton, Susan Montgomery, Angela Acceturra
7	10:55-11:10	The Efficacy of Exercise Interventions in Reducing Side Effects in Young Women with Breast Cancer Students: Alexandra Danks, Anna Head, Tiffany McKinley, Kellie Moher Supervisor: Jenna Smith
8	11:10-11:25	Educational interventions for teaching values to health care professional students: A scoping review Students: Bianca Fong, Sharon Jebaselvan, Shawna Neal, Kristyn St Hilaire Supervisors: Dr. Vanina Dal Bello-Haas and Dr. Pat Miller
9	11:25-11:40	Pregnancy-Related Pelvic Girdle Pain: Understanding Clinical Decision Making Students: Grecia Alaniz and Yazmin deGroot Supervisors: Sylvia Daniel and Dr. Sinéad Dufour
10	11:40-11:55	Can a screening tool designed for orthopaedic clinical settings accurately identify pelvic floor dysfunction? Students: Brittany Vandyken and Alex Keizer Supervisors: Dr. Sinéad Dufour and Darryl Yardley with co-Investigators MJ Forget, Nelly Faghani and Carolyn Vandyken

	12:00-1:00	LUNCH
11	1:00-1:15	Hip surveillance practices for children with cerebral palsy at Ron Joyce Children's Health Centre: A retrospective chart review Students: Alysun Lillico, Amanda Saunders, Andrea Yallin, Jessica Mahler Supervisors: Deana Mercier and Marilyn Wright
12	1:15-1:30	Is the 90-second musculoskeletal screen (90SS) a practical and reliable way to gather health information in varsity athletes? Students: Samy Shash, Kristofer Arcangel, D'Arcy Heenan, Michael Bochus Supervisor: Kristin Long
13	1:30-1:45	An Estimate of the Predictive Validity of a Health Survey and 90 Second Screen for Predicting Injuries in Varsity Athletes: A Guide to Preparticipation Screening Implementation Students: Brandon Broijer, Christopher Degeus, Aaron Kipp, Joseph Pagliaro Supervisor: Kristin Long
14	1:45-2:00	Interprofessional Collaboration for Indigenous Access to Healthcare Services: a Scoping Review and Navigation Model Students: Katrina Radassao, Nicholas Nucci with OT Students: Katherine Liston, Rachel Strohm Supervisor: Sarah Wojkowski with co-investigator: Justine Jecker
	2:00-2:15	BREAK
15	2:15-2:30	Factors Impacting Local Sustainability for Short Term Medical Missions & Recommendations for Student International Placements: A Scoping Review Students: Rachel Steele, Jessica Chin, Samantha Hu, Caitlinn Thompson Supervisor: Dr. Nancy Rushford
16	2:30-2:45	Estimating the interrater reliability of the Finger Accuracy and Speed Tapping (FAST) Test and examining its feasibility in assessing upper extremity function in people with Parkinson's disease Students: Hilary Deverell, Heather Dowling, Rheanne Carleton, Audrey De Jong Supervisors: Dr. Pat Miller and Dr. Matthew Woolhouse
17	2:45-3:00	Estimating the Threshold Value for Change for the Leg, Foot, and Postural Control Dimensions of the Chedoke-McMaster Stroke Assessment (CMSA) Students: Caitlin Wharin, Rachel Beyer, Kathleen Odumeru, Ellie Gillespie Supervisors: Dr. Pat Miller and Prof. Paul Stratford
18	3:00-3:15	Health-Care Professionals' Perspectives on Exercise Counselling for Patients with Cancer Students: Alicia Page, Elysia Zavaglia, Sara Mackellar Supervisor: Dr. Oren Cheifetz
	3:15-5:00	CLOSING REMARKS and CELEBRATORY RECEPTION

Fidelity Strategies for Community Rehabilitation: A Scoping Review

Students: Greg Brown, Tahira Mascarenhas, Kaitlyn McLeod, Matt Nicol

Supervisors: Dr. Ada Tang, & Dr. Julie Richardson

ABSTRACT

Purpose: To investigate what fidelity strategies have been applied to community-based exercise rehabilitation programs (CBERP).

Methods: A literature search was performed to identify studies that addressed intervention fidelity in CBERPs in MEDLINE, EMBASE, psycINFO, AMED, CINAHL, SPORTDiscus, the Cochrane library, REHABDATA, PEDro, and OTseeker database. Two pairs of independent reviewers screened title/ abstract, followed by full-text review. Data extraction was performed by two pairs of independent reviewers to identify: exercise program design, strategies for ensuring fidelity and evaluation fidelity, as well as moderators of fidelity.

Results: 15 articles met the inclusion criteria. Four discussed general implementation frameworks, four described fidelity-specific frameworks, and five examined fidelity strategies and moderators of fidelity in the context of a CBERP. The remaining articles addressed the researchers' role in knowledge translation.

Conclusions: Major themes for enhancing implementation fidelity included: deconstructing programs into essential elements, ongoing assessment of instructors and participants, and bidirectional communication between program developers and implementers. Currently, there is minimal evidence supporting the use of these strategies in CBERPs. Future research should focus on establishing the effectiveness of these strategies, prioritizing the components of fidelity, and determining methods for achieving long-term maintenance of fidelity.

Evaluating the reliability of the Ovako Working Posture Assessment System (OWAS) to characterize firefighter injury risk using Dartfish video analysis software

Students: Ewa Habrowski, Tim Hurley, Jeff Wang, Kerri Zalan

Supervisors: Dr. Joy MacDermid & Dr. Kathryn Sinden, with co-investigator Sara Sayed

ABSTRACT

Purpose: Pairing Dartfish kinematic video analysis software with the Ovako Working Posture Assessment System (OWAS) risk assessment tool is a novel way to assist clinicians in determining risk severity in firefighters performing routine tasks. This study examined the inter-rater reliability of this approach using three raters and compared the reliability of OWAS scores generated using single versus combined video perspectives.

Method: The risk assessment was performed by applying OWAS to still-frames captured from video recordings of 20 firefighters performing a hose drag task. Three raters with varying levels of ergonomic assessment experience evaluated working posture risk using OWAS. Inter-rater reliability was calculated using Cohen's kappa with quadratic weighting. Pairwise rater kappas were averaged within four separate phases of the routine hose drag task to determine overall reliability.

Results: Variable levels of reliability were found among raters during each of the four phases of the routine task. Averaged interrater reliability was poor to very good (kappa = -0.03 to 0.89) across phases. OWAS inter-rater reliability was higher for task phases that consisted of simple static postures as compared to phases involving more complex dynamic postures. There was no difference in reliability when raters assessed working posture risk using single versus combined video perspectives.

Conclusions: Use of the OWAS risk assessment tool with Dartfish may not provide the most reliable method of assessing risk severity of routine firefighter activities. Using more sensitive postural assessment tools in combination with Dartfish may be beneficial in injury risk assessment and improve inter-rater reliability

A scoping review of musculoskeletal injuries in firefighters: Epidemiology, and primary/secondary prevention

Students: Aislinn Braun, Glen Hempstock, Sarah Perruzza
Supervisors: Dr. Joy MacDermid, & Dr. Kathryn Sinden

ABSTRACT

Purpose: To perform a scoping review describing the extent and nature of the research regarding musculoskeletal (MSK) injuries in firefighters (FF) including: 1) epidemiology of MSK injuries in FF, 2) prevention/rehabilitation interventions of MSK injuries in FF.

Methods: The study follows the stages of a scoping review outlined by Levac. PubMed, CINAHL, Embase, and PsycINFO were searched with limitations of 'human' and 'English language'.

Results: 29 articles were included (27 epidemiological, 2 intervention). The majority of the research was completed in the USA, there is a trend of increasing publications since 2010, and there is a lack of research including females. The epidemiological studies were concerned with the quantification and description of MSK injuries among firefighters, the identification of the specific mechanisms of injury associated with MSK injuries and injury rates, and the job tasks associated with MSK injuries in FF. The intervention studies were not thematically related.

Conclusions: The majority of existing literature consists of epidemiological studies. There is an opportunity to expand the field of knowledge by conducting epidemiologic studies with a focus on females, investigating primary and secondary prevention studies, and by conducting intervention studies to treat common MSK injuries in firefighters.

Assessment, risk factors, impact and management of fatigue in cerebral palsy across the lifespan: a scoping review

Students: Dana Ashbee, Caroline Beacham, Lea Damata, Kendra Young
Supervisor: Dr. Jan Willem Gorter

ABSTRACT

AIMS: The aim of this scoping review was to describe the assessment tools, risk factors, impact, and management techniques that address fatigue for individuals with Cerebral Palsy (CP) across the lifespan and all Gross Motor Function Classification System (GMFCS) levels. This review outlines a resource for healthcare professionals (HCP) to apply current literature into clinical practice.

METHOD: We systematically searched MEDLINE, EMBASE, the Cochrane Library, Cumulative Index to Nursing and Allied Health Literature (CINAHL), REHABDATA, PubMed, and Physiotherapy Evidence Database (PEDro) for studies reporting on fatigue in individuals with CP. Studies were limited to those that involved participants with a formal diagnosis of CP, published in English and within the last 15 years. Data was extracted and charted using the following subheadings: risk factors, assessment, management, and impact.

RESULTS: Thirty-eight articles highlighted a range of risk factors, outcome measures, impacts, and management strategies across the lifespan.

INTERPRETATION: The topics listed above are appropriate starting points in recognizing and treating fatigue across the lifespan. Further research is needed to solidify the best clinical approach that HCP can use to address fatigue and improve the lives of those living with CP.

Lifestyle modification interventions for low back pain: a systematic review of the literature

Students: Thomas Abbass, BSc;* Sarmina Baskaran, BSc;* Saba Mehrabkhani, BA;* Kirsten Weber, BKin*

Supervisor: Dr. Luciana Macedo, BScPT, MScPT, PhD*

ABSTRACT

Purpose: To determine whether lifestyle modification interventions such as weight loss and smoking cessation are effective in increasing quality of life, decreasing disability and/or the severity or number of recurrences of pain symptoms in patients with LBP.

Method: Search strategies were developed for each database (MEDLINE, EMBASE, CINAHL, and OVID PsycINFO). The study eligibility criteria were as follows: (1) RCT's and quasi-experimental designs; (2) adults with chronic non-specific LBP \geq 12 weeks or recurrent \geq 4 episodes; (3) evaluated weight loss or smoking cessation interventions compared with baseline, placebo, no treatment, active treatment or additional treatment; (4) interventions promoted lifestyle changes. Primary outcomes included were pain intensity and disability, all others were considered secondary.

Results: A total of 5 studies met inclusion criteria. All included studies examined the effect of weight loss on LBP. No studies examined the effect of smoking cessation.

Conclusions: Results suggest that weight loss may be effective for reducing disability and pain in patients with non-specific or recurrent LBP. Definitive conclusions cannot be drawn due to lack of methodological quality of included studies. Clinicians should be cautious instructing patients on benefits of weight loss on LBP, as this has not been confirmed with high quality RCTs.

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Contributors: All authors collected, analyzed, and interpreted the data; drafted or critically revised the article; and approved the final draft.

Competing interests: None declared.

Acknowledgements: The authors thank Dr. Miller for providing this enriching opportunity to explore this topic as an area of clinical importance.

Relationship Between Self-Efficacy, Self-Report, and Clinician Reported Measures for Patients with Hip and Knee Osteoarthritis

Students: Kimberly Caporicci, Tyler DiSimoni, Catherine Hare, Kailey Houston

Supervisors: Stephen Patton, Susan Montgomery & Angela Acceturra

ABSTRACT

Purpose: The purpose of this study was to compare the relationship between self-efficacy and self-report measures to self-efficacy and clinician reported measures.

Methods: Individuals were recruited for this study if they had hip and/or knee osteoarthritis (OA) and were being assessed for total joint arthroplasty. Pearson's correlation coefficients and Meng's z-tests were conducted to compare the differences in correlation coefficients.

Results: Self-efficacy as measured by the Arthritis Self-Efficacy Scale (ASES) was significantly correlated with all self-report and clinician reported measures, except the ASES other symptoms subscale and the Knee Society Score (KSS). Stronger correlations were found between the ASES and Oxford Knee Score as compared to ASES and KSS. However, there were no significant differences between the ASES and the Oxford Hip Score as compared to the ASES and the Harris Hip Score.

Conclusion: Self-efficacy is a central component to an individual's ability to function with OA, and may provide clinicians with relatively accurate information regarding overall function. In individuals with knee OA, clinicians may be able to use either self-report measures or the ASES to determine the patient's perception of function, but should continue to use both self-report and clinician reported measures.

The Efficacy of Exercise Interventions in Reducing Side Effects in Young Women with Breast Cancer

Students: Alexandra Danks, Anna Head, Tiffany McKinley, Kellie Moher
Supervisor: Jenna Smith

ABSTRACT

Purpose: To determine the effectiveness of exercise interventions in reducing side effects and recurrence rates in young women with breast cancer.

Methods: A systematic review of randomized controlled trials was performed using Embase, Ovid MEDLINE, PsycINFO, and The Cumulative Index to Nursing and Allied Health Literature (CINAHL) (up to and including May 21, 2017). Participants were comprised of young women (aged 18-55 years and/or premenopausal) diagnosed with BC and who were currently or were previously receiving adjuvant therapy.

Results: Eight trials met the inclusion criteria and were assessed using the Cochrane risk of bias tool by two blinded reviewers. Meta-analyses found exercise resulted in non-significant positive effects on quality of life and no significant changes on percent body fat. Narrative analyses demonstrated inconsistent findings of exercise on bone mineral density, body composition, fatigue, and no effect on psychosocial outcomes. Positive trends were found for cardiovascular outcomes and physical activity levels.

Conclusions: Firm conclusions could not be drawn due to the high heterogeneity, low quality and limited number of articles available on this population. This suggests that further research is needed to address the impact of exercise on the side effects of BC in young women.

Educational Interventions for Teaching Values to Health Care Professional Students: A Scoping Review

Students: Bianca Fong, Sharon Jebaselvan, Shawna Neal, Kristyn St.Hilaire
Supervisors: Dr. Vanina Dal Bello-Haas & Dr. Pat Miller

ABSTRACT

Purpose: To identify the evidence that exists regarding educational interventions in the teaching of professional values to health care professional students.

Methods: A scoping review of peer-reviewed articles from Jan 1, 1990 to March 31, 2017 was conducted using CINAHL, Ovid MEDLINE, Ovid PsycINFO, and ERIC. Articles obtained from the search strategy were screened for relevance and extraction of data was completed for included studies. Quantitizing analysis was used to analyse qualitative data to develop classifications.

Results: Application of the search strategy resulted in 2235 articles of which 56 articles met the inclusion criteria. Twenty-five were qualitative, 26 were quantitative, and five were mixed-method study designs. Articles were classified as active, passive, or multimodal teaching styles and further categorized into teaching methods.

Conclusion: Active teaching styles were more commonly utilized and preferred by students. The active teaching style of experiential learning was the most reported teaching method, highlighting the need for health care educators to create a connection between the material taught and its application and relevance to students' future practice. Further rigorous research is needed to examine the effectiveness of methods used to teach professional values and behaviours across various health care professions, in particular the physiotherapy discipline.

Pregnancy-Related Pelvic Girdle Pain: Understanding Clinical Decision Making

Students: Grecia Alaniz, Yazmin deGroot,
Supervisors: Sylvia Daniel, PT MSc. & Sinéad Dufour, PT PhD

ABSTRACT

Objectives: The primary objective was to investigate how private practice physiotherapists (PTs) in Ontario make clinical decisions about pregnancy-related pelvic girdle pain (PPGP). The secondary objective was to evaluate differences between pelvic health PTs and orthopaedic PTs in their knowledge of PPGP clinical practice guidelines (CPG) and clinical decision-making.

Design: Cross-sectional survey study.

Methods: A survey was developed and electronically distributed to private practice PTs in Ontario. Participants were recruited via various physiotherapy associations and organizations. The survey included questions about management strategies, best practice, and perspectives on CPGs.

Results: Seventy-eight individuals responded, 44 were included in the study (31 pelvic health PTs, 13 orthopaedic PTs). Pelvic health PTs had increased awareness regarding CPGs compared to orthopaedic PTs (74% vs. 38.5%, $p < 0.05$), selected correct pain terminology (77% vs. 38%, $p < 0.05$), and correctly identified age as a non-risk factor for PPGP (68% vs. 31%, $p < 0.05$). This knowledge did not translate to clinical practice, as both groups selected management strategies incongruent with PPGP CPGs.

Conclusion: The study findings demonstrate that awareness of PPGP CPGs does not necessarily transfer into clinical practice, as demonstrated by participants selecting treatment strategies that were incongruent with the current PPGP CPGs.

Can a Screening Tool Designed for Orthopaedic Clinical Settings Accurately Identify Pelvic Floor Dysfunction?

Students: Alexzandra Keizer, Brittany Vandyken

Supervisors: Dr. Sinéad Dufour & Darryl Yardley, with co-investigators MJ Forget, Nelly Faghani & Carolyn Vandyken

ABSTRACT

PURPOSE: To develop a screening tool for use in primary care that might identify the potential contribution of pelvic floor dysfunction (PFD) in common orthopedic pain presentations, and to test the validity of this screening tool, specifically as related to identified pelvic floor muscle (PFM) tenderness on digital examination.

METHODS: 90 females (46 ± 12.7 years) reporting lumbopelvic (LPP) or hip pain in the last week were included. Participants completed the developed Primary Care Pelvic Health Screen (PC-PHS), Forced FABERs test and an internal exam for PFM tenderness by blinded physiotherapists. Statistical analysis included descriptive statistics, Chi-Square tests, a ROC curve and logistical regression analysis.

RESULTS: The PC-PHS demonstrated content validity for detection of PFM tenderness. The ROC curve determined that at least 4 out of 9 items identified on the PC-PHS had a specificity of 79% while at least 5 out of 9 had a specificity of 100%.

CONCLUSIONS: The pelvic floor needs to be considered by primary care practitioners in the assessment of LPP and hip pain. The PC-PHS is a valid tool that practitioners can use to identify PFM tenderness without administering an internal exam, thus improving the care path for common orthopedic conditions.

Hip surveillance practices for children with cerebral palsy at Ron Joyce Children's Health Centre: A retrospective chart review

Students: Alysun Lilloco, Jessica Mahler, Amanda Saunders, Andrea Yallin
Supervisors: Deanna Mercier & Marilyn Wright

ABSTRACT

Purpose: To describe the current/past practices for hip surveillance in children with cerebral palsy (CP) at Ron Joyce Children's Health Centre (RJCHC) and determine if there is a need to implement a hip surveillance protocol for these patients at RJCHC.

Methods: A retrospective chart review analyzed the medical charts for patients aged 0-18 years old with a diagnosis of CP or a clinical picture of CP who had been seen at the RJCHC in the last year. Data regarding year of birth, GMFCS level, type of CP, surgical intervention, orthopedic appointments, age of hip x-rays and corresponding migration percentages, spasticity clinic attendance and relocation to Hamilton (if applicable) were recorded.

Results: Data from 162 medical charts were included. 42% of patients received a hip x-ray before the age of five and 39% of all patients did not have any x-rays at all. The percentage of patients with hip dislocation was 5.6%. Eight patients (5%) underwent bony hip surgery. 3% of patients followed the x-ray protocol proposed by Holland Bloorview Kids Rehabilitation Hospital. 69% and 74% of patients were seen by spasticity clinic and an orthopedic specialist respectively.

Conclusion: Findings of this study recommend that RJCHC implement a hip surveillance protocol due to inconsistent following of children with CP.

Is the 90-second musculoskeletal screen (90SS) a practical and reliable way to gather health information in varsity athletes?

Students: Kris Arcangel, Michael Bochus, D'Arcy Heenan, Samy Shash
Supervisor: Kristin Long

ABSTRACT

Purpose: To determine inter-rater and inter-occasion reliability of the 90SS when performed by novice and expert raters. Another purpose was to determine if a novice rater training session increases the reliability of the screen.

Methods: A repeated measures design was used. Raters scored two video sets (A&B) of each athlete on two occasions, one week apart. Novice raters received training prior to their second session.

Results: Inter-rater reliability for expert raters was $ICC_{2,1}$ 0.23-0.34 (SEM: 1.13-1.37). Inter-occasion reliability was $ICC_{2,1}$ 0.54-0.68 (SEM: 0.79-1.06). Inter-rater reliability for novice raters were $ICC_{2,1}$ 0.13-0.21 (SEM: 1.09- 1.25). Inter-occasion reliability for novices were $ICC_{2,1}$ 0.46- 0.54 (SEM: 0.90-0.91). After the training session, $ICC_{2,1}$ for videos A&B changed from 0.18 (95% CI: 0.0056-0.52) to 0.20 (95% CI: 0.021-0.54) and $ICC_{2,1}$ 0.13 (95% CI: 0.0056-0.43) to 0.12 (95% CI: -0.0018-0.40) between the first and second visit, respectively.

Conclusion: Inter-rater reliability was poor, while inter-occasion reliability was poor to moderate for novice raters. With expert raters, inter-rater reliability was poor, while inter-occasion reliability was moderate. There was no increase in reliability after the novice rater training session. The 90SS has limited clinical utility, except for potential use in single expert rater repeated measurements.

An Estimate of the Predictive Validity of a Health Survey and 90 Second Screen for Predicting Injuries in Varsity Athletes: A Guide to Preparticipation Screening Implementation

Students: Brandon Broijer, Chris Degeus, Aaron Kipp, Joseph Pagliaro
Supervisor: Kristin Long

ABSTRACT

Purpose: The purpose of this study was to estimate the predictive validity of the pre-participation health survey and 90SS in predicting future injury or illness over the course of the 2016-2017 Guelph Varsity season.

Methods: A prospective cohort study was conducted at Guelph University. Seventy-nine varsity athletes from six teams completed a health screen prior to the 2016-2017 season. Data from a concurrently occurring health surveillance study was cross-referenced to determine the predictive value of the health screen. Mock data was created for 105 athletes and was used in a 90SS validity demonstration; cut-off scores were created to predict injury risk category.

Results: There were no statistically significant predictive values for any of the analyses conducted on the health survey. Mock data for the 90SS predicted that a cut-off score of ≥ 2 best maximizes sensitivity (62.79%) and specificity (79.03%) when determining future injury risk, with an AUC of 0.78. There was a moderate correlation between 90SS score and number of weeks missed due to injury (0.46 [95CI 0.19-0.67]).

Conclusion: Despite inadequate data, the authors have presented a thorough method to recreate a predictive validity study using physical screens or health screens, including extensive knowledge translation components.

Interprofessional Collaboration for Indigenous Access to Healthcare Services: A Scoping Review and Navigation Model

Students: Nicholas Nucci, Katrina Radassao, with OT students Katherine Liston, Rachel Strohm

Supervisor: Sarah Wojkowski with co-investigator Justine Jecker

ABSTRACT

In 2016, Nokiiwin Tribal Council conducted a needs assessment in its six member communities, identifying improving health coordination as the priority. Two student occupational therapists (OTs) and two student physiotherapists (PTs) were placed with Nokiiwin to understand the role of these professions in contributing to health coordination and increasing access. The scoping review purpose is to gather literature on the topic of rehabilitation professionals' role in contributing to Indigenous healthcare access.

The databases AMED, CINAHL, iPortal, OVID Medline, OVID ePub, Pimatsiwin, Scholar's Portal, and Social Sciences Abstracts were searched for literature addressing healthcare providers role in increasing healthcare access for Indigenous populations. Specific Indigenous journals were also searched. Eight studies met inclusion and exclusion criteria, and were analyzed for themes. Theme categories were developed based on literature and students' placement experiences.

The majority of the literature is not specific to occupational therapy or physiotherapy. The literature focuses on interprofessional teams or healthcare providers more broadly. Selected articles include qualitative studies, case studies, case series, and expert opinion from Canada, Australia, and the United States. The literature highlights physical location, cultural safety, and collaboration as increasing care and access for Indigenous clients. Geographic isolation, jurisdictional constraints, and colonialism are barriers to healthcare access for Indigenous populations.

Recommendations to improve access to healthcare on remote reserves are as follows: Increase awareness of services available in the communities; Utilize navigation to help First Nations access to the healthcare system; Continue advocacy addressing political barriers impacting access.

The authors went on to develop a conceptual model based on the findings of this scoping review, clinical experience and needs of Nokiiwin Tribal Council.

Keywords: Indigenous, Healthcare access, Scoping review

Factors Impacting Local Sustainability for Short Term Medical Missions & Recommendations for Student International Placements: A Scoping Review

Students: Jessica Chin, Samantha Hu, Rachel Steele, Caitlinn Thompson
Supervisor: Dr. Nancy Rushford

Abstract

Purpose: To examine the impact of short-term medical missions (STMMs) and student international placements on local communities and identify factors that enable the sustainability of STMMs to provide ethical and sustainable health interventions for underserved communities in developing countries.

Method: A scoping review of the literature was conducted using the OVID Medline, Web of Science, Pais International, CINAHL, EMBASE, and PsychInfo databases from 1976 - May 15 2017.

Results: A total of 48 articles were retained from the search. Five major themes were identified including: community engagement, ethical considerations, local resource use, cultural humility, and measuring impact. Often measurement of impact did not include input from the host community and international student placements focused on the learning goals of the student, rather than impact and sustainability of the health interventions.

Conclusions: Research on the impact of STMMs and international student placements is limited, posing the ethical dilemma of whether these medical service trips are beneficial or harmful to the local community. Based on the themes identified, a list of preliminary recommendations for student placements was produced. However, further examination of this issue is needed to guide best practice in the field and the role of Universities and the student learner.

Estimating the interrater reliability of the Finger Accuracy and Speed Tapping (FAST) Test and examining its feasibility in assessing upper extremity function in people with Parkinson's disease

Students: Rheanne Carleton, Audrey De Jong, Hilary Deverell, Heather Dowling
Supervisors: Dr. Pat Miller & Dr. Matthew Woolhouse

ABSTRACT

Purpose: To estimate the interrater reliability of the new Finger Accuracy and Speed Tapping (FAST) Test and examine its feasibility in assessing the effects of in-home virtual dance therapy on upper extremity function in people with Parkinson's disease (PD).

Methods: A cross-sectional parameter estimation study was conducted using healthy controls. An alternating-in-pairs randomization was used to allocate participants to Rater 1 or 2. Participants completed three trials of the FAST Test with each rater. A feasibility study examined the use of the FAST Test to assess participants with PD following the use of an in-home dance program.

Results: Twelve controls and two participants with PD were recruited. Intraclass correlation coefficient (ICC) estimates for accuracy and speed in controls were ICC=0.94 (95% CI: 0.82, 0.98) and ICC=0.93 (95% CI: 0.77, 0.98), respectively. Both participants with PD had improved speed immediately post-dance therapy.

Conclusions: The FAST Test has evidence of high interrater reliability in controls. It appears to be a feasible and low-cost tool for assessing upper extremity function in people with PD using an in-home virtual dance program. Future research should examine the psychometric properties of the FAST Test in people with PD.

Estimating the Threshold Value for Change for the Leg, Foot, and Postural Control Dimensions of the Chedoke-McMaster Stroke Assessment

Students: Rachel Beyer, Ellie Gillespie, Kathleen Odumeru, Caitlin Wharin
Supervisors: Dr. Patricia Miller & Prof. Paul Stratford

ABSTRACT

Purpose: To estimate a threshold value for change of the leg, foot, and postural control dimensions of the Chedoke-McMaster Stroke Assessment (CMSA) Impairment Inventory and the confidence in labeling a person as having improved or not.

Methods: Secondary analysis of two data sets, previously reported by two research teams, using two different methods. The first method used a multiple of the standard error of measurement to calculate the threshold value for change. The second method used the diagnostic test method to calculate a threshold improvement value and the confidence in labeling a person as having improved or not on the dimensions investigated.

Results: The threshold value for change was determined to be one impairment point for the leg, foot, and postural control dimensions of the CMSA. The positive predictive values associated with the leg, foot, and postural control dimensions were 74%, 59%, and 65%, respectively.

Conclusion: A change of one impairment point has been estimated as the threshold value of change for the leg, foot, and postural control dimension of the CMSA. Clinicians can use a change of one impairment point to confidently determine that a patient has truly changed following an intervention.

Health-Care Professionals' Perspectives on Exercise Counselling for Patients with Cancer

Students: Alicia Page, Sara Mackellar, Elysia Zavaglia
Supervisor: Oren Cheifetz

ABSTRACT

Purpose: The primary objectives of this study were to identify health care providers (HCPs) current knowledge, practices, beliefs, barriers and facilitators to exercise counselling for people with cancer in an inpatient oncology setting.

Methods: An online survey was administered to HCPs working in hematology and/or oncology inpatient units at the Juravinski Hospital. Results were interpreted using descriptive analyses.

Results: 18 respondents (response rate 9.33%) completed the survey. Only 2 respondents correctly identified the Canadian Physical Activity Guidelines and 77.8% were unaware of any cancer-specific guidelines. 66.8% of respondents believed that exercise counselling should be a part of their care, though they lack the knowledge to do so in practice. The top three barriers identified included lack of time (38.9%), qualification (33.3%), and knowledge (33.3%). The top three facilitators identified included an educational session for HCPs (58.8%), patient handouts (52.9%), and an exercise specialist as part of the team (41.2%).

Conclusions: HCPs in the acute oncology setting believe exercise is important, but lack the knowledge to currently provide exercise counselling in practice. This provides an opportunity for physiotherapists to take on a leadership role in exercise counselling for patients with cancer.

