



School of Rehabilitation Science
MSc(PT) Program

Research & Evidence Based Practice
Abstracts

2014

**MSc Physiotherapy Program
Presentation Schedule for REBP Symposium
McMaster University, MIP Room 1 - Tuesday, July 22 2014**

	9:00 -9:10	WELCOME With address by Dr. Patricia Solomon, Associate Dean, School of Rehabilitation Science
1	9:10-9:25	The Effects of Weighted Compression for the Treatment of Concussion: A Pilot Study Students: Adam Davidson, Leah Higgins, Colton Jonah, Pamela Zimmer Supervisors: Brett Lyons and Denise Mortley
2	9:25-9:40	Efficacy of self-management programs in reducing side-effects of breast cancer treatment: A systematic review and meta-analysis of randomized control trials Students: Lindsay Boogaard, Leah Gater, Matthieu Mori, Andrew Trincao. Supervisor: Jenna Smith
3	9:40-9:55	Development of a Model to Inform Rehabilitation using Evidence for Physiotherapy Management of Stroke: The REPS Model Students: Jacey Jackson, Katelin Nicholls, Shannon Walters Supervisors: Dr. Pat Miller and Dr. Laurie Wishart
4	9:55-10:10	The <i>Heads Up Test</i> Project: Development of the items for an advanced motor skill test for youth who have had a concussion Students: Tess Chen, Anne Dieterle, Laura Jackson Supervisors: Dr. Virginia Wright and Dr. Nick Reed Co-investigator: James Murphy
5	10:10-10:25	Shoulder Pain And Disability Index: A Rasch Analysis Students: Brad Boake, Tim Childs, Tom Soules, Dan Zervos Supervisor: Dr. Joy MacDermid Co-investigator: Joshua Vincent
	10:25-10:40	BREAK
6	10: 40-10:55	Where has all the leisure gone? An exploration of leisure participation post-stroke (Inter-professional project) Students: Jessica Huynh, John Tak, Sam Fellows, and Caroline Gimblett Supervisors: Dr. Ada Tang & Dr. Jocelyn Harris
7	10:55-11:10	Essential Pain-Related Competencies and Content in Canadian Physiotherapy Curricula Students: Colleen Bethune, Saadia Hassan, Jenn Nagle, Jenn Stemmler Supervisor: Jordan Miller Co-investigators: Trisha Parsons, Yannick Tiysignant-Laflamme, Susan Tupper, David Walton
8	11:10-11:25	Exercise, Cancer and Steroids: A Systematic Review Students: Joanna Burzynski, Navdeep Grewal, Dianne Vandepas, William Nguyen Supervisor: Dr. Oren Cheifetz

9	11:25-11:40	Pelvic Floor Complaints: Urogynecological Problem, Orthopaedic Problem or Both? Students: Caitlin Kuzyk, Caitlin Price, Jacqueline Fiorali Supervisors: Dr. Sinead Dufour & Carolyn Vandyken
10	11:40-11:55	An observational comparative analysis of the kinematics of scootering in children with cerebral palsy versus typically developing children Students: Michael Di Vito, Andrea Giroux, Ali Holmes, Anik Sarkar Supervisors: Marilyn Wright and Donna Twose
	12:00-1:00	LUNCH
11	1:00-1:15	Diagnostic tests to assess neck problems: A systematic overview of the literature. Students: Jenna Burke, Nick Friesen, Laura MacFadyen, Sahila Subendran Supervisor: Dr. Lina Santaguida
12	1:15-1:30	How are we doing compared to best practices: total knee arthroplasty? Students: Brittany DePass, Laura McGill, Nick Peters, Danica Petre Supervisor: Denise Taylor, Kirsti Reinikka, Sylvia Daniel
13	1:30-1:45	How are we doing compared to best practices: total hip replacements? Students: Mandi Gillies, Mike McLeod, Sue Safadi Supervisor: Denise Taylor, Kirsti Reinikka, Sylvia Daniel
14	1:45-2:00	How are we doing compared to best practices: hip fractures? Students: Stacey Burns-Hogan, Julie d'Entremont, Trinette Kaunds, Sara Speckeen, Sandy Veit Supervisors: Denise Taylor, Kirsti Reinikka, Sylvia Daniel
	2:00-2:15	BREAK
15	2:15-2:30	Performance of Adolescent Soccer Players on the Functional Movement Screen Students: Karlyn Driedger, Kirsten Labaj, Sarah Luxon Supervisors: Kristin Long, Jason Smith Co-Investigator: Dr. Monique Muller
16	2:30-2:45	Improving Outcomes for Breast Reconstruction Following Breast Cancer - Is there a role for physiotherapy? A scoping review Students: Jaclyn Falotico, Elisabeth Wiens, Vanessa Younes Supervisors: Beth Hoag and Emily Thorpe
17	2:45-3:00	Factors affecting patient adherence with conservative management of hip and knee osteoarthritis. Students: Donna DeGeer, Robyn Deverett, David Evans, Lyndsey Pearsall Supervisors: Angela Accettura and Stephen Patton
18	3:00-3:15	Perceptions and Experiences of Patients who have been newly prescribed a gait aid at one month following discharge: Phase 1 survey development Student: Leah Franco, Matt Koornneef, Katie Pistor, Laura Reithmeier, Amanda Voorberg Supervisor: Julie Moreland, Elisa Mayens, Dr. Vince DePaul
	3:15	CLOSING REMARKS

1. The Effects of Weighted Compression for the Treatment of Concussion: A Pilot Study

Students: Adam Davidson, Leah Higgins, Colton Jonah, Pamela Zimmer

Supervisors: Brett Lyons and Denise Mortley

ABSTRACT

PURPOSE: The purpose of this pilot study was to investigate the feasibility of completing a Randomized Controlled Trial assessing the utility of weighted compression as a treatment for balance and vestibular deficits following concussion. Secondary to this purpose, this study sought to offer preliminary data regarding the effectiveness of this intervention.

METHOD: A pretest-posttest study design was employed in this study. Nine participants with concussion, and four healthy controls completed three outcome measures: the Sway Balance™ application to measure static balance, the Community Balance and Mobility Scale (CB&M) to measure dynamic balance, and the Vestibular Ocular Motor Screen (VOMS) to measure vestibular functioning, with and without weighted compression to explore the effects of weighted compression.

RESULTS: Trends towards improvements were noted in static balance, dynamic balance, and vestibular function, with one participant reaching statistical significance ($p < 0.05$) in terms of static balance improvements. Four participants reported improvements in perception of performance and symptoms during testing. There were no trends observed in any of the measures within the healthy controls.

CONCLUSIONS: This pilot study presents results suggesting that weighted compression may be a viable treatment for concussion symptoms. Further research is warranted to fully understand the treatment benefits of weighted compression.

2. Efficacy of self-management programs in reducing side-effects of breast cancer treatment: A systematic review and meta-analysis of randomized control trials

Students: Lindsay Boogaard, Leah Gater, Matthieu Mori, Andrew Trincao.

Supervisor: Jenna Smith

ABSTRACT

Purpose To determine the efficacy of self-management programs in decreasing side effects in women undergoing breast cancer treatment.

Method An electronic literature search was conducted within the CENTRAL, CINAHL, Ovid EMBASE, and PubMed online databases. Randomized controlled trials that included women who had a primary diagnosis of breast cancer, had partaken in a self-management program, and whose outcomes were compared to women not participating in such programs, were included in this review. Two reviewers independently screened and selected studies to be included. Two blinded reviewers performed data collection and assessed risk of bias. Standard mean difference (SMD) and standard deviations (SD) were used to create a meta-analysis of key outcomes.

Results Nine trials were included in this review. Self-management interventions were found to significantly improve health-related quality of life [SMD (95% confidence interval (CI))= 0.49 (0.16, 0.82), $p = 0.004$], coping ability [0.19 (0.03, 0.34), $p=0.02$] and fatigue [-0.94 (-1.69, -0.18), $p=0.01$], with a positive trend for improvement in psychological distress [-0.15 (-0.31, 0.01), $p=0.06$].

Conclusions Self-management programs are found to be effective in improving the health-related quality of life, coping abilities, fatigue and psychological distress in individuals undergoing treatment or dealing with chronic side effects of treatment for breast cancer.

KEYWORDS: Breast Neoplasms, Self-care, Adverse Effects, Quality of Life, Therapeutics

3. Development of a Model to Inform Rehabilitation using Evidence for Physiotherapy Management of Stroke: The REPS Model

Students: Jacey Jackson, Katelin Nicholls, Shannon Walters

Supervisors: Dr. Pat Miller and Dr. Laurie Wishart

ABSTRACT

The Model to Inform Physiotherapy Practice (MIPP) was created in 2004 to guide clinical decision-making in physiotherapy (PT) rehabilitation. Due to advances in stroke research, it was hypothesized that new trends have emerged since its development. A scoping review was completed to determine the trends and propose updates to the original MIPP or develop a new model to guide PT stroke rehabilitation. Results indicated components of the original MIPP remained current, however new key trends emerged, supporting the development of a new model: Rehabilitation using Evidence for PT management of Stroke (REPS). Interprofessional collaboration (IPC) emerged as a key element to be incorporated into the REPS model as this topic was predominant in recent literature. Additionally, it was found that the three pillars of the new REPS model paralleled the three components of evidence-based practice (EBP). These similarities reiterate the importance of continuing to integrate EBP into stroke rehabilitation. The creation of the REPS model is hoped to provide an updated, holistic guide for PTs, novice practitioners, and students to aid in management of adult clients with stroke.

4. The *Heads Up Test* Project: Development of the items for an advanced motor skill test for youth who have had a concussion

Students: Tess Chen, Anne Dieterle, Laura Jackson

Supervisors: Dr. Virginia Wright and Dr. Nick Reed

Co-investigator: James Murphy

ABSTRACT

Objective: To develop the item list for an advanced motor skill test for youth post-concussion to clear residual motor impairments that may persist in order to inform safe return to play.

Research Design: A performance measure development study focused on content validity.

Methods: Four physiotherapists and one occupational therapist generated items from the literature to be ranked on three criteria: safety, feasibility and importance to test. An initial survey was sent to experts followed by a second survey. A youth survey was also administered. Item reduction was achieved through expert ratings of items and clinical expertise.

Results: 53 items were generated and were reduced to 14 items after surveys administered to one youth and 15 concussion experts. A follow-up survey added new items to the assessment in response to expert comments and importance. Four experts participated in the follow-up survey. A final assessment consisting of 25-items was compiled through expert feedback, youth input and a methodological decision-making process by the authors.

Conclusions: The *Heads Up Test* is intended to expose motor impairments in youth post-concussion prior to return to play. This assessment will be piloted on youth in future studies to refine scoring criteria and psychometric properties.

5. Shoulder Pain and Disability Index: A Rasch Analysis

Students: Brad Boake, Tim Childs, Tom Soules, Dan Zervos

Supervisor: Dr. Joy MacDermid

Co-investigator: Joshua Vincent

ABSTRACT

Study Design: Clinical measurement study: Level of evidence (N/A)

Introduction: The Shoulder Pain and Disability Index (SPADI) is a self-reported measure of pain and disability related to shoulder pathology. In comparison to Classical Test Theory (CTT), rasch analysis offers a more rigorous examination of the measurement properties of a scale.

Purpose of the study: This study utilizes rasch analysis to evaluate the psychometric properties of the SPADI to propose potential modifications and avenues for future investigation.

Methods: SPADI scores (n=212) from persons one year post rotator cuff repair were collected from an outpatient specialty clinic. Fit to the rasch model, unidimensionality of the subscales, and areas of bias were evaluated.

Results: Both the pain and disability subscales demonstrate unidimensionality. The person separation index was found to be high, indicating reliability and internal consistency. Sex and dominant side affected influenced how people scored on the SPADI.

Conclusions: Clinicians should be cautious when interpreting and summing patient scores due to variables such as sex and dominant side affected. The findings suggest patients have difficulty discriminating between item responses, particularly within the middle of the scale. Rasch analysis supports the psychometric properties of consistency and reliability, previously determined by CTT methods.

Key words: rasch analysis, Shoulder Pain and Disability Index, psychometrics, classical test theory

6. Where has all the leisure gone? An exploration of leisure participation post-stroke (Inter-professional project)

Students: Jessica Huynh, John Tak, Sam Fellows, and Caroline Gimblett

Supervisors: Dr. Ada Tang & Dr. Jocelyn Harris

ABSTRACT

Introduction. Leisure refers to activities performed in a person's spare time, which employ a sense of meaning, purpose and pleasure. Following a stroke, participation in leisure activities decreases, yet the reasons for this have not been investigated thoroughly. The purpose of this study is to explore physical, cognitive, psychoemotional, social and environmental factors which influence leisure participation and satisfaction post-stroke.

Methods. An observational, cross-sectional study design was employed. Individuals were eligible for study participation if they were 18 years or older, at least six months post-stroke, and completed formal rehabilitation. Primary outcome measures were the Leisure Interest Measure and the Leisure Satisfaction Measure. Secondary outcome measures were the following: Chedoke-McMaster Stroke Assessment, Mini Balance Evaluation Systems Test, Montreal Cognitive Assessment, Centre for Epidemiological Studies- Depression Scale, Chedoke Arm and Hand Activity Inventory, 6 Minute Walk Test, 5-Meter Walk Test, Reintegration to Normal Living Index, and Craig Hospital Inventory of Environmental Factors. Bivariate correlation analyses and linear regression models were used to analyze the data.

Results. From assessment of 17 participants (12 males), mean age was 65.3 years and mean time post stroke of 6.8 years. A multivariate regression analysis revealed three significant models, demonstrating the relationship between independent variables with leisure interest and leisure satisfaction among stroke survivors. Presence of depressive symptoms, gender, and the physical and attitudinal environment demonstrated a significant relationship with interest in physical types of leisure activities ($R^2=.73$, $P < 0.05$). Also, presence of depressive symptoms, cognition, balance, leg impairment and the attitudinal environment demonstrated a significant

relationship with satisfaction in leisure activities related to education ($R^2=.84$, $P < 0.05$). Cognition, balance, lower-extremity impairment and the natural and physical environment demonstrated a significant relationship with psychological satisfaction in leisure activities ($R^2=.54$, $P < 0.05$).

Discussion. This study demonstrated that individuals' interests and satisfaction with their leisure pursuits is associated with a variety of personal and contextual factors. There is a need for rehabilitation professionals to continue to address ADLs, while simultaneously providing their clients with opportunities to discuss and explore leisure activities.

7. Essential Pain-Related Competencies and Content in Canadian Physiotherapy Curricula

Students: Colleen Bethune, Saadia Hassan, Jenn Nagle, Jenn Stemmler

Supervisor: Jordan Miller

Co-investigators: Trisha Parsons, Yannick Tiysignant-Laflamme, Susan Tupper, David Walton

ABSTRACT

Purpose: The objective of this study was to achieve consensus among pain educators in physiotherapy programs across Canada on the minimum pain-related competencies and content that are essential for entry-to-practice as a physiotherapist in Canada.

Methods: *Subjects:* 19 pain educators from Canadian entry-level physiotherapy programs were purposively sampled to participate in the study. *Design:* A three round modified Delphi study. *Procedure:* A series of three web-based surveys were distributed to participants over 14 weeks. Participants were encouraged to rate pain-related competency and content items in each survey as essential for entry-to-practice, should be achieved in post-graduate training, or not important. De-identified results from each round were distributed to participants prior to the completion of subsequent rounds.

Results: 15 competencies and 44 content items were identified as essential for entry-to-practice. One competency and two content items were identified as appropriate for post-graduate training. One competency and 24 content items did not achieve consensus.

Conclusions and clinical implications: The list of pain-related competencies and content items determined in this study could help to inform physiotherapy curriculum development by forming a minimum standard for entry-to-practice for Canadian physiotherapists.

8. Exercise, Cancer and Steroids: A Systematic Review

Students: Joanna Burzynski, Navdeep Grewal, Dianne Vandepas, William Nguyen

Supervisor: Dr. Oren Cheifetz

ABSTRACT

Purpose: The purpose of this systematic review was to determine the effects of exercise on skeletal muscle and functional abilities of patients with cancer, taking corticosteroids.

Methods: A systematic review of the current literature was completed using eight databases (AMED, CENTRAL, CINAHL, EMBASE, LILACS, MEDLINE, Ovid HealthSTAR and PEDro). Specific inclusion criteria encompassed patients with a primary diagnosis of cancer, currently taking catabolic steroids, and participating in an intervention of exercise. Only studies that measured outcomes related to the effects of exercise on the musculoskeletal system were considered.

Results: Five articles met the inclusion criteria. These articles looked at various populations with differing types of cancer, performing a wide variety of exercise programs (aerobic training, strength training, stretching), or a combination of the three. Although the overall evidence was inconclusive, trends toward the benefit of exercise in counteracting the negative effects of corticosteroids were observed.

Conclusions: Results of this systematic review preclude the possibility of making strong recommendations for exercise within this cohort and highlight the need for further research to be conducted. However, they may assist clinicians in making informed decisions regarding exercise prescription in this population.

9. Pelvic Floor Complaints: Urogynecological Problem, Orthopaedic Problem or Both?

Students: Caitlin Kuzyk, Caitlin Price, Jacqueline Fiorali

Supervisors: Dr. Sinead Dufour & Carolyn Vandyken

ABSTRACT

Purpose: To identify the prevalence of pelvic floor dysfunction in females seeking orthopaedic assessment for mechanical low back pain.

Methods: A multi-site cross-sectional study design. Standardized objective tests and self-report measures were employed at initial assessment. Collected data was recorded using Excel spreadsheets.

Results: All subjects (N= 8) attending physiotherapy for mechanical low back pain were also found to have pelvic floor dysfunction.

Conclusion: Women presenting with mechanical low back pain appear to have co-existing pelvic floor dysfunction. To properly and accurately assess the pelvic floor, and the relationship to low back pain, the gold standard digital palpation assessment should be implemented as routine practice to determine the nature of pelvic floor dysfunction.

10. An observational comparative analysis of the kinematics of scootering in children with cerebral palsy versus typically developing children

Students: Michael Di Vito, Andrea Giroux, Ali Holmes, Anik Sarkar

Supervisors: Marilyn Wright and Donna Twose

ABSTRACT

Purpose: The purpose of this study is to create a “scootering cycle” framework and provide a descriptive account of the lower extremity propulsive chain in scootering for children with CP compared to their typically developing counterparts.

Methods: This retrospective review of clinical data included 9 participants between the ages of 5 and 14 years old. The participants were divided into two groups; typically developing children (4) and children with cerebral palsy (CP) (5). Scootering patterns were recorded on video using a VICON three-dimensional motion analysis system. Scootering patterns were analyzed by the researchers using a descriptive, observational approach.

Results: Children with CP demonstrated more hip flexion during scootering than their age matched typically developing peers. The CP group also showed less knee flexion, plantar flexion and pelvic obliquity.

Conclusions: Scootering could be considered as a treatment adjunct in pediatric physiotherapy for children with CP as it promotes lower extremity joint range of motion and general physical activity. Future studies are needed to determine the effect of scootering on increasing range of motion and strength in children with CP.

11. Diagnostic tests to assess neck problems: A systematic overview of the literature.

Students: Jenna Burke, Nick Friesen, Laura MacFadyen, Sahila Subendran

Supervisor: Dr. Lina Santaguida

ABSTRACT

Purpose: To summarize current evidence on the use of clinical diagnostic tests for neck pain in physiotherapy practice and identify gaps in the literature.

Method: Study Design: Overview of Reviews. A systematic search was conducted and included reviews published from 2000 to 2012. An update was performed (2012 to April 2014). Articles were included if they were systematic reviews of diagnostic properties of clinical tests for mechanical neck pain. Publications were screened using DistillerSR and evaluated for risk of bias using AMSTAR. Data extraction was performed on included studies.

Results: Fourteen articles met inclusion criteria, seven of which had extractable data. Spurlings test, Valsalva test, distraction test, cluster tests, and range of motion may be useful in ruling in cervical pathology. Upper limb tension test, shoulder abduction test, and range of motion may help to rule out a diagnosis. Craniocervical flexion test, McKenzie Method test, muscle testing, and visual inspection suggest sufficient reliability. Insufficient evidence was reported on intersegmental motion, and palpation tests.

Conclusions: Evidence supporting the use of clinical tests is limited. This overview has identified gaps in the literature pertaining to the diagnostic accuracy of clinical tests that should be addressed with future research.

12. How are we doing compared to best practices: total knee arthroplasty?

Students: Brittany DePass, Laura McGill, Nick Peters, Danica Petre

Supervisor: Denise Taylor, Kirsti Reinikka, Sylvia Daniel

ABSTRACT

Purpose: To investigate rates of clinician adherence to best practice guidelines (BPGs), according to Ontario quality based procedures (QBPs) and Bone and Joint Canada, for the treatment of patients undergoing total knee arthroplasty (TKA) in Ontario.

Methods: A literature review was conducted on the subject of current BPGs for Physiotherapy (PT) care following TKA. A quantitative, online cross-sectional survey design was developed and used to determine adherence to BPGs across Ontario. PTs were recruited through the established Hospital and Home Care Liaison Networks of the Ontario Physiotherapy association (OPA). Descriptive data analysis was performed using SPSS v.22.

Results: The highest adherence rates occurred for actual discharge date, administration of pre- and post-operative education sessions, and having a standardized referral process for outpatient services. There appears to be a trend showing that individuals in large urban centres are using QBPs more often than those in rural locations.

Conclusions: There is a lack of evidence surrounding BPGs for this patient population and there is no widespread agreement as to what the primary document that clinicians should be referring to in order to guide their practice is. Further investigation should be undertaken to better understand adherence rates to current available BPGs across Ontario.

13. How are we doing compared to best practices: total hip replacements?

Students: Mandi Gillies, Mike McLeod, Sue Safadi

Supervisor: Denise Taylor, Kirsti Reinikka, Sylvia Daniel

ABSTRACT

Purpose: The purpose of this study was to provide an understanding of current practice patterns of physiotherapists working with patients undergoing a total hip replacement and to identify potential barriers and facilitators to implementing best practice guidelines and achieving provincial benchmarks.

Method: A survey methodology was utilized. Physiotherapists in Ontario working with patients undergoing a total hip replacement participated. Questions were asked across the care pathway (e.g. preoperative and postoperative protocols) as well as facilitators/barriers to implementing best practice guidelines.

Results: The results showed variability in knowledge about best practice guidelines across the care pathway (e.g. preoperative education, discharge timeline, postoperative education) for total hip replacement patients. The respondents acknowledged barriers to utilizing best practice guidelines (e.g. lack of awareness, lack of time, unsure where to find them).

Conclusions: This study has identified a need for education and improved knowledge translation about best practice guidelines to physiotherapists working in the total hip replacement care pathway. As well a strong theme around education was found in the reported barriers and facilitators to implementing best practice guidelines. As physiotherapists play a critical role across the continuum of care they will need to provide strong leadership to the health care team.

14. How are we doing compared to best practices: hip fractures?

Students: Stacey Burns-Hogan, Julie d'Entremont, Trinette Kaunds, Sara Speckeen, Sandy Veit

Supervisors: Denise Taylor, Kirsti Reinikka, Sylvia Daniel

ABSTRACT

Purpose: To explore knowledge and use of Best Practice Guidelines (BPG) in physiotherapy treatment of hip fractures in Ontario, and to identify facilitators and barriers to implementation.

Method: Cross-sectional, self-administered web-based survey completed by registered physiotherapists working with hip fractures in hospital or home care settings, using snowball sampling.

Results: Of 49 respondents, 21.4% reported using Quality Based Procedures and 40.5% used BPG in practice, compared to clinical experience (81.0%) and hospital protocol (52.4%). Most therapists believe BPG improve patient outcomes (87.2%) and are important to the quality of patient care (89.7%), while 69.2% believe their institutions were meeting provincial standards. Primary barriers to BPG implementation were lack of time (89.6%), uncertainty of where to find BPG (46.2%) and being unaware of current BPG (20.5%). Primary facilitators to implementing BPG were awareness of BPG (66.7%) and ease of access to BPG (61.5%).

Conclusions: A majority of physiotherapists surveyed utilized clinical experience rather than BPG to inform physiotherapy care following hip fracture. A recent transition into patient based funding requires the use of BPG to maximize patient outcomes and health system efficiency. Results indicate that improved access to, and education around BPG can potentially improve integration into clinical practice.

15. Performance of Adolescent Soccer Players on the Functional Movement Screen™

Students: Karlyn Driedger, Kirsten Labaj, Sarah Luxon

Supervisors: Kristin Long, Jason Smith

Co-Investigator: Dr. Monique Muller

ABSTRACT

Purpose: The FMS™ is a measure that evaluates movement efficiency and has been used to predict injury. Normative values have been established in adults over the age of 18, but not in adolescent athletes. The purpose of this study was to describe how male and female competitive adolescent soccer players aged 9-15 perform on the FMS™.

Methods: Seventy-two competitive soccer players aged 9-15 were recruited from Guelph Soccer Club. Prior to the soccer season, novice and expert raters assessed male and female participants with the FMS™. Median scores were calculated for age and sex.

Results: Forty-five participants (12-14 years) were included in the data analysis. Fourteen year old females had a higher median total FMS™ score of 16, compared to 12 and 13 year old female participants who had a median score of 15. There were no differences observed in median total FMS™ scores between 12 and 13 year old males or females.

Conclusions: Reference values were determined for male and female soccer players, which coaches and trainers can utilize when interpreting FMS™ scores in similar populations.

16. Improving Outcomes for Breast Reconstruction Following Breast Cancer - Is there a role for physiotherapy? A scoping review

Students: Jaclyn Falotico, Elisabeth Wiens, Vanessa Younes

Supervisors: Beth Hoag and Emily Thorpe

ABSTRACT

Purpose: To conduct a scoping review of the available literature on both myofascial release (MFR) and physiotherapy interventions in women who have undergone breast reconstruction following breast cancer.

Methods: The Cochrane, MEDLINE, EMBASE, AMED, CINAHL and PubMed databases were searched. Journal articles published between the years 2000 and May 2014 were included within this study.

Results: A total of 22 articles met the inclusion criteria. Articles were divided into three overarching themes which included the following: 1) post-operative complications of breast surgery; 2) breast cancer surgery and physiotherapy; 3) MFR.

Discussion: The overall quality of evidence ranged from low to high with limited studies related to the use of physiotherapy or MFR post-breast reconstruction. The use of physiotherapy following breast surgery has shown to be successful at treating post-operative complications. Due to the similar post-operative complications between breast cancer surgery and breast reconstruction, promising results could be seen when applying physiotherapy treatment to the latter.

Conclusion: Further research is needed to determine whether positive results can be produced in patients after breast reconstruction.

17. Factors affecting patient adherence with conservative management of hip and knee osteoarthritis.

Students: Donna DeGeer, Robyn Deverett, David Evans, Lyndsey Pearsall

Supervisors: Angela Accettura and Stephen Patton

ABSTRACT

Purpose: To determine patient compliance rate with conservative treatment recommendations for management of hip and knee osteoarthritis (OA) and the factors affecting patient compliance.

Methods: A cross sectional cohort pilot study was conducted using telephone surveys from April 2014 to June 2014. Approximately six to eight weeks following initial consultation at the Regional Joint Assessment Program (RJAP) Juravinski site, patients were contacted via telephone by the student research team. Patients were asked if they followed through with their conservative treatment recommendations; reasons for non-compliance were explored.

Results: Overall, 76% of patients (n=22) were compliant with at least one recommendation provided. The compliant group had a significantly higher baseline rating of pain on the Numerical Pain Rating Scale (NPRS) and fewer co-morbidities than those in the non-compliant group. No other statistically significant differences were observed within other demographic variables. However, additional non-significant trends were observed. The most common reasons for non-compliance were: lack of time, not enough education received from the RJAP team, patients did not think the treatment would help, and financial constraints.

Conclusions: Certain characteristics may predict lower compliance, including a lower self-report rating of pain and multiple co-morbidities.

Key words: osteoarthritis, compliance, physical therapy specialty, conservative, non-surgical

The authors have no conflict of interests to declare.

18. Perceptions and Experiences of Patients who have been newly prescribed a gait aid at one month following discharge: Phase 1 survey development

Student: Leah Franco, Matt Koornneef, Katie Pistor, Laura Reithmeier, Amanda Voorberg

Supervisor: Julie Moreland, Elisa Mayens, Dr. Vince DePaul

ABSTRACT

Purpose: To develop a survey to gain information regarding the perspectives and experiences of individuals who have been prescribed a new gait aid in hospital, at one month following discharge and to assess survey reliability.

Methods:

Participants. A convenience sample of inpatients from St. Joseph's Healthcare Hamilton, Charlton Site (SJHH) participated in all phases of the study one month following discharge from hospital. Thirteen inpatient physiotherapists (PTs) at SJHH participated in the survey development.

Design. Survey development, pilot testing, and test-retest reliability.

Procedure. Two PT focus groups and three patient interviews were conducted to develop the survey. The survey was pilot tested using two subjects, and test-retest reliability was conducted using six participants. Intraclass correlation coefficient (ICC) using 95% confidence interval (CI) was calculated for each survey item.

Results: The final version of the Gait Aid Information Tool (GAIT) contained 32 items organized into three sections. Seven items were considered reliable (ICC > 0.8).

Conclusions: The GAIT assesses perspectives and experiences of individuals using a new gait aid at one month post-discharge. GAIT items are relevant to patients and generate information important to PTs about patient behaviours regarding gait aid use upon discharge. Results suggested seven GAIT items were reliable.