Understanding Determinants of Basic Motor Abilities, Self-care and Play of Young Children with Cerebral Palsy

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Cerebral palsy (CP) is the most prevalent childhood neuromuscular condition seen by rehabilitation practitioners; however, the evidence base supporting rehabilitation practice from a holistic, multivariate perspective is very weak.

**Primary Objectives**

1. To identify the child, family, and service determinants that together explain the change in basic motor abilities of young children with CP over a one-year period.
2. To identify the child, family, and service determinants that together explain engagement in self-care and play of young children with CP.

**Secondary Objectives** include 1) determining the sensitivity-to-change of the measure of participation in self-care and play, and 2) determining aspects of intervention that are related to optimal outcomes.

**Research Plan:** Using a prospective cohort design, 963 children with CP between the ages of 18 months and 4.5 years, stratified by GMFCS level (i.e. n = 321 in each of the clustered groups of Levels I/II, III, and IV/V), are being recruited from centres across Canada and the US, using quota convenience sampling. Each child enrolled in the study will be followed over a period of one year. At time 1, we are collecting data on basic motor abilities, self-care, and play, in addition to measures of child adaptive behaviour, primary and secondary impairments, and related health conditions. At time 2 (6 months after time 1), we are collecting data on family function and services received. Finally, at time 3 (one year after time 1), we will collect data on basic motor abilities, self-care and play for a second time. Data analysis will first involve a thorough descriptive analysis, confirmatory factor analysis, followed by evaluation of the fit between our proposed model and the data collected in each of the three groups using structural equation modeling. Sensitivity to change will be determined, as will the correlation between a range of service factors with outcomes over the period of one year.

**Relevance:** Significant determinants that are amenable to change will be targets for future intervention, thus contributing to more effective service delivery. In contrast, but equally important, significant determinants that are not amenable to change will assist with realistic goal setting, thus enhancing efficiency of services.

Uprooting, Displacement, and Health in the Lives of Girls

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Uprooting and displacement have become a common part of everyday life for millions of girls and young women throughout the world. In Canada, a growing population of newcomer, homeless and Aboriginal girls have also experienced dislocation from home, community, and in some cases, family. There has been little research on the health effects and the impact of gender, race, and class intersecting with violence and dislocation. The primary purpose of this critical narrative study was to examine how uprooting and displacement have shaped health experiences and understandings among three groups of girls and young women: 1) newcomers to Canada (immigrant and refugee girls); 2) homeless girls; and 3) Aboriginal girls. Secondary objectives were to examine the sociopolitical barriers they encounter and to explore how policies and legislation shape their lived realities and impact on their ability to integrate into the worlds they inhabit.

In-depth narrative interviews were conducted with 19 girls currently living in Southwestern Ontario. Narrative themes revealed that although there is much diversity within and between these groups, uprooting and displacement create social boundaries and profound experiences of disconnections in relations. Barriers to re/establishing connections generate dangerous spaces within interlocking systems of oppression. However, in negotiating new spaces in this context, there is the potential for the forming and re-forming of alliances where sources of support hold the promise of hope. It is within these spaces of hope and pathways of engagement where connections offer a renewed sense of belonging and a sense of well-being. The findings highlight the relevance of the construct of uprootedness in girls’ lives, provide beginning directions for the design and evaluation gender-specific and culturally meaningful interventions, and comprise a substantial contribution to the limited research that exists in the growing area of girls studies in Canada.
Educational Needs-Assessment for Health Professional Preceptors and Students

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Introduction: Academic programs rely on effective clinical preceptors to help prepare health professional students for practice. However, preceptors require education. An on-line format could allow access to education when needed, without travel. Objectives: The objective of this needs assessment was to determine whether Audiology, Nursing, Physiotherapy, Occupational Therapy, and Speech Language Pathology preceptors and students, from both urban and rural environments, would use an on-line, module-based resource and what topics were of most interest to them. Another objective was to identify the preferred length for modules.

Methods: A needs assessment was developed and conducted using a web-based survey. Clinicians from rural and urban sites in south-western Ontario, as well as students enrolled in health professional programs at The University of Western Ontario, were invited to participate. Results: 596 responses were received, fairly evenly distributed across disciplines except audiology. 20% were students and 20% identified themselves as from rural environments. Over 90% indicated they would use an on-line resource for preceptor education. Leading topics of interest were Giving and receiving feedback, Clinical reasoning, Roles and expectations, and Developing learning objectives. Two thirds of respondents wanted the modules to be of only 30 minutes duration. Conclusions: Clinical educators and students would use an on-line preceptor education tool, but they want modules to be short. Topic needs are similar for students and preceptors, across disciplines, and in both urban and rural environments. This information was used to guide development of an on-line, interprofessional preceptor education program.

Pilot testing PEP - An On-Line Program for Students and Preceptors

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Purpose: Following development of learning modules, a pilot was conducted to evaluate the Preceptor Education Program (PEP), an interprofessional, on-line program developed to enhance the clinical preparation of health professional students and to support preceptors before and during a placement.

Rationale and Significance: In the health care professions, preparation of students includes clinical placements facilitated by a preceptor. Students, preceptors, and clients benefit when the learning environment is well designed and supported.

Methods: Seven on-line self-directed learning modules were developed based on responses (n= 596) to a survey of students and health care professionals in urban and rural clinical practice sites in south-western Ontario. Participants in the pilot included 110 students and 65 preceptors, testing 6 out of 7 modules (n=703). Participants completed a 23 item evaluation of the module content, the web site design, and the potential impact on practice. The items used a 5 point Likert scale rating to assess the usefulness of the module content as well as the usefulness of learning aids such as video clips, interactive learning activities, and downloadable documents. Each module was also rated in terms of its overall relevance to practice. Information was collected on the ease of access and navigation throughout the web interface. Finally the potential impact of this learning resource was assessed by asking participants how likely they were to use the site in their own clinical education experiences and whether or not they would recommend it to others.

Results: The module content and resources were found to be useful and all were assessed as either quite relevant, moderately relevant, or extremely relevant to practice. Most respondents felt better prepared for their next placement and planned to continue to use the site as well as recommend it to other practitioners. The web site design was appealing and easy to use. Narrative comments provided useful feedback for short term revisions and future development opportunities.

Conclusions: Preceptors and students from multiple health disciplines found PEP beneficial to the clinical placement experience.

Validity, Reliability and Responsiveness to Change of Two Abbreviated Versions of the Gross Motor Function Measure in Children with Cerebral Palsy

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Currently the Gross Motor Function Measure (GMFM-66) is a 66-item tool that is used to measure motor function in children with cerebral palsy. The GMFM-66 is used both clinically and for research; a reduction in time required to employ the measure would allow for more frequent use of the measure in both these settings. There have been two proposed shortened versions and it is expected that one of the abbreviated versions of the GMFM-66 examined will be shown to provide a reliable and valid estimate of gross motor function while requiring less time in its application. It is also expected that the responsiveness and sensitivity-to-change will not be significantly compromised as a result of the reduction of items. A sample of 40 children will be recruited to assess the validity, reliability, responsiveness and sensitivity-to-change of both the shortened versions of the GMFM-66.
Screening for Duplication of 7q11.23 in Children with Speech and Language Impairments

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Speech and language impairments (S/LI) affect 3-10% of children and carry enormous social, therapeutic and emotional costs. Although there is known to be a strong genetic component to S/LI, only one gene has been implicated (FOXP2), and this in only very rare cases. We recently identified the Williams-Beuren Syndrome (WBS) region on chromosome 7q11.23 which, when duplicated, causes severe speech and expressive language impairment in children (Somerville et al., 2005, New England Journal of Medicine). Our objective was to find more children with this duplication in order to build an accurate picture of the speech and language problems associated with this chromosome rearrangement and help us generate a useful genetic screening protocol. We approached this from two aspects, performing both a genetic and phenotypic screen. For the genetic screen, we recruited children with a primary diagnosis of S/LI or apraxia of speech through speech-language pathologists and interactive web sites for families with apraxia. Informed consent was obtained, saliva collected, DNA extracted and duplication of the WBS region tested. The initial screen of 180 children did not identify any with a duplication of 7q11.23. In conjunction, we have been carrying out a phenotypic screen of individuals attending genetics clinics, to identify patients who bear similar features to the patient with dup7q11.23 that we originally reported in 2005. We identified a 5-year old boy with a diagnosis of severe S/LI. His younger sibling also had severe language delay, and both children had global developmental delay. A third, older sibling had a mild speech impairment. Genetic analysis demonstrated that the two younger siblings had dup7q11.23, but that the eldest sibling did not. We conclude that careful phenotypic screening of patients attending genetics clinics may identify more individuals with dup7q11.23 than a more general genetic screen of children with S/LI. This is likely due to the enormous genetic and environmental heterogeneity of speech and language impairment. The identification of this new locus opens up the possibility of linking the S/LI phenotype to a specific gene (or genes) from within the 7q11.23 region, so giving valuable insight into speech and language development.

Responses in Auditory Cortex Predict Language Ability and Impairment in Children: A Magnetoencephalography (MEG) Investigation

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Recent evidence suggests that a subgroup of children with autism show similarities to children with Specific Language Impairment (SLI), who don’t have autism, in the pattern of their linguistic impairments. The source of this overlap is unclear. We examined the ability of responses in the auditory cortex to predict language and other developmental abilities in 45 children and adolescents aged 7-17 years who had typical development, autism, language impairment, or both. Following standardized assessment of language ability, nonverbal IQ, and autism-associated behaviours, 110 tones were presented in both ears to while participants watched a silent video. Brain responses were recorded using a whole cortex, 151-channel MEG system. After averaging all trials, two key responses in the primary auditory cortex (the M50 and M100) were recorded in both hemispheres. Timing of the M50 responses in the right hemisphere (RH) predicted overall oral language ability, accounting for 36% of the variance. Nonverbal IQ and autism behaviour ratings were not predicted by any of the brain responses. Timing of the RH M50 was the best predictor of clinical language impairment diagnosis (i.e., irrespective of autism diagnosis), and demonstrated 82% accuracy in predicting Receptive language impairment. Using a cutoff of 84.6 ms for this response, we achieved 92% specificity and 70% sensitivity in classifying children with and without Receptive LI. Auditory cortical responses appear to reflect language functioning and impairment rather than non-specific brain (dys)function (e.g., IQ, behaviour). RH M50 timing proved to be a relatively useful indicator of impaired language comprehension, suggesting that delayed sound processing in the RH may be a key brain-based abnormality underlying the overlap between subgroups of children with autism and SLI.
The Clinically Important Difference (CID) From Primary Hip and Knee Arthroplasty for the Western Ontario McMaster University (WOMAC) OA Disability Index

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This study determined the clinically important difference (CID) from total hip (THR) and knee (TKR) replacement using the Western Ontario McMaster University Osteoarthritis Index (WOMAC). WOMACs were collected at decision for surgery (n=2,709) and 1-year follow-up. Patients rated change in pain and function at 1-year, also indicating if they would go through surgery again. ‘Good deal better’ defined the positive CID. WOMAC change scores for transition ratings and willingness to go through surgery again were evaluated using receiver operating characteristic curves. For THR, the positive CID were 41/100 for pain and 34/100 for function. For TKR, the positive CID were 36 for pain and 33 for function. Willingness to go through surgery again validated the CID. Post-operative complications decreased the likelihood of a positive CID. Improvement that is ‘a good deal better’ is an appropriate threshold for the THR/TKR positive CID. Attaining a positive CID is negatively related to complications.

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Oxygen Uptake, Leg Blood Flow and Vascular Conductance Kinetics During Moderate-Intensity Exercise: The Effect of Respiratory-Alkalosis

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This study examined the effect of hyperventilation-induced respiratory-alkalosis (R-ALK) on the adaptation of O2 uptake (VO2), leg blood flow (LBF) and femoral artery vascular conductance (VC) during moderate-intensity knee-extension (KE) exercise (MOD). Eight young male subjects (26 ± 5 yrs; mean ± SD) completed 4 – 6 repetitions of alternate-leg KE exercise during normal breathing (CON; PTEC02 −40 mmHg) and sustained hyperventilation (R-ALK; PTEC02 −20 mmHg). Increases in work rates were made instantaneously from baseline (3W) to MOD (80% estimated lactate threshold). VO2 was measured breath-by-breath by mass spectrometry and volume turbine. LBF (calculated from mean femoral blood velocity and artery diameter) was measured simultaneously at the femoral artery by Doppler ultrasound. Mean arterial pressure (MAP) was measured with a pneumatic finger cuff and was used to calculate VC as follows: LBF * MAP − 1. The adaptation of VO2, LBF and VC were modeled using a mono-exponential equation by non-linear regression. The adaptation of phase II VO2 (tVO2), LBF (tLBF) and VC were slower (P<0.05) during R-ALK (tVO2: 49 ± 26 s; tLBF: 46 ± 16 s; tVC: 29 ± 14 s) compared to CON (tVO2: 28 ± 8 s; tLBF: 23 ± 6 s; tVC: 18 ± 6 s). In conclusion, the slower adaptation of LBF and VC in R-ALK compared to CON may have contributed in part, to the slower VO2 kinetics observed during R-ALK.

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An Ethnographic Study of a Community-Based Recreation Program in London, Ontario

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The opportunity for children and youth of all abilities to fully participate in their social environments is a goal shared by rehabilitation professionals and policy makers. Participation in integrated recreation settings provides children with a sense of belonging and encourages them to focus on the similarities between themselves and their peers rather than on the differences. In this poster I describe the culture of the setting, to identify elements in the culture that are supportive for children with disabilities and to identify elements in the culture that could make the setting more inviting to children of all abilities.

The Characteristics of Master Athletes 65 years of age and older Competing in a Sport

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The number of older athletes is growing with the aging of our populations in many Western countries. The purpose of this study will be to examine, through a comprehensive review of the literature, the characteristics of master athletes 65 years of age and older who are actively competing in a sport. A literature search using the following multiple electronic databases will be conducted (Scholars Portal Search, SPORTDiscus, SociINDEX, Scopus and Google Scholar). The key words that will be used are master(s) athlete(s), veteran athlete(s), senior athlete(s), elderly athlete(s) and older athlete(s) and characteristic(s), trait(s), intrinsic, extrinsic and compete, competitor(s), competitive, competition(s). Additional studies may be identified by manually searching reference lists for potentially relevant papers. This review will be restricted to studies with human participants that were published from January 1997 to December 2007. This literature review will be the first step for the researcher in establishing the physical, psychological and environmental characteristics of master athletes 65 years of age and older who are presently competing in a sport.
The Many Faces of Knowledge Translation
Ryan DeForge, Kathy Ellis, Anita Kothari, Raphael Lencucha

Knowledge translation research involves understanding the process of, and outcomes related to, adopting and applying research findings. This poster showcases four KT research studies. Starting with a traditional project, we used a KT framework to evaluate and make recommendations for optimal uptake, by nurses, of educational modules developed by a private company. The next project takes on the call to create more interactions between the disseminator and user of knowledge through the use of a facilitator to support KT. Third, a global perspective was taken to understand how non-governmental organizations contribute to the development of a global tobacco policy framework. The last project examines how mapping software and maps can be used to inform decisions in Ontario Early Years Centres. Collectively these projects illustrate the variety of opportunities to understand knowledge translation processes.

Negotiating Home-Based Dementia Care: A Critical Ethnography
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PURPOSE: To examine how family networks and home care providers negotiate the provision of care with a senior living with dementia.

OBJECTIVES: To examine the negotiation process and outcomes of one dementia care network; to make recommendations about the delivery of dementia home care services.

METHODS: This critical ethnography examines values and behaviours of dementia care networks. Data were collected via participant observation and semi-structured in-depth interviews with clients, caregivers and home care providers.

FINDINGS: Preliminary analysis suggests that comprehensive assessments are necessary in order to fully understand the complexity of dementia care networks and to ensure adequate formal care services are provided to clients with dementia.

DISCUSSION: Assessment tools and strategies need to be refined to better reflect the complexity of dementia care networks. It is important to consider these networks in their entirety so that the needs of clients and their families are met in a comprehensive manner.

This project was funded by the Canadian Institute for Health Research and by the Alzheimer’s Society of Canada.

Affordances in Early Motor Development: The Onset of Purposeful Movement
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The onset of early purposeful movement, which can be observed as reaching, rolling, and crawling, occurs between the ages of 4 and 10 months and is uniquely characterized by a high degree of variability. The aim of this project is to investigate the extent to which key contextual factors can explain this variability observed in early development. Of specific interest is the immediate home environment, such as the play space and caregiving practices, as well as the unique individual characteristics of infants, such as motivation, curiosity and activity level. A sample of 300 typically developing infants, aged 4 to 10 months, are being recruited through programs offered by various agencies providing services to families and children in London, Ontario. Parents were asked to complete a set of questionnaires that address demographic characteristics, social support, and mental health, as well as the daily activities of their infant and individual infant characteristics. Measures were selected from the literature based on criteria of appropriateness, feasibility, and psychometric properties if applicable. A survey of the available measures in the literature revealed a lack of appropriate tools designed to assess contextual factors relating specifically to motor development for young infants. The Environmental Opportunities Questionnaire and the Infant Characteristics Questionnaire were developed to address this gap and have undergone pilot testing to determine acceptability and feasibility to parents and assessors. Subsequently, each parent and infant dyad participated in an interview and developmental assessment. During the interview, parents responded to questionnaires addressing infant health, the home environment and equipment use. Motor development was assessed using the AIMS. For the analysis, Structural Equation Modeling will be used to test the overall conceptual model and investigate the complex relations among the multiple constructs and a Confirmatory Factor Analysis will be run on the two new measures.
Profiling Family Health Teams: Process of Development of the Thames Valley Family Health Team

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Background: Several factors including an aging population, an increase in the prevalence of chronic disease and a shift of the deliver of health care from hospital to community are placing increased demands on Ontario’s primary health care system. A key primary health care reform initiative in Ontario is development of Family Health Teams (FHTs). Since their inception in 2005, FHTs have not been evaluated in any capacity.

Purpose: The purpose of this proposed grounded theory (GT) study is to develop a substantive theory regarding the process of development of the Thames Valley Family Health Team.

Methodology: Grounded theory, a highly systematic research approach, which lends well to the inquiry of process, will be used. The authors will draw on the works of Corbin and Strauss and will locate their research in a pragmatic world view.

Methods: Participants will consist of key informants related to the development of the Thames Valley Family Health Team who will be purposely selected to cover the broadest range of perspectives. Semi-structured interviews will be conducted and a research journal will be kept by the primary investigator. Data collection and analysis will consist of an open and iterative process. The data will be analyzed using a process referred to as constant comparative analysis, carried out in three stages of data coding and by using a conditional matrix.

Implications: The FHT initiative proposes to improve the use of human health resources through collaboration and role expansion to ultimately improve service delivery in primary care. It is anticipated that the theory generated from this study can inform future research pursuits to enhance the operation of FHTs in Ontario.

The Effect of Exercise Videos on Women’s Body Dissatisfaction

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The media depicting idealized images of a thin, slender physique have led to body dissatisfaction among women in Western society. Several researchers have suggested that the social comparison theory is the underlying mechanism between these sociocultural ideals and body dissatisfaction. More so, if a comparison is made with an individual that is perceived to be superior to oneself on an attribute of interest, such as a slender figure, an upward comparison occurs resulting in an increase of depression and anger, and a decrease in self-esteem. Exercise videos have been promoted as motivational exercise tools where typically, the exercise video instructor is dressed in revealing attire displaying a thin, fit, and toned figure. While exercise video instructors may initially motivate consumers to try to achieve this similar figure by using the video, they seem to have minimal psychological gains due to the physical dissimilarity found among these individuals to the instructor. The purpose of this intervention is twofold. Firstly, to demonstrate that a media literacy intervention – which facilitates critical thinking during passive viewing of these media images – will result in significantly less body dissatisfaction compared to the control group. Secondly, to demonstrate that the negative effects caused by viewing the instructor’s appearance will be negated by the task mastery experienced during exercising to the video. The objective of this intervention is to illustrate that the exercise will override body dissatisfaction possibly encountered when viewing images that would normally deter participants’ exercise behaviour.

A Community Exercise Program for Stroke Survivors: The Pilot Process

Fitzgerald C., Belfry S. The Canadian Centre for Activity and Aging

The Canadian Centre for Activity and Aging (CCAA) investigates the interrelationship of physical activity and aging and translates knowledge into leadership courses and model exercise programs. Currently in Ontario, Canada there are no community-based exercise programs for individuals with stroke once they have received rehabilitation. Further, rehabilitation is rarely offered beyond one year when most functional gain is made. However, gains in muscle strength, balance, walking ability, and functional, social and emotional capacity can be maintained post-rehabilitation using a community-based exercise program. The objective of this project was to implement a 12-week community-based exercise program to twelve stroke survivors over the age of 50 in order to help them reintegrate successfully into the community.

Purpose: To deliver a community-based exercise program for stroke survivors to help them retain physical gains from rehabilitation in order to achieve successful community re-integration.

Methods: Permission was granted for the Canadian Centre for Activity and Aging to adopt and deliver an evidence-based exercise program for stroke survivors. The CCAA partnered with Parkwood Hospital London and the Southwestern Ontario Stroke Strategy to provide Seniors’ Fitness Instructors with additional training on stroke and exercise. Participants were recruited, screened, and given a fitness appraisal to determine scores of anthropometric measures and a validated questionnaire was used to assess social and physical functioning.

Preliminary Results: Eleven stroke survivors were recruited to participate in the 12-week pilot exercise program (9 males, 2 females, mean age 65 with a range of 48-86). Pre-pilot results show that the most common physical deficits resulting from the stroke included: unilateral paralysis/weakness (92%), fatigue (83%), balance problems (75%), communication difficulties (67%), and memory/problem solving challenges (67%). Feeling self-conscious about appearance when out in public was the most reported social/emotional challenge among the participants. There was no difference among participants between physical functioning and social/emotional functioning prior to the pilot exercise program.

Conclusions: Participants benefit physically, socially and emotionally after taking part in a 12-week post-rehabilitation community exercise program for stroke survivors. The model program is replicable and the Canadian Centre for Activity and Aging is developing a leadership training program that can be disseminated nationally and internationally.
Promoting KT to Shape the Landscape of In-Home Care

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Knowledge translation (KT) is essential for evidence-based practice. To promote KT for evidence-based home care, participatory action research methods were adapted to create process-oriented on-the-job KT. In-home policy personnel, decision-makers and health care providers were engaged in two phases of: critical reflection on the research evidence and related KT challenges/opportunities; creating, implementing and assessing evidence-based practice strategies; and institutionalizing and diffusing these strategies. In Phase 1, 33 participants worked through five 2-hour sessions and three months of self-directed strategy implementation. The qualitative data analysis of the audiotaaped sessions revealed attitudinal, policy and behavioural barriers and facilitators to KT, and also revealed process outcomes and recommendations for promoting KT. Participants presented these findings at a 1-day workshop to an expanded network of 203 colleagues.

In Phase 2, the expanded network divided into 20 focus groups which met 9 times each. These focus groups identified 12 KT action strategies for implementation and testing over the next year, prioritizing refinements in front-line practice, communication and coordination, policies and procedures and continuing education.

Phase 1 measures revealed statistically significant gains in perceptions of a supportive work context (p = .001) and self-motivated learning orientation (p = .001), and positive trends in team functioning and job motivation. An eight-month self-directed implementation of Phase 2 activities, now in progress, will provide further information about the utility of this KT strategy for shaping the landscape of evidence-based in-home care.

Mental Health, Diversity and Homelessness

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Background and Objective: This study explores the intersecting vulnerabilities among individuals who are homeless and have psychiatric challenges. Psychiatric survivors are often perceived as a homogenous group with similar needs. However, survivors with further minority status are likely to have additional concerns and needs that may not be met by the current systems of care. People further marginalized by visible minority/cultural minority group status, sexual orientation, and/or disabilities are being studied. While belonging to any of these groups can increase the risk for potential poverty and homelessness, the interaction among these vulnerabilities is poorly understood, particularly in relation to housing and homelessness.

Methods: The Project (three phases):
1.) Secondary analysis of data collected through the Housing and Mental Health CURA. These data were provided by 320 people.
2.) Focus groups with members of visible and ethnic minority groups.
3.) Policy analysis.

Results from Phase 1: Data related to race/ethnicity, disabilities, and sexual orientation were explored to learn more about how these characteristics relate to use of selected health care services, housing, quality of life, status of personal support networks, severity of illness, and level of functioning. Caucasians are more likely to be housed than non-caucasians, while aboriginal people are over-represented in the shelter group (χ² =10.202, p=.037). There was no difference between groups on the basis of current housing or visible minority group membership in the use of emergency room or hospitalization services in the month prior to the interview. In the preceding 2 years, people who were aboriginal or of mixed culture/ethnicity showed a trend towards significantly more housing changes (f=2.605, df=3,249, p=.037), as did being homeless at the time of the interview (f=73.888, df=2, 251, p=.000).

Conclusions: Results will inform policy and care models to better meet the needs of people with minority group characteristics.

Creating a Climate of Interprofessionalism in mental health care at UWO

Dr. Cheryl Forchuk, Professor School of Nursing; Program Leader Lawson Health Research Institute; Dr. Evelyn Vingilis, Director of Population and Community Health Unit, Professor; Dr. Carole Orchard, Coordinator of Interprofessional Education Initiatives

“Creating Interprofessional Collaborative Teams for Comprehensive Mental Health Services” (CIPHER-MH) is a Health Canada Funded project that explores interprofessional practice in the context of mental health care and homelessness. The aim of the project is to display the complexities of mental illness in the context of a “real” individual; emphasize client-centered practice; and increase participants awareness and skill in interprofessional collaboration. To accomplish this, professionals from community agencies and health care students from seven major disciplines (Nursing, Psychiatry, Medicine, Occupational Therapy, Physiotherapy, Social Work, and Psychology) participated with consumers in workshops and practice placements. Evaluation methods consisted of IP validated instruments, IP focal questions, feedback forms, and focus groups with students, placement supervisors, and consumers. Results of this project centre around several themes: the development of structures to support interdisciplinary collaboration, client and professional benefits, attitudinal, boundary, and resource issues, as well as communication. Data gathered has informed the planning for this project, but more importantly, will assist in the sustainability of an IP culture in mental healthcare environments.
Preventing Homelessness Among Mental Health Patients Discharged from Psychiatric Ward to “No Fixed Address”

Cheryl Forchuk RN, PhD; Elsabeth Jensen RN, PhD; Richard Csiernik CSW, PhD; Jeffrey Hoch PhD; Shani Kingston-MacClure BA, MSW; Michelle VanBeers; Rebecca Vann BSW MSW; Cheryl Smith

In London, discharges from hospitals to shelters or streets occur at least 194 times per year. The researchers developed and tested an intervention to prevent this problem. Participants in the intervention group were provided with immediate social support, assistance accessing housing, and assistance with first and last month’s rent. The results showed that all individuals in the intervention group attained and maintained housing, whereas all but one individual in the control group did not attain housing and remained homeless when interviewed six-months later. The exception joined the sex trade to avoid homelessness. Efforts are underway to make the intervention routine.

Police Mobile Crisis Services: A Comparative Approach to Evaluation

Cheryl Forchuk RN PhD, Professor, University of Western Ontario, Scientist & Program Leader, Health Services & Outcomes Program, Lawson Health Research Institute; Elsabeth Jensen RN PhD; Mary-Lou Martin RN MEd MScN; Rick Csiernik PhD RSW

Currently in Canada, there has been an increase in contacts between the police and individuals with mental illness. Consequently, Police Mobile Crisis services are becoming gradually more popular in Ontario, particularly after the success of the Crisis Outreach and Support Team (COAST) program in Hamilton, Ontario. Unfortunately, we do not have a good understanding of the essential components, processes, and outcomes for police mobile crisis services. Therefore, this is an issue that needs to be addressed as new police mobile crisis teams are emerging with variations in structure and organization.

By employing a case study approach, we can compare and contrast police crises models in three different cities: Chatham-Kent, Haldimand-Norfolk, and Hamilton. Quantitative systems level data will include a description of the communities served, frequencies of emergency room and police calls, and satisfaction surveys employing likert scales and open-ended questions. To obtain qualitative data, we are employing ethnographic methods such as participant observation, focus groups and interviews with three communities within each site: Family, consumers and services providers. We are expecting a sample size of 120 participants: 60 consumer and family members and 60 individuals involved in the provision of services at various agencies. By using this case comparison method, it will give us rich data in order to understand the similarities and differences between these police mobile crisis models. Moreover, it will assist us in identifying key issues regarding the development of successful police mobile crisis services in Ontario.

At this moment, we are collecting quantitative and qualitative data. A few participant observations have been completed and more will be done in the next month or two. We are concluding our set of focus groups in Haldimand-Norfolk at the end of this month with family members and will be commencing focus groups in Chatham-Kent and Hamilton in February.

Holding On and Letting Go: Toward a Model of Co-Regulation for Driving in Later Life

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Debbie Laliberte Rudman, PhD, OT Reg. (ON), School of Occupational Therapy, FHS, The University of Western Ontario, ON

Although there is evidence that driving becomes increasingly risky with aging, it is also clear that stopping driving in later life is associated with adverse health and social consequences. Research that informs seniors, families and health care professionals regarding how to support continued safe driving and facilitate transitions to the status of non-driver can make a significant contribution to the health and participation of aging adults. Although considerable research deals with cessation of driving related to medical conditions, not much is known about how aging drivers who do not experience a medical condition requiring cessation engage in self-regulation or about the influence of others on how driving regulation occurs. This exploratory, qualitative study used focus groups with 79 community-dwelling individuals, including pre-senior (aged 55-64) drivers, senior (aged 65 and over) drivers and senior ex-drivers, to explore the process of driving self-regulation. Separate focus groups were conducted with 20 physicians to understand their perceptions of their role in monitoring aging clients’ driving. Analysis resulted in the formation of a model of driving self-regulation that highlights intrapersonal, interpersonal and environmental issues. The purpose of the current analysis was to combine data from the drivers, ex-drivers and physicians to further understand how driving is co-regulated through interpersonal interactions amongst aging drivers, physicians and family members. Findings highlight challenges to effective co-regulation, including reluctance of families and physicians to be involved, uncertainty and differences in opinion regarding factors that enhance risk and a lack of planning. Recommendations for enhancing co-regulation and future research are provided.
Heat Stress Prevents Overload-Induced Hypertrophy of Myosin Heavy Chain Type I Fibre Area, But Does Not Alter Structural Damage or Localized Patterns of Cellular Replication

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Heat stress (HS) inhibits compensatory hypertrophy in the rat plantaris muscle by preventing the accumulation of myosin heavy chain type I (MHC-I) protein. However, it is unknown whether HS also affects MHC-I fiber area, structural changes, nuclear accumulation and localized satellite cell activation in overloaded plantaris. Thirty Sprague-Dawley rats underwent synergistic ablation and were divided into non-heat stressed (NHS) and heat stressed (15-min, 42°C) groups. The contralateral limb was used as a control. Muscles were assessed after 1, 3 and 7 days of functional overload. MHC-I fiber area was not significantly different between NHS and HS plantaris muscles after 1 day of overload (0.228 mm² vs. 0.172 mm², respectively); however, MHC-I fiber area was significantly greater in the NHS plantaris compared to HS plantaris after 3- and 7-days (0.364 mm² vs. 0.193 mm² and 0.442 mm² vs. 0.237 mm², respectively). Localized Myf-5, PCNA and MyoD suggested a similar pattern of satellite cell activation in both NHS and HS plantaris muscles on all days. Overload induced progressive structural damage and massive accumulation of nuclei in the deep portion of the plantaris regardless of a prior HS. These results suggest that HS may prevent an overload-induced increase in MHC-I fiber area by restricting protein expression in existing fibers, rather than via altered replication signals, tissue strain or nuclear accumulation.

Physiological and Functional Recovery of Balance and Mobility after Stroke

S. Jayne Garland, Vicki L Gray, Svetlana Knorr, Tanya D. Ivanova
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Our research focusses on the capacity of the neuromuscular system to recover following stroke. Physiotherapy and therapeutic exercise play a large role in the rehabilitation of individuals following stroke, particularly in the area of mobility. Postural control is fundamental to mobility. Indeed, it has been reported that 83% of patients 2-4 weeks post-stroke had a balance disability (Tyson et al, 2006) and practicing balance and walking activities comprised 34% of physiotherapy treatment (Tyson & Selley, 2006). Little is known about whether exercise promotes the remodelling of the impaired muscle activation evident after stroke or whether the level of impairment (stroke severity) influences the capacity for remodelling. Using measurements of electromyography and postural sway, as well as functional measures of balance, strength, endurance and mobility, our poster will highlight a number of experiments that are ongoing that focus on the physiological and functional recovery of individuals following stroke.

Conflict and Board Performance in Provincial Sport Organizations

Shannon Hamm

Provincial Sport Organizations (PSOs) are a major partner in the Canadian sport system. They play a fundamental role in the delivery of sport by overseeing player and coach development, being a resource for community sport organizations, and providing sanctioning for events across the province. As nonprofit organizations they rely on the performance and cooperation of non-paid members and thus group processes are essential to their operation (Amis, Thibault, Slack, & Kikulis, 1996; Hoye & Cuskelly, 2006; Inglis, 1997). As such, it is important to understand the nature and quality of the work environment in which PSO boards operate. Gladstein (1984) stated that conflict is an important factor within most work groups, but in many cases is overlooked due to the negative connotation associated with the concept. Robbins (2003) emphasized the ‘interactionist view’ of conflict which highlights both the positive and negative outcomes of conflict. Consequently, understanding the impact of conflict on group dynamics is important when attempting to enhance group effectiveness (Jehn, 1995). The purpose of this project is to examine group processes of PSO boards with a specific focus on group conflict, decision quality, and board performance.

The Application of a Stigma Approach to Better Understand Falls in Older Adulthood

Heather Hanson, M.A., Ph.D. Candidate; Alan Salioni, Ph.D.

The discussion of falls can be an emotive topic for older adults. Fear, embarrassment, loss of confidence, and physical and emotional injury are potential consequences of falling. The negative connotations surrounding falls can result in an older adult feeling hesitant about reporting its occurrence to health professionals or family members. This poster will explore the potential contribution that a stigma approach may have on the study of falls among older adults. Other fields have benefited from the study of health-related stigmas and the study of falls can be informed by drawing from such work. The attribution of cause, threat to self-identity, and effects of labeling will be highlighted, along with the implications for research. Recognizing the social and psychological influence of a fall on the older adult will be beneficial for better understanding the reporting of falls, entry into fall prevention programs, and behaviour change.
Holistic Retirement Planning As a Resource for Health

Hogue A, Shaw L, Hobson S, Schweitzer A, Faculty of Health Sciences, University of Western Ontario

In Canada there are a growing number of women on the cusp of retirement. However, the major emphasis on planning for this transition is financial. A grounded theory study was used to investigate and analyze data to uncover the processes women use to prepare for retirement. Twelve professional women, teachers and nurses, shared their insights through group dialogue and interviews. Findings suggest that finances do underscore decisions around retirement however also in the forefront of planning is the identification of meaningful occupations and opportunities where health can be a resource for living in retirement. Health is perceived as more than merely physical ability, it includes social, spiritual and mental well-being. In conclusion, more efforts are needed to engage women in holistic retirement planning that focuses on discussion about engagement in meaningful occupation, finances, the meaning of health, and the importance of planning ahead to stay healthy through participation in later life.

Electrical Stimulation Therapy (EST) Increases Rate of Healing of Pressure Ulcers in Community Dwelling People with Spinal Cord Injury (SCI)

Houghton PE, Campbell KE, Fraser CH, Harris C, Woodbury MG, KE Hayes, DH Keast University of Western Ontario, Lawson Health Research Institute, London, Ontario, Canada.

Background: Eighty-five percent of people with SCI injury will have a pressure sore at some time during their life. Electrical stimulation therapy (EST) involves delivery of low levels of electrical current directly to the wound bed using specialized equipment.

Purpose: To investigate whether EST administered as part of community-based, interdisciplinary, wound care program can improve healing of pressure ulcers in people with SCI.

Methods: Adults (51+/−14y) with SCI (n==34) and pressure ulcers living in community received standard wound care including a pressure management program. Half of the subjects were randomly assigned to also receive EST (HVPC, 100mA, 80Hz, alternating polarity) for an average of 372 hours of over 3 months using a portable, programmable EST device.

Results: The percentage decrease in wound surface area was significantly greater in subjects receiving EST (71±25%) compared to those who just received standard care (36%±61%; p<0.05). Wound appearance was also significantly better in wounds treated with EST compared to control. Sixty-nine percent of subjects who were randomly assigned to receive EST had complete closure whereas only 7 of 18 (39%) of subjects closed after receiving only standard care. Average EST treatment period required to produce wound closure was 175±138 days.

Conclusion: These results demonstrate that EST can improve wound size, appearance and rate of healing of pressure ulcers of people with SCI. EST can be incorporated successfully into an interdisciplinary wound care program in the community.

This research was supported by a grant from Ontario Neurotrauma Foundation.

Environmental Influences on Physical Activity Levels in Youth

Jennifer D. Irwin, Patricia Tucker, Jason Gilliland, Meizi He, Kristian Larsen & Paul Hess

Purpose: This study assessed the amount of physical activity engaged in by youth aged 11-13, in relation to: (1) the presence of neighborhood recreational opportunities objectively measured within a geographic information system; and (2) parents’ perceptions of recreation opportunities in their neighborhoods.

Methods: Students in grade 7 and 8 (n=811; 50.4% female) in 21 elementary schools throughout London, Ontario completed the adapted Previous Day Physical Activity Recall and a questionnaire assessing environmental influences in the home and school neighborhoods. Parents/guardians of participants also completed a questionnaire eliciting demographic information and perceptions of the neighborhood environment. Logistic and linear regression (SPSS version 15) were utilized for data analysis.

Results: On average, students engaged in 159.5 min/day of physical activity. Both subjective and objective measures of recreational opportunities were associated positively with physical activity (p < .05). Those students who had 2 or more recreation facilities in their neighborhood were 2.4 times (95% C.I. 1.45 – 3.93, p < 0.01) more likely to fall within the upper quartile of physical activity. Children with recreation facilities in their neighborhood (as reported by parents) were 14.33 minutes more active after school than children without facilities (p<.05).

Conclusion: Both subjective and objective assessments of recreation opportunities in the neighborhood increased the likelihood of youth being more active. Greater recreational opportunities seem essential to facilitate youths’ healthy levels of physical activity.
Adolescents’ Perspective of Neighborhood Influences on Physical Activity and Dietary Behaviors

Jennifer D. Irwin, Patricia Tucker, Jason Gilliland, Meizi He, & Paul Hess

Purpose: To explore grade 7 and 8 students’ perceptions of their physical activity and food consumption behaviours, with special attention to how their neighbourhood environments influence these behaviours.

Methods: This grounded theory qualitative study targeted a heterogeneous sample of students between the ages of 12–14 years. An experienced moderator, using a semi-structured interview guide, conducted 9 focus groups (n = 61). Focus groups were digitally-recorded and transcribed verbatim. Inductive content analysis was completed independently by two researchers. Steps were taken throughout to ensure data trustworthiness.

Results: Participants’ main active pursuits included structured and unstructured activities such as soccer, hockey, volleyball, basketball, and bike riding. Adolescents’ physical activity was reportedly influenced by environmental factors including parks, recreation facilities, streets and sidewalks. Participants’ reported that they knew the difference between healthy and unhealthy foods, and still choose unhealthy snacks often. Their food consumption was reportedly influenced by the abundance and availability of fast food restaurants and convenience stores in their local neighbourhoods.

Conclusion: This is the first Canadian study to qualitatively examine youths’ perception of the local environment on their physical activity and dietary intake behaviours. This study is important as it offers adolescents’ perspective of environmental influences on physical activity and food consumption which may be as vital as the objective or ‘actual’ availability of physical activity facilities or food vendors.

Snoezelen Room: A Prescription for Balance?

Kelsey Klages, Health and Aging, Health and Rehabilitation Sciences, The University of Western Ontario

The prevalence of falls among those with dementias is high, but there are few falls prevention programs currently available. Balance deficits largely explain the predilection to falling observed in individuals with Alzheimer’s disease. A Snoezelen room allows multi-sensory therapy and is often used to increase relaxation and/or stimulation in individuals with the disease. In this environment, effects of touch, lights, colours, sounds, smells and tastes are used to expose individuals to multiple sensations in order to soothe and stimulate them. This study will investigate the capability of multi-sensory therapy to improve balance and reduce falling among individuals with the disease. Ten eligible Alzheimer’s disease patients will complete 20-30 minute sessions of proprioception stimulation in the Snoezelen room three times a week for three months. The participant will decide what area of the room to explore but will be encouraged to engage in activities that stimulate lower limb proprioception and tactile sensors. Ten additional participants will be chosen to match the intervention group gender, age and disease severity and will comprise the control group. This group will receive visits by a trained volunteer to account for the treatment group’s one on one interaction in the Snoezelen room. The Functional Reach Test, the Tinetti Balance Assessment Tool and the Timed Up and Go Test with and without a dual task will be used to assess balance of all participants at baseline and after the intervention. Outcomes of this study will provide evidence to direct policy changes related to use of this therapy.

Effect of prior heavy exercise on \( \dot{V}_O_2 \) uptake kinetics in the upper regions of the moderate-intensity domain

John M. Kowalchuk 1,2, Harry B. Rossiter3, Lisa M.K. Chin1, Donald H. Paterson1 and Brian J. Whipp3; 1School of Kinesiology and 2Department of Physiology and Pharmacology, The University of Western Ontario, London, ON, Canada and 3Institute of Membrane and Systems Biology, University of Leeds, Leeds, U.K.

That the adaptation of pulmonary \( Q_2 \) uptake (\( \dot{V}_O_2 \)) in the upper region of the moderate-intensity exercise domain is slow relative to the lower region is thought to reflect an intrinsic characteristic of the recruited muscles (Brittain et al., EJAP 86:125, 2001). Because prior heavy-intensity exercise speeds moderate-intensity \( \dot{V}_O_2 \) kinetics when they are slow, we wished to determine whether prior heavy exercise would similarly speed \( \dot{V}_O_2 \) kinetics in the upper moderate-intensity domain. Ten males performed 4-6 repeats of two double-step (S) cycle ergometer protocols: 1) S1-S2: 20 W to 80% of the estimated lactate threshold made in two equal increments, and 2) HS1-HS2: as protocol 1, but with S2 preceded by heavy exercise (Δ50%); each step lasted 6 min. \( \dot{V}_O_2 \) was measured breath-by-breath using a turbine and mass spectrometer. The fundamental \( \tau \dot{V}_O_2 \) time constant (\( \tau \)) was greater (p<0.05) in S2 (41 ± 15 s (mean ± SD)) than S1 (21 ± 4 s). After heavy-intensity exercise, \( \tau \dot{V}_O_2 \) was lower (p<0.05) in HS2 (31 ± 10 s) than S2, but remained greater (p<0.05) than HS1 (22 ± 5 s). Thus \( \dot{V}_O_2 \) kinetics in the upper moderate-intensity domain are not immutable, becoming faster after heavy exercise. However, this effect (presumably due to activation of intramuscular enzymes, improved oxidative substrate provision and/or improved \( Q_2 \) transport kinetics) did not entirely overcome the intrinsically-slow kinetics in this region.

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Federal Parliamentary Committee Hearings on Bill C-71, The Tobacco Act: Examining Written and Oral Statements of the Tobacco Industry

Stephanie Kumpunen (MSc. Candidate), Anita Kothari, PhD

The international tobacco industry uses tactics to delay, weaken and eliminate policy; skew research and manipulate the media. This case-study project will examine the Canadian experience with tactics, analyzing explicit and implicit messages within statements made by representatives of the tobacco industry that appeared at committee hearings and provided written submissions to the House of Commons Standing Health Committee and the Senate Legal and Constitutional Affairs Committee reviewing a 1997 key piece of Canadian tobacco control legislation, Bill C-71, the Tobacco Act, an Act to regulate the manufacture, sale, labelling and promotion of tobacco products. An interpretive discourse analysis method (based on Potter and Wetherell’s (1993) four types of analytic considerations) will be used to examine 70 texts to answer three research questions: 1) What discursive tactics are used by the tobacco industry to justify their position?; 2) How are these issues related to smoking and tobacco control framed or presented?; and 3) What was the context (i.e. political climate and tobacco control climate) during the timeframe that the document was submitted or presentation was made? The study is driven by the perceived lack of information about the influence of direct submissions and presentations as a tobacco industry tactic to delay or prevent changes in public policy, despite a large amount of literature surrounding other tobacco industry tactics; as well as, the transferability of findings to other potentially antagonistic industries to health promotion such as the food and pharmaceutical industries.

A Literature Review of the Impact of Dysphagia on Patients with Myotonic Dystrophy and their Caregivers

Kori A. LaDonna, BA Health Promotion

INTRODUCTION: Myotonic Dystrophy (DM) is an inherited disorder affecting the brain, the eyes, and smooth, skeletal and heart muscle. DM patients experience sleep disorders, intellectual impairments, emotional problems, and dysphagia (difficulty swallowing). Dysphagia is one of the most serious symptoms of DM because it may cause choking, pneumonia, and death. The purpose of this literature review is to describe the unique characteristics of DM, and to discuss the effects of dysphagia on DM patients and their caregivers.

METHODS: MedLine, Pubmed, EMBASE, SCOPUS and CINAHL were searched for English language articles combining “Myotonic Dystrophy” with “dysphagia,” “quality of life,” and “swallowing.” A search for dysphagia questionnaires addressing quality of life was conducted.

RESULTS: Articles describing the physical, emotional and cognitive aspects of DM, and studies addressing the impact of dysphagia on this population were identified. No research studies have addressed the social implication of dysphagia and its affect on quality of life for patients with DM and their caregivers.

Picture This: Capturing Rural Older Women’s Perspectives of their Mental Health With Photovoice

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Dr. Beverly D. Leipert, RN, PhD, Chair of Rural Women’s Health Research, Associate Professor Faculty of Health Sciences and Faculty of Medicine and Dentistry, The University of Western Ontario
Dr. Jan Miller Polgar, PhD., OT., Reg. (Ont.), FCAOT, Associate Professor, School of Occupational Therapy, Graduate Chair, Health and Rehabilitation Sciences Program, Faculty of Health Sciences, The University of Western Ontario

This poster presentation will provide information on doctoral work in progress, which will be conducted using innovative photovoice methodology to: 1) explore rural older women’s perspectives regarding their mental health, and 2) investigate how sociocultural and environmental factors in rural areas affect the mental health of rural older women. Since minimal research has focused on this population, little is known about their mental health issues. An urgent need exists to explore sociocultural and geographical factors in rural environments that may affect the mental health of rural older women.

Photovoice is a unique methodology developed specifically for research with rural women. In this study, 25-30 rural women, 60 years of age and over, who reside within 250 kilometers of London, Ontario, will engage in picture taking, individual interviews and focus group discussions regarding their mental health. Cameras will be provided to research participants and their pictures will form the basis of individual and focus group interviews about their mental health issues. Participants’ pictures, notebook comments, and perspectives in individual and focus groups interviews will form the basis of the analysis. NVIVO, a qualitative computer software program, will facilitate data management, retrieval and analysis. This poster presentation will address: the purpose of the study, photovoice methodology and recruitment, data collection, and analysis strategies to be used in the doctoral research. Enhanced knowledge resulting from this study will assist in the development of effective health promotion policies and practices to address mental health issues for rural older women.
Rural Home Care Issues, Challenges, and Solutions

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Abe Oudshoorn, RN, PhD(c) Lecturer, School of Nursing, Faculty of Health Sciences, The University of Western Ontario

While home care has received much attention lately, little research to date has drawn on the experiences of rural multidisciplinary teams providing in-home care. Home care is typically studied in urban areas, with the tendency to expand urban practices to rural settings, often with problematic results. This paper presents findings regarding unique rural multidisciplinary home care issues, challenges, and strategies for solutions. Five focus group interviews were held with each of three rural multidisciplinary home care provider groups (15 focus groups with total n=19) in southwest Ontario, Canada. Findings revealed practice issues related to time, distance, communication, recruitment and retention. System issues related to poor understanding and scheduling of rural practice by administrators and urban employers. Study findings also indicate that rural home care requires enhanced understanding and changes to policies and practices to provide efficient and effective care to rural residents. Ways to assist in enhanced understanding about rural home care issues include mapping of geographical care locations, needs, and resources, and greater inclusivity of home care providers in policy and decision making. Ways to enhance practice include the use of rural home care teams and case conferences, telemonitoring, and rural home care co-ops. Our study revealed very committed care providers in rural areas, but also immediate needs for enhanced valuing, enriched staffing and support, and better understanding by urban employers, as well as changes to policies and practices, to address practice and system issues and ensure the provision of efficient and effective home care in rural settings. Best Practice Guidelines for Rural Home Care are urgently needed.

Growing Older with a Disability: Using the ICF to Identify Research Needs

T. Martin, V. Rota, L. Shaw, School of Occupational Therapy, The University of Western Ontario

Introduction and Background: Many people born with disabilities are now, for the first time, growing old. There is no clear research direction for this unique population. The aim of this study was to identify trends and needs for future research regarding disability and aging.

Design: A retrospective analysis of 51 papers from the FICCDAT was conducted. The WHO’s ICF framework was used to code these papers, and descriptive statistics identified the predominant areas of current study and future needs.

Data Analysis: A consensus approach was used to ensure appropriate categorization according to the ICF. Each paper was divided into a results category and an outcome category to differentiate between research results and the recommendations for further research. Descriptive statistics were calculated using SPSS v.15.0 for Windows.

Findings:
- The majority of papers include more than one ICF domain
- Current research disproportionately focuses on environmental factors and activities and participation factors
- There is a clear disparity in research on the changing body functions and structures of those aging with a disability
- Current services, systems and policies are not adequately addressing the needs of persons growing old with a disability

Implications:
- Change is required globally at the societal and environmental levels to improve quality of life in people growing old with a disability
- Research that considers the nexus of disability and aging is essential to help persons with disabilities and health care providers achieve and improve health and wellbeing for this population.
- Those aging with a disability will continue to be marginalized in our health care system without a holistic approach to understanding their needs

Acknowledgements: This study was conducted as part of an independent study for two undergraduate students in the Faculty of Health Sciences at the University of Western Ontario.

Neuropeptide Y And Age-Related Development of Hypertension in the Rat

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We tested the hypothesis that neuropeptide Y (NPY) receptor activation would increase with age during the development of hypertension. In vivo infusions of NPY (15µg/kg) and Phenylephrine (PE, 10nmol/kg) to the hindlimb of spontaneously hypertensive rats (SHR) and their genetic control Wistar-Kyoto (WKY) rats were performed in animals of 3, 5 and 7 weeks of age (n = 2-3 per strain per age). Hindlimb vascular conductance (Cvl), was calculated as an indicator of vascular responsiveness. Following PE infusions, Cvl in the 7 week SHRs and WKYs fell similarly by 58.5% and 49.2% respectively (p<0.05). Infusion of NPY produced a 69.0% fall in Cvl in the SHRs (p<0.05), but had no effect in the WKYs. NPY effects were less pronounced in younger SHR animals. Thus, while PE elicited similar responses in the SHR and the WKY animals, the sensitivity to exogenous NPY became pronounced with age in the SHR.

Acknowledgement: This work was supported by a grant from CIHR.
Baccalaureate Nursing Education and Prevention-Based Nursing Career Stress Management

Jason McCready, RN, BScN, BSc, MScN(c), Dr. Mary-Anne Andrusyszyn, RN, BScN, MScN, EdD, Dr. Carroll Iwasiw, RN, BScN, MScN, EdD

The career stress of nurses is highly discussed, researched, and repeatedly blamed for increasing attrition from the profession. Collectively, these factors contribute heavily to the current nursing shortage. Nursing career stress (NCS) and the nursing shortage have a cyclical relationship. Nursing career stress is seen as a potent contributor to the shortage, and the shortage is exacerbating stress experienced by nurses. The prevention of occupational stress is touted as more effective than are reactive-natured, management-focused stress interventions, and thus prevention is promoted across disparate professions and disciplines as the logical priority if change is to be effected in the growing epidemic of occupational stress.

There are two logical groups with whom NCS prevention (NCSP) can occur: the entrenched nursing workforce and undergraduate nursing students. Nursing career stress prevention in the existing workforce is largely researched and discussed as an organizationally-focused issue, and nursing is an active participant in these activities. However, NCSP is rarely discussed as potentially occurring prior to entry-to-practice. While there is a decent body of theoretical and empirical research regarding nursing education’s role in the curriculum-based reduction, prevention, and/or management of stress for nursing students, it has been almost exclusively focused on the stress experienced during nursing school. There is little or no mention of preventing the NCS to be encountered later on in nurses’ practice.

In this research study, basic baccalaureate nursing curricula in Ontario are assessed for content and processes related to NCSP. A model entitled the Nursing Career Stress Prevention Model for Baccalaureate Nursing Education was developed and is the structural and theoretical basis for this much needed research. In addition to a review of the literature and the purposes and methodologies of the study, the presenter will describe the study results in terms of a) how, and to what degree baccalaureate nursing curricula in Ontario contain NCSP content and processes; and b) when present, to which levels of prevention (viz., primary, secondary, and tertiary) does the NCSP content apply?

Student Today, Dean Tomorrow? Preparing Graduate Students for Future Academic Leadership Roles

Jason McCready, RN, BScN, BSc, MScN(c), Mary-Anne Andrusyszyn, RN, BScN, MScN, EdD

Within the climate of the current nursing shortage, there is impetus and a strong push to increase undergraduate nursing enrolments. This expansion of the nursing student body requires a corresponding growth in the ranks of nurse educators, who are collectively aging and looking towards retirement. Coupled with the present shortage of nursing faculty, this will dramatically exacerbate the need for nursing faculty. Success in recruiting new nurse educators will require innovative ways to prepare and socialize graduate students for future faculty roles.

As nursing faculty retire, so too will those among them who are in academic leadership positions. Succession planning for these leadership roles normally occurs within the inner circle of current faculty; but this group is aging and diminishing each year. As such, who will tomorrow’s leaders be, and how do we interest and prepare them for these roles? The answer may be in actively engaging graduate students in learning experiences that will prepare them for potential academic leadership roles.

In this presentation a course that was collaboratively designed to provide one graduate student with access and opportunity to critically analyze the roles, functions, and responsibilities of various academic leaders, committees and councils, as well as examine academic/administrative processes and structures, will be presented. In-depth understandings gained from this innovative approach to succession planning along with recommendations based on the analysis will be shared.

Relationship Between Engagement in Health Promoting Behaviours and Perceptions of Health Related Quality of Life

Stacy Miller, Linda Miller & Christopher Lee, Health & Rehabilitation Sciences Graduate Program, Measurement & Methods Field, Faculty of Health Sciences

The purpose of this study was to examine health promoting behaviours in a group of healthy, normal functioning adults to investigate the relationships among engagement in health promoting behaviours, perceptions of health-related quality of life, and personality. A battery of three tests was used, including a 20-item Mini-International Personality Item Pool (Mini-IPIP), 26-item World Health Organization Quality of Life (WHOQOL) measure, and a 81-item measure of Health Promoting Behaviours (HPB) that was developed for the study. Results from a sample of 50 graduate students indicate that the measure of HPB has good internal consistency for the full scale (Cronbach’s alpha = .884) and acceptable consistency for the individual subscales. Correlations between HPB subscales and the WHOQOL subscales ranged from .052 to .821; correlations between HPB subscales and Mini-IPIP subscales ranged from -.421 to .558. The strongest correlation was observed between the Psychological domains of the HPB measure and the WHOQOL measure. The strongest correlation for the HPB measure and the Mini-IPIP was between the Psychological domain of the HPB and the Conscientiousness domain of the Mini-IPIP. Results suggest that health promoting behaviours are related to personality and health-related quality of life.
Dimensions of Capacity in Community Sport Organizations

Katie Misener

As important providers of sport opportunities in our communities, it is imperative to understand the factors that influence the ability of community-based sport organizations to achieve their missions and effectively carry out the mandate of current sport policy. Organizational capacity has emerged in the nonprofit literature as a multidimensional framework for understanding the various dimensions that together enable an organization to achieve its mission. My research program seeks to develop a deeper understanding of the dynamics and implications of organizational capacity in community sport organizations. Through an instrumental case study methodology (Stake, 2003), the first phase of my research program explored the nature of five capacity dimensions (Hall et al., 2003) as well as how the various dimensions influence goal achievement in one CSO. These dimensions included human resources capacity, financial capacity, relationship and network capacity, infrastructure and process capacity, and planning and development capacity. The second and third phases of the research program build on this work but are focused specifically on relationship and network capacity in CSOs as strategic relationships and partnerships have emerged in sport policy as the key mechanism of service delivery (McDonald, 2005). Through interviews with CSO Presidents in one community, Phase 2 will explore the antecedents, processes and outcomes of multiple dyadic relationships. The findings will compliment existing knowledge on partnerships in sport and recreation (e.g., Cousens et al., 2006; Babiak, 2007). Using survey methodology, Phase 3 will further examine the nature of relationship and network capacity identified in Phase 2 and its impact on CSO performance with a broader sample.

Studying the nature and management of relationships will increase our understanding of the capacity of nonprofit community sport organizations to impact the Canadian sport community. The mechanisms for strengthening organizational capacity in community sport organizations, which will be identified through this research, will also provide insight for sport policy development and related initiatives in the nonprofit sector.

Nutrition and Exercise Lifestyle Intervention Program (NELIP) for Overweight and Obese Pregnant Women

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Excessive weight gained during gestation and weight retention after pregnancy are important predictors of long-term maternal and offspring obesity, and the reduction of these factors may decrease future obesity risk. **Objective:** The goal was to determine the effect of a Nutrition and Exercise Lifestyle Intervention Program (NELIP) on overweight and obese (OW) pregnant women by monitoring pregnancy weight gain, birth weight, and maternal weight retention at 2 months postpartum. **Methods:** Pregnant women with a pre-pregnancy BMI of ≥ 25.0 kg/m² (N=48) and a reference group (BMI<25.0; N=12) participated in a NELIP starting at 16-20 weeks of pregnancy, continuing until delivery. NELIP consisted of an individualized nutrition plan with total energy intake of a minimum of 2000 kcal/day (8360 kJ/day), with 40 - 50% of total energy intake from carbohydrate. The exercise program consisted of walking (30% peak aerobic capacity) for 40 minutes, 3 – 4 times per week. **Results:** Weight gained by OW women on NELIP was 6.9±4.7 kg, accounting for 0.38±0.3 kg/week, with a total pregnancy weight gain of 13.3±9.3 kg. Weight retention at 2 months postpartum was 2.9±8.1 kg and average birth weight was 3.535±0.5 kg. Seventy-three percent of the OW women did not gain excessive weight on NELIP. **Conclusion:** NELIP prevented excessive pregnancy weight gain with minimal weight retention at 2 months postpartum in OW women. Minimizing weight retention at 2 months postpartum by preventing excessive weight gain during pregnancy may assist overweight and obese women in initiating successful weight control during the postpartum period.

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On the Prediction of Speech Quality Ratings of Tracheoesophageal Speech Using an Auditory Model
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Total laryngectomy is often the treatment of choice for many patients suffering from laryngeal cancer. This procedure alters the speech production mechanism, and Tracheoesophageal (TE) speech is an alternative where the pulmonary air is forced through the esophagus. TE speech is characterized by a generally lowered frequency, near normal intensity, and because of access to the large volume of pulmonary air, generally normal temporal features when compared to normal speakers. However, the overall sound quality of TE speech is best described as highly aperiodic, rough, and noisy. Additionally, considerable variability across TE speakers does exist. Therefore measurements of TE speech quality are often useful in TE speech rehabilitation process. Acoustic analysis of TE speech has the potential of quantifying the voice quality and assisting the speech pathologist in determining and monitoring the therapy process. In this paper, we apply two different methods for predicting the voice quality ratings of TE speakers by naive listeners: (a) conventional spectral and linear prediction measurements that were investigated in earlier studies, and (b) a methodology based on a perceptual auditory model that attempts to mimic the speech quality perception by a normal hearing listener. Using a database of speech quality ratings of 35 TE speaker samples, our results showed that (a) typical spectral metrics extracted from running speech samples do not correlate well with perceptual subjective ratings of TE speech samples, and (b) the auditory-model based voice quality metric yields high degree of correlation with perceptual ratings.

Understanding the Professional Socialization of Audiologists through Reflection
Stella L. Ng, BA (Hons) MSc, Reg. CASLPO Audiologist, PhD Candidate, Health Professional Education Advisors: Doreen Bartlett, PhD and Deb Lucy, PhD

Audiology is a highly technical profession; it is my observation that audiologists typically work on what Schön refers to as “the high, hard ground” of professional practice, aiming to apply research-generated evidence and technical rationality to best practice. As such, the “swampy lowland” of practice, which contains the “messy confusing problems [that] defy technical solution”, is often overlooked by audiologists. The cost of this scenario is quality hearing healthcare and client-centered practice, because “in the swamp lie the problems of greatest human concern”. To examine the hidden forces that drive practice, Schön states that educators should prioritize the artistic aspects of professional practice over the more commonly studied technical aspects. Schön calls this “turning the problem upside down.” To begin an “upside down” investigation of the issues facing audiology, I propose to construct a grounded theory of the professional socialization of graduate-level audiology students, as understood through guided reflection, which I will elicit through critical incident and think aloud techniques. The currently proposed study will be part of a larger project evaluating several aspects of Western’s audiology training program. The larger study design will be an adaptation of a program evaluation that took place in a physical therapy education program. The professional socialization aspect of the project will now be discussed, including a brief literature review and explanation of the chosen methodological approach.

Investigating the Impact of an 18-Week Cardiovascular Exercise Program on Body Composition in Female Non-Exercisers
Erin Pearson, Craig Hall

The purpose of the study was to investigate the impact of an 18-week cardiovascular exercise program on body composition in female non-exercisers (exercise < once per week). Inclusion criteria required that women were between the ages of 18-45, not pregnant, not on any type of diet or possessing any medical condition contraindicated for exercise. Calculation of Body Mass Index (BMI) was also required; women were considered eligible if their BMI was > 25kg/m² (overweight range). A secondary purpose of the study was to compare the effect of providing information on body composition changes (intervention group) versus weight change information only (control group) on exercise adherence, and multiple exercise cognitions. Participants (n=89) were randomized after all eligibility criteria were met. Based on the results of a sub-maximal fitness test (American College of Sports Medicine, 2000), all participants were given an individualized program which required them to exercise for 30-45 minutes, 3 times per week, and to maintain a predetermined target heart rate (THR) range. The range percentages increased progressively from a THR of 50-60% of heart rate reserve (HRR) in week 1, to a THR of 60-70% of HRR by week 18. Previous studies have shown that in order to invoke improvements in physical function and fitness, the intensity of exercise needs to be in this moderate to high range (Lox et al., 2003). In order to ascertain body composition, participants were scanned at baseline, 6, 12, and 18 weeks using Dual-energy X-ray Absorptiometry (DXA). Preliminary analyses of the basic patterns of change among the dependent variables occurred using a repeated measures ANOVA. Initial results for both the intervention and control groups indicated a trend over time showing a decrease in fat mass between baseline and week 18, and an increase in lean mass between baseline and 6 weeks, followed by a decrease between weeks 6 and 18.
**Breath by Breath VO2 Analysis and Assessment of Repeated Bouts of Sprint Intervals Compared to Repeated Bouts of Wingate Anaerobic Tests**

Petrella, NJ., McKay, BR., Gurd, BJ., Paterson, DH. and Kowalchuk, JM.  
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Repeated bouts of high-intensity, interval training (HIT) cause a significant increase in the performance of aerobic based tasks and in muscle oxidative enzymes (Burgomaster et al. 2005). This study assessed the differences in the energy cost between two types of sprint training through measurements of pulmonary O2 uptake (VO2) and power output calculations. Seven young healthy subjects (age = 24±3.7 yrs; mean ± SD) participated in a three-phase testing protocol. Session one involved an incremental ramp test to volitional fatigue on a cycle ergometer to determine VO2peak (VO2peak = 51±6 ml kg-1 min-1). Sessions two and three involved either a) eight repeated one-min bouts of HIT at a work rate corresponding to 120% VO2peak (W), with each separated by one min of 25 W cycling, or b) four bouts of WAnT (relative resistance of 7.5% of body weight [kg]), with each separated by four min 25 W cycling.  Peak power output was greater (p<0.01) for the WAnT (758 ± 320 W) than HIT (500 ± 184.7 W), while total power output was not different between conditions (HIT = 2313 ± 615 W; WAnT = 1895 ± 464 W). Preliminary observations suggest both groups reach ~95% VO2peak by bout-2 with HIT spending a greater amount of time at VO2peak indicating a greater total O2 cost vs. WAnT.

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**Stigmatization of Individuals with Head and Neck Cancer by Health Care Professionals**

Scott M. Rasmussen, B.HSc, *Health and Rehabilitation Sciences*, Dr. Philip C. Doyle, Ph.D

Health care professionals are the first to interact with individuals who have been diagnosed with head and neck cancer (HNCa). Consequently, they possess the ability to either create, or in contrast, help alleviate labels that may play a negative role in the emotional status of the individual following diagnosis and treatment. The purpose of this study is to explore whether three groups of health care professionals differentially stigmatize individuals with HNCa based on the assumed initial cause of the illness. The four health care professional groups this study seeks to compare are: (1) 15 otolaryngologists (HNCa surgeons); (2) 15 speech-language pathologists who work with HNCa; 3) 15 speech-language pathologists who don’t work with HNCa; and 4) 15 family physicians (who refer individuals with HNCa to a specialist). Participants will rate their perception of an individual described in a vignette using a 15-item Judgments in Health Care measurement instrument. Data will be analyzed using Student’s T-Tests and analysis of variance (group, vignette, and emotional dimension).

**Relative and Absolute Reliability of Physical Function and Activity Measures in People with End-Stage Renal Disease**

Sawant A, PT DPT; Overend TJ, PhD PT; Anderson C, MScPT; Gutierrez C, BScPT; Locking-Cusolito H, MScN; Perryman B, DipPT

End-stage renal disease (ESRD) is a condition characterized by impairment of kidney function affecting multiple physiological systems. Health Canada statistics indicate an increasing number of people in Canada requiring hemodialysis. Therapeutic interventions in people with ESRD have used physical function measures such as the 6-minute-walk test (6MWT), timed sit-to-stand test (TSS), and activity outcome measures such as the Human Activity Profile (HAP) to assess effectiveness. Since the underlying biological process of any particular pathology contributes to the systematic and random errors it is important to determine relative and absolute reliability for each population group of interest. Relative and absolute reliability has not yet been determined for the 6MWT, TSS and HAP for the population with stable ESRD.

**METHODS:** 25 participants (67.2+/= 14.2 years) were recruited from the local dialysis unit. The 6MWT and TSS30 were repeated on two occasions one week apart, just prior to a dialysis session. Participants completed the HAP during their dialysis session on the same two occasions.

Data analysis: Relative reliability was assessed using the intraclass correlation coefficient (ICC 2,1) and absolute reliability was assessed with standard error of measurement (SEM) and minimal detectable change (MDC95) statistics.

**RESULTS:** Relative test-retest reliability was excellent for the 6MWT and TSS30 [ICC 2,1=0.93 (CI 0.85 – 0.97)] and adjusted activity score (AAS) for the HAP [ICC 2,1 =0.92]. Relative test-retest reliability of the MAS of the HAP was moderate [ICC 2,1 =0.76 (CI 0.52 – 0.89)]. The SEM and MDC95 for the 6MWT were 28 m and 77 m, for the TSS 30 (0.9 and 2.6 repetitions) and for the AAS (4.1 and 11.4) respectively.

**CONCLUSION:** The results of this study add information to the current understanding of these outcome measure allowing clinically relevant conclusions to be drawn from intervention studies.

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Women, Identity, and Olympism: Reflections on the Ongoing Struggles Faced by Women in the Olympic Movement

Angela Schneider, Associate Professor – Kinesiology; Sarah Teetzal, Ph.D. candidate – Kinesiology

This poster examines specific struggles women in the Olympic Movement face from a philosophical perspective. Political and ethical issues for women Olympians are often related to the International Olympic Committee (IOC)’s policies and recommendations concerning the conception and classification of women athletes. The traditional ideals of women during the ancient Olympic Games and the revival of the modern Olympic Games (up to and including some current ideals) are intimately tied to a particular view of a woman’s body and mind. Despite the elimination of an official policy of sex testing for all female athletes at the Olympics, the question ‘what makes a woman a woman?’ persists in Olympic sport. Moreover, the philosophical anthropology promoted in Olympism is often an idealized conception of the human – the human male. Although Olympism could theoretically promote the ideals of harmonious human development and excellence, there remain some serious questions about gender specificity.

This poster addresses four issues female Olympians face because of their sex and gender: 1) the requirement of proving to sports authorities that they are indeed women; 2) the inclusion of transgendered women in the Olympic Games; 3) body image issues associated with athletic body shapes deemed too masculine to meet heteronormative standards; and, 4) gender issues associated with training and performance-enhancing drugs.

Consumers’ Self-Direction in Return-to-Work: Lessons from Clients

Lynn Shaw, School of Occupational Therapy

Rationale: Studies involving consumers with chronic disabilities consistently report that they are left out in the return-to-work process. Consumer efforts to resume work after injury are continually hampered by the tug-of-war between the return-to-work and the health care systems. Without external help, consumers turn to themselves for answers and information needed for making informed decisions on health and return-to-work.

Objectives: The aims of this presentation are to share insights from research on the journeys of consumers from unemployment to engagement in consumer-driven action and advocacy; and to present steps therapists might take to partner with consumers.

Approach: A case study will be used to demonstrate how injured workers’ initiatives are empowering other consumers to take steps to manage their health and find work, and how one therapist has forged a partnership with consumers to help them achieve their goals.

Practice Implications: Therapists can partner with consumers by translating evidence and policy information into consumer-friendly formats and involving consumers in generating knowledge through research.

Conclusions: Therapists can offer both a source of support and resources to empower consumer-to-consumer initiatives in achieving health and timely return-to-work.

What Is Successful Priority Setting and How Can We Measure It?

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Peter A. Singer, MD, MPH, FRCP(C), FRSC, Interim Director, MaLaughlin-Rotman Centre for Global Health, Senior Scientist and Professor of Medicine, University Health Network and University of Toronto

Background: Priority setting (ps) has been defined as distribution of resources (e.g. money, time, beds, drugs) among competing interests (e.g. institutions, programs, people/patients, services, diseases). Ps is a messy, complex, and inevitable social process. How do decision makers know if they are doing it ‘right’ or even ‘well’? Currently there is little information or methods to evaluate ps. Research shows decision makers want guidance in ps and are willing to work with researchers.

Objectives: To provide ps guidance for decision makers and answer: ‘how can we evaluate success in ps’. Involves 2 steps: (1) define ps success from stakeholders point of view (decision & policy makers, scholars, patients, public). (2) create and pilot test a tool to measure ps success.

Methods: (1) Create a Conceptual Framework via consultation of the literature and 3 empirical studies (interviews with Canadian decision makers; focus groups with a national representation of patients and policy makers; International Delphi study including scholars and decision makers). (2) Create an Evaluation Tool via iterative process and psychometric testing. (3) Test the Tool: a real-world application of the tool to determine usability.

Results: We define successful ps through 10 elements of a conceptual framework. We describe the development of the evaluation tool and the results of its application (pilot test). The framework and tool can be used by decision makers to evaluate ps activities by identifying areas of success and opportunities for improvement.

Policy Implications: Decision-makers can find guidance for ps. The framework and tool contain both procedural and substantive goals of ps, and specify both quantitative and qualitative dimensions. To our knowledge, this is the first comprehensive framework describing successful ps and the first tool to evaluate success. By evaluating success in ps, we take steps toward improving ps.
Exploring Injury, Hip Fracture and Aging in Urban Neighbourhoods: Preliminary Findings

Tanner D, Kloseck M, Crilly R, Chesworth B, Gilliland J, The University of Western Ontario

Spatial analysis is an underutilized methodology in health science research. The purpose of this research is to examine the spatial distribution and epidemiology of hip fracture occurrence in urbanized areas of the City of London. A geographic information system (GIS) is used to map and analyze hip fractures (ICD-10-CA code: S72.0-72.201) captured in administrative hospital discharge records of patients 65 years of age and older admitted to St. Joseph's Health Care London and London Health Sciences Centre sites (n = 1310, mean age: 83.4) within the 2002-2006 calendar year period. Secondary data analysis, incorporating location quotient (LQ) analysis and descriptive epidemiology techniques is used to measure hip fracture prevalence and to describe the spatial patterning of hip fracture events. Relationships between hip fracture and age, place of residence (community-dwelling vs. nursing home), seasonality and socio-economic circumstance are also investigated. This poster will showcase the research questions guiding the work and report on findings to date.

Overweight Youths’ Perspectives on Healthy Bodyweight Promotion

Heather Clarke Thomas, MSc, RD and Dr. Jennifer D. Irwin, PhD, University of Western Ontario

Objectives: The purpose of this study was to qualitatively assess overweight/obese adolescents’ perceptions of: the meaning of "healthy bodyweight"; barriers and facilitators to healthy bodyweight attainment; and what they believe would effectively enhance and support their healthy bodyweight behaviours. This information will inform the development of an efficacious health promotion program targeting healthy bodyweight for adolescents.

Methods: This qualitative study targeted a sample of overweight and obese youth between 14-17 years. An experienced interviewer, using a semi-structured interview guide, conducted 11 in-depth interviews. Interviews were audio-recorded and transcribed verbatim. Inductive content analysis was conducted independently and simultaneously by three qualitative researchers. Additional measures were incorporated to ensure data trustworthiness.

Results: The majority of participants characterized healthy bodyweight as a combination of consuming nutritious foods and engaging in regular physical activity. Some included a psychological dimension to the definition. Participants’ perceptions of the facilitators included: family support; access to nutritious food at home; physical activity encouragement; and school physical activity environment. Participants’ perceived barriers included: lack of family support; poor nutrition environment; unsupportive school environment; time; self-esteem; and bullying. Participants identified preferences for an intervention to include: opportunities for unstructured co-ed recreational activities; co-ed nutrition education sessions; and a gender-specific discussion forum to explore experiences and challenges.

Conclusion: Participants provided a wealth of information to form the foundation of future interventions tailored specifically to this target population. A youth-focused program informed by the insights and preferences of its target population is essential to implement an efficacious healthy bodyweight intervention.

A Qualitative Exploration of the Physical Activity Experiences and Perspectives of Older Adult Vietnamese Immigrants

Anh Tran1, Gareth R. Jones, PhD 1,4, Debbie Laliberte Rudman, PhD 1,2, Anthony A. Vandervoort, PhD 1,3

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Physical activity (PA) and exercise (EX) reduce the impact of chronic disease and disability and ultimately preserve functional independence in old age. Non-acculturated older adult immigrants are at risk of increased sedentary behaviour. Culturally sensitive PA promotion and EX interventions targeting older immigrants may facilitate active aging among older adult ethnic minority groups. Grounded theory methodology will be utilized to enhance understanding of the experiences and current perspectives older Vietnamese-Canadian immigrants have regarding PA and EX. This investigation seeks to qualitatively capture the process and implementation of an 8-week Get Fit for Active Living – Vietnamese Version (GFALViet) PA and EX education program. Ten informants (65+ years of age), from the Greater Toronto Area, recruited through the Vietnamese Association of Toronto, will participate through in-depth interviews prior to and after participation in the GFALViet. Initial pilot testing of interview questions with older Vietnamese immigrants suggest that their perspectives of, and engagement in, PA and EX change depending upon context (personal or family need) and time events (i.e. marriage, immigration). Results of this study will extend appreciation for how older Vietnamese-Canadian’s understand and engage in a PA and EX education program. Theory generated will help health professionals, academics, and communities develop programs that are sensitive to the cultural-specific needs and attitudes regarding PA and EX within the older Vietnamese-Canadian immigrant population.
Cellular Localization of HSF1 and Hsp70 in Skeletal Muscle Following Acute Exercise

Jason R Travis, Kevin J Milne, Earl G Noble. School of Kinesiology, Faculty of Health Sciences, The University of Western Ontario, London, Canada

Exercise induction of the inducible isofrom of the 70 kDa heat shock protein (Hsp70) requires activation of the Heat Shock Transcription Factor (HSF1), possibly via its phosphorylation by intracellular protein kinases. However, phosphorylation of HSF1 (pHSF1), its localization and the potential fiber specific relationship between Hsp70 and pHSF1 in skeletal muscle following exercise (EX), is unknown. To address this issue, the plantaris (Plt) and the white portion of the vastus lateralis (WV) were harvested from adult male Sprague-Dawley rats at either 30mins or 24hr post-EX (1hr treadmill run at 30m/min). These muscles were chosen for analysis because of previous reports indicating that the Plt is relatively refractory to exercise whereas the WV demonstrates a robust response. Indeed, western blots from the WV revealed an ~4 fold increase in Hsp70 (24hr after EX) whereas the Plt was unresponsive. Co-localization of pHSF1 and Hsp70 with confocal microscopy, revealed strong nuclear staining of pHSF1 in those fibers inducing Hsp70 following EX. However, pHSF1 was also found in nuclei of fibers that did not demonstrate an increase in Hsp70. This suggests that nuclear localization of pHSF1 is essential but not sufficient to induce Hsp70 in skeletal muscle fibers post-EX and supports a role for additional downstream regulation of this response.

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Co-Active Life Coaching as a Treatment for Obesity among University Students

M. van Zandvoort, Msc. (candidate), L.D. Morrow, PhD, J.D. Irwin, PhD.

Purpose: To assess the impact of a 13-week Co-active life coaching intervention on obese university students’ waist circumference, body mass index (BMI), functional health status, and self-esteem.

Methods: A multiple-baseline single-subject research design was utilized with five full-time female undergraduate students with BMI ≥ 30kg/m². Two Certified Professional Co-active Coaches provided an average of eight one-on-one sessions with participants. Measures included height and weight (used to calculate BMI), waist circumference, the previously validated Short-Form 36 (SF-36) Health Survey, and the previously validated Rosenberg Self-Esteem Scale were administered throughout the study. As recommended by Kazdln (1982), visual inspection was the primary method of data analysis for waist circumference and BMI (which were measured weekly throughout the intervention). Effect sizes were calculated for the SF-36 and Rosenberg Self-Esteem Scale to assess the magnitude of the intervention’s impact on these variables. Cohen’s (1988) rule for interpreting effect size was employed.

Results: Visual inspection revealed no change in BMI for two, a decrease for two, and a slight increase for one participant. Waist circumference decreased for three participants and remained stable for two. Cohen’s $d = 0. 90$ for the Rosenberg Self-Esteem Scale, representing a large effect size. Cohen’s $d = 0. 90$ for the participants’ pre-post total scores on the SF-36 (mental health subscale $d = 0. 74$, physical health subscale $d = 0. 88$).

Conclusions: Coaching-facilitated improvements in self-esteem and functional health status of obese students may provide the necessary foundation for healthy bodyweight behaviors (increasing physical activity and choosing healthier eating).

Understanding the Ethical Decision Making Process in the Resuscitation of Extremely Premature Infants

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Advancements in neonatal intensive care have resulted in the capacity to intervene in the survival of infants at the extremes of prematurity. However, ethical dilemmas and moral distress associated with determining for which of these high risk infants resuscitation is a viable option is evident in clinical practice. Parents and health providers may have different perceptions of various ethical issues which can complicate the decision-making process surrounding resuscitation. These differences may contribute to tension and conflict, thus, increasing moral distress regarding the initiation or withholding of resuscitation.

Focusing on family-centered care, this study explores ethical issues involved with the decision-making process of key informants concerned with infant resuscitation. As much of the existing literature on ethical decision-making in the resuscitation of extremely premature infants focuses on how health-care providers rationalize decisions, we aim to examine parents’ perspective of this experience, especially those who are in the midst of decision-making.

The aim of the research is: (i) to explore various ethical issues as identified by key informants (women, their partners, physicians, allied health providers) and, (ii) through the use of grounded theory, develop an ethical decision-making framework for the resuscitation of extremely premature infants. Focus groups and individual in-depth interviews allow participants to describe their experience with this decision-making process. Data analysis involves identifying key themes which depict an ethical decision-making framework that can be used to increase our understanding of the decision-making process and ultimately decrease moral distress for both families and health providers. Preliminary results will be presented.
Exercise Induces Hsp70 in Endothelial Cells of the Coronary Vasculature

Steve Wolff, Kevin Milne, Earl Noble, School of Kinesiology, Faculty of Health Sciences. London, Ontario, Canada

Exercise (EX) and heat-shock (HS) both lead to increased myocardial content of the cardioprotective inducible isoform of the 70 kDa heat shock protein, Hsp70. Twenty-four hours after HS, myocardial Hsp70 is co-localized with blood vessels, indicating a cell-type specific response to this stress. The objective of the current study was to determine whether a similar localization of myocardial Hsp70 occurs post-EX. Adult male Sprague Dawley rats were randomized into control (CON), EX (60 min treadmill running, 30 m/min) or HS (42ºC, 15 min) groups. Left ventricles (LV) were harvested at 30 min and 24 hrs post-treatment and analyzed for Hsp70 by both western blotting and confocal immunofluorescence microscopy. Both HS and EX resulted in significant increases in Hsp70 in LV homogenates. Under both conditions, confocal microscopy revealed a minor increase in Hsp70 in the myocytes compared to CON, but as early as 30 min post-treatment there was a striking increase in endothelial localized Hsp70 that persisted for up to 24 hrs. These data support previous findings with HS and suggest that exercise results in a similar cell-type specific induction of myocardial Hsp70. Consequently, the cardioprotective nature of exercise may lie in the Hsp70 mediated protection of coronary blood vessels. Supported by CIHR-CCT-83029 and NSERC-8170-05 RGPIN.

The Relationship Between Nursing Leadership and Patient Outcomes: A Systematic Review

Carol A. Wong, R.N., M.Sc.N, PhD (c.), University of Western Ontario and Dr. Greta Cummings, R.N., Ph.D, University of Alberta

Purpose: The purpose of this review was to describe the findings of a systematic review of studies that examined the relationship between nursing leadership and patient outcomes in healthcare organizations and to make recommendations for further study.

Background: With recent attention directed to the creation of safer practice environments for patients, nursing leadership is called on to advance this agenda within organizations. However, surprisingly little is known about the actual association between nursing leadership and patient outcomes.

Methods: Published English-only research articles that examined formal nursing leadership and patient outcomes were selected from computerized data bases and manual searches. Articles included in the study had to measure leadership (independent variable) in formal nurse leaders at any level of health care organizations, measure patient outcomes (dependent variable) and evaluate the relationship between the two variables. Data were extracted from and the methodological quality assessed of the final 7 included quantitative research articles.

Results: All studies reviewed were relatively methodologically sound but utilized non-experimental, cross-sectional descriptive designs that preclude any interpretation of causality. Evidence of significant associations between positive leadership behaviours, styles or practices and increased patient satisfaction and reduced adverse patient events were found. Findings relating leadership to patient mortality rates were inconclusive.

Conclusion: The findings of this review suggest that an emphasis on developing transformational nursing leadership is an important organizational strategy to improve patient outcomes. We also propose that further studies of a longitudinal and intervention nature in a variety of settings with more diverse and randomly selected samples are needed to advance knowledge of the complex contextual and multivariate relationships among leadership and patient outcomes.

Communicating With “Tweens” in the Sport Industry: Practitioners’ Insights

Laura Wood, PhD Student, School of Kinesiology, The University of Western Ontario & Marijke Taks, PhD, Faculty of Human Kinetics, University of Windsor

The youth market has attracted the attention of an array of marketing professionals who have realized the lucrative nature of market involvement (Goldburg, Gorn, Peracchio, & Bamossy, 2003). Although the youth market is highly desirable, it is difficult to both reach and influence (Bennett & Lachowetz, 2004). Research has identified different age groups that constitute the youth market and one of them is referred to as the “tween” group that is composed of youth between the ages of 9 to 14 years (Lindstrom, 2004; Lindstrom & Seybold, 2003; McNeal & Ji, 2003). This study focused on this market segment due to its size, spending power, and interest from marketers (McNeal, 1999; McNeal & Ji, 2003).

The purpose of this study was to examine communication strategies utilized by marketing practitioners when targeting youth (aged 9-14) in a sport context. The examination had two objectives: (a) to determine whether these strategies are similar to those depicted in the literature, and (b) to guide future research. Using Kotler, Armstrong, and Cunningham’s (2002) five-stage model for effective communication, practitioners’ viewpoints of what constitutes an effective communication strategy were studied through the use of semi-structured interviews (N=5). One of the key findings is the benefit of using technology in a communication platform, and the need to be up-to-date with the technologies used by youth. Another key finding relates to language. The youth market has a well-developed method of communicating with each other, and in order to reach and penetrate this group, marketers need to be well versed in the use of this language.
Voices of Youth through Images of Aging: Happy, Healthy and Occupied?

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Photovoice is a Participatory Action Research (PAR) method through which participants photograph and discuss prominent concerns in their community. It provides a catalyst for change and empowers and enables community members to communicate to policymakers where change is needed. Third and fourth year bachelor of Health Science students at the University of Western Ontario participated in a photovoice project documenting health issues in aging. Students photographed a wide variety of health and aging topics and wrote a one-page narrative on what they thought deserved attention. In 2007 a total of 600 photovoice assignments were collected, out of which 10% were selected for analysis. The selected assignments were related to societal views on aging, ageism, education and aging, spirituality and aging, happiness, well-being, fulfillment and aging. The purpose of this project was to identify patterns and themes related to students’ perceptions about successful aging, wellness and occupation. Preliminary content analysis indicated that students’ perceptions on active, healthy aging were mostly related to elderly who stayed occupied either through work, hobbies and/or leisure activities. A discrepancy between well-being and well-doing exists, whereby the images of happy aging focused on doing. We suggest that students’ perceptions on what defines successful aging are guided by the education system and societal views where active members are seen as contributors to society. In a culture obsessed with accomplishments, even a time of reflection and reminiscence can be seen as better spent being occupied. Can a sense of personal continuity, transcendence and serenity be achieved by doing?
**Exercise and Health Psychology Laboratory, Faculty of Health Sciences**

The Exercise and Health Psychology Laboratory (EHPL) was opened in the spring of 2007 and was designed to conduct research into the psychological determinants of physical activity, and the effectiveness of exercise interventions in promoting healthier lifestyles. It is located on the fourth floor of the Arthur and Sonia Labatt Health Sciences Building.

Current research involves: a) investigating the effectiveness of an exercise intervention that seeks to modify (enhance) physical activity behaviour in first-degree relatives of colon cancer patients, b) the effect on exercise adherence of providing body composition information to female exercise initiates aged 18-45 who want to become and stay active, and c) determining the influence of an imagery intervention on increasing self-efficacy and exercise adherence. Findings from the research conducted by the EHPL will have important implications for improving the health of individuals, and ultimately, lowering the cost of health care to the Canadian public.

**Electrophysiology Laboratory at the National Centre for Audiology**

The Electrophysiology Laboratory at the National Centre for Audiology in the School of Communication Sciences and Disorders is involved in speech and hearing research. Ongoing projects include the measurement of cochlear and auditory nervous system function using otoacoustic emissions and the auditory steady-state response. Otoacoustic emissions are low level sounds that can be recorded in the ear canal of most normal hearing individuals using a sensitive microphone. They give evidence that the outer hair cell system in the inner ear is intact. In our lab, we have been investigating the role of the neural efferent system connecting the ears by studying the reduction of these emissions in the test ear with sound stimulation to the opposite ear. A separate ongoing study in auditory evoked potentials, is investigating the role of cochlear mechanics in the processing of sounds used to elicit electrical activity from the auditory brainstem. Through this work, we will be able to optimize the sounds that are used for evaluating hearing by observing the brain’s electrical activity recorded from the surface of the head.

In another line of research, the lab investigates the maintenance of accurate speech production, which is controlled in part by auditory feedback. The control of vowel formants is being studied by manipulating them in real-time in the feedback provided to participants through headphones. Individuals compensate for errors induced in auditory feedback by changing their speech production. Relatively little is known about how the auditory vocal feedback system performs this task, and the lab has been working to better understand the phenomena and its mechanisms.

The laboratory can accommodate graduate students through the Hearing Science field of the Health and Rehabilitation Sciences program, as well as through the graduate programme in Neuroscience. The lab’s principle investigator is Dr. David Purcell (http://nca.uwo.ca/purcell/).

**The Aging and Community Health Research Lab**

The Aging and Community Health Research Lab creates applied research and learning opportunities surrounding the health and function of older individuals living in communities. Funded by the Canada Foundation for Innovation (CFI), the lab conducts research with the goal of enhancing the lives of older individuals through the development of strategies to optimize their health and independence as they age. Much of this research is done in situ with the individuals as active participants in the research. Indeed, another significant aspect of the research by this lab focuses upon community capacity building whereby the participants learn to contribute to the health of their communities. In a real sense this extends the reach of the formal healthcare system. The lab’s researchers are currently engaged with several communities in London and collaborate with researchers from the Schulich School of Medicine and Dentistry, Parkwood Hospital and Lawson Health Research Institute.
Sport Management Lab, School of Kinesiology

Sport Management Defined
Sport management is an exciting discipline ranging from the development of new sport products and sport policies, to the administration of interuniversity athletics and community sport and recreation programs, to the marketing and management of professional sport franchises and Olympic Games. The study and practice of sport management builds on the disciplines of business, law, organizational psychology, sociology, recreation, and kinesiology. Sub-disciplines of sport management include marketing, leadership, organizational behaviour, organizational theory, legal aspects, communication, tourism, event management, and pedagogy. Sport management is studied and practiced in a wide variety of contexts:

- nonprofit and commercial sport
- local, regional, provincial, national and global sport organizations
- sport, recreation and fitness for participants and spectators

The School of Kinesiology offers undergraduate, MA, and PhD programs in sport management, under the direct guidance of Profs. Karen Danylchuk, Alison Doherty, Barry Martinelli, and Jim Weese. The MA program is unique in North America, offering students the option of completing a thesis or an internship, or both.

Sport Management in an Active Society
Sport is recognized as a powerful mechanism for the health and well-being of individuals and their communities, given the physical and mental benefits, economic returns, and social capital that are associated with participation (e.g., Bloom, Grant, & Watt, 2005; Bowen, 2004). The study and practice of sport management is directed towards the efficient and effective development, implementation, and evaluation of programs, products, and services that may enhance these benefits.

The Sport Management Lab
The Sport Management Lab is located on the 4th floor of Thames Hall. It provides space and resources to support the work of faculty members and Masters and Doctoral students in this discipline. The office is home to the Sport Management doctoral students, and houses computing equipment as well as an extensive collection of research resources. An “annex” provides valuable space for group meetings. Prof. Alison Doherty is the Director of the Lab.

Sport Management Research at UWO
Current faculty and graduate student research projects based on the Sport Management Lab include investigations into:

- Perceived conflict in the boards of provincial nonprofit voluntary sport organizations
- Correlates of nonprofit board behaviour and performance
- Organizational capacity in community sport
- Interorganizational relationships and networks in community sport
- Older adult volunteering in sport
- Social responsibility among fitness organization staff
- An evaluation of the National Coaching Certification Program (NCCP)
- Generation Y audience interpretations of mediated messages in female sport
- Social marketing and charitable sport event participation

Recent research projects have examined:

- Perceptions of sport sponsorship by the fast food industry
- Sport apparel brand awareness, preference, and loyalty: Differences amongst select ethnic groups
- Brand associations with a new sport franchise: Spectator perceptions of Toronto FC
- Organizational culture in the Canadian fitness industry
- Perceived role ambiguity in provincial sport organizations
- Organizational effectiveness of Swimming Natation Canada and Australian Swimming Inc.
- Sport Canada athlete funding and accountability framework
- Sport Canada’s gender equity policy
- Social capital and community sport network

The International Centre for Olympic Studies
This poster visually represents the major functions of the International Centre for Olympic Studies (ICOS) using text and graphics. The origins, physical space, mission, and mission-serving initiatives of the ICOS are also described. The ICOS was established at The University of Western Ontario in 1989, and was the first of its kind in the world. It remains the only such research Centre in the Americas. It has as its primary mission the generation and dissemination of academic scholarship focused specifically upon the socio-cultural study of the modern Olympic Games and the Olympic Movement. To that end, the Centre publishes scholarly journal Olympika: the International Journal of Olympic Studies which has appeared annually since 1992. The Centre also hosts a bi-annual scholarly symposium, the papers of which are collated into Proceedings. The ninth such symposium will take place in Beijing, China in August 2008.