

2021 UBC OKANAGAN

Interdisciplinary Student Health Conference

Tuesday March 9, 2021

5:30 – 8:30 pm

Hosted virtually via Zoom and Open Science Framework



THE UNIVERSITY OF BRITISH COLUMBIA

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

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Conference Navigation

Conference Posters

Conference Posters are will be available for viewing and comments March 9-10, 2021 on our Open Science Framework page at https://osf.io/ezxkv/wiki/Posters_by_Category/

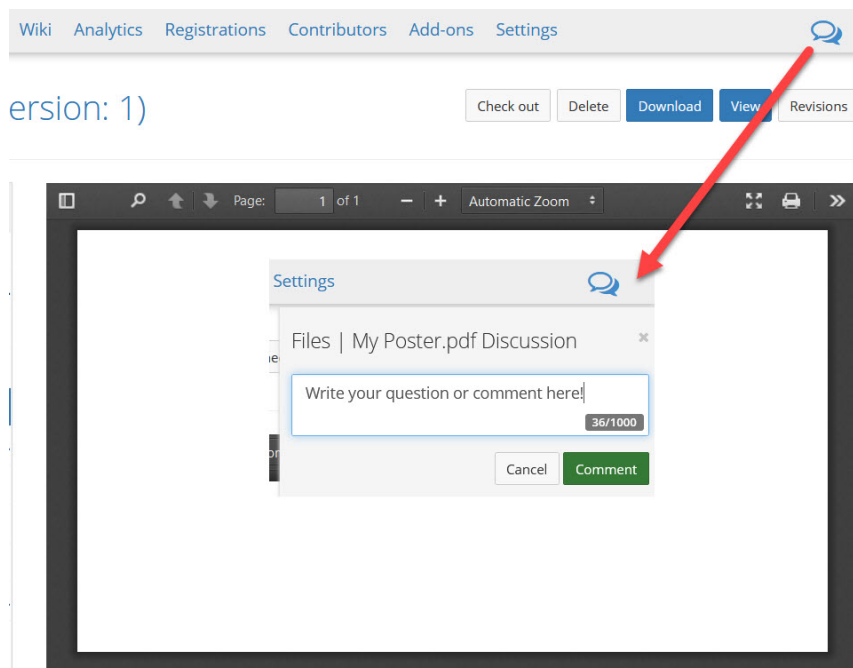
For a list of **posters by author**, see here: https://osf.io/ezxkv/wiki/Posters_by_Author/

Commenting on Posters

On a given poster's page, click on the comment icon and post your comment or question!

Posters will be open for comment and questions until end of day March 10th.

[Learn more about the nuances of commenting here if inclined.](#)



Conference Zoom Registration

Conference keynote and oral presentations will be held virtually on Zoom on March 9, 2021 from 5:30 – 8:30 pm

Please **register here** to attend the virtual conference:

<https://smp.med.ubc.ca/research/student-research/ubc-okanagan-interdisciplinary-student-health-conference/>

Important: Please make sure you are using **Zoom 5.3.0** or later in order to move between presentation rooms during the conference. <https://support.zoom.us/hc/en-us/articles/201362233-Upgrade-update-to-the-latest-version>

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Schedule

5:30 PM	Welcome & Keynote Address <i>Main Session</i>					
	3 Minute Oral Presentations <i>Breakout Rooms</i>					
Category	Biomedicine, Drugs and Computational Research	Child and Public Health	Community Health	Rural, Clinical, and Emergency Care	Student and Social Health	Virtual and Digital Health
	<i>Room 1</i>	<i>Room 2</i>	<i>Room 3</i>	<i>Room 4</i>	<i>Room 5</i>	<i>Room 6</i>
Adjudicator	Dr. Harry Miller	Dr. Barbara Oliveira	Ms. Christine Balfour	Dr. Olusegun Oyedele	Dr. Deanna Gibson	Mr. Jason Curran
6:35 PM	Paul Brown Nicole Ketter	Katie Del Buono	Violet Ignace Caitlin Elias Ethan Dallaire	Colin Appleby Andrea DieBold	Sarah Clement	Brett Bernard
6:42 PM	Alexis Genereaux-Guidi	Erin Delfs Helen Chiang	Rachel Shim	Remi Kandal	Nina Gregoire B. Emma Alcott	Cara Johnston
6:49 PM	Allyssa Hooper	Aashka Jani Larissa Steidle	Alex Myshak-Davis	Carley Paterson	Sage Trampleasure	Taylor Regier Hans Fuhrmann
6:56 PM	Graham Landells	Sofia Samper	Bethany Kolisniak Jenna Sim	Jason Scott	Anne Tseu Kirthana Ganesh	Sarah Park
7:03 PM	Dakshitha Ranatunga Wesley Bedford	Sienna Kantymir Ceyanna Pohl	Hannah Young	Monique Walsh	Rebekah Underhill Lucas Standing Thomas Pool	Michelle Yang
7:10 PM	<i>Audience Q&A</i>	<i>Audience Q&A</i>	<i>Audience Q&A</i>	<i>Audience Q&A</i>	<i>Audience Q&A</i>	<i>Audience Q&A</i>
	Break					
7:30 PM	10 Minute Presentations <i>Main Session</i>					
7:30 PM	Kimberley Rutledge Mariza Micallef					
7:45 PM	Brianna Tsui					
8:00 PM	Liisa Wainman					
8:15 PM	Awards & Closing <i>Main Session</i>					

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Keynote

“Feeding the Spark: tenacity in clinical research”

Daryl Wile, MD, MSc, FRCPC (Neurology)

Clinical Investigator, UBC Faculty of Medicine Centre for Chronic Disease Prevention and Management
Southern Medical Program
Clinical Assistant Professor, UBC Department of Medicine, Division of Neurology

Adjudicators

Biomedicine, Drugs and Computational Research

Harry Miller, PhD, R.Psych

Clinical Neuropsychologist
Psychology Clinic Director, Associate Director of Clinical Training, Lecturer, Psychology
Irving K. Barber Faculty of Arts and Social Sciences, UBC Okanagan

Child and Public Health

Barbara Oliveira, PhD

Postdoctoral Fellow, Exercise, Metabolism and Inflammation Lab
Faculty of Health and Social Development, UBC Okanagan

Community Health

Christine Balfour RN, BScN, B.Ed, MA

Associate Professor
Faculty of Health and Social Development, UBC Okanagan

Rural, Clinical, and Emergency Care

Olusegun Oyedele, MBChB (MD), PhD

Associate Professor of Teaching
Faculty of Medicine, UBC Southern Medical Program, UBC Okanagan

Student and Social Health

Deanna L. Gibson, PhD

Associate Professor; Associate Head of Research, Department of Biology
Irving K. Barber Faculty of Science
Associate Member of the Faculty of Medicine, Department of Medicine
UBC Okanagan

Virtual and Digital Health

Jason Curran, MPH, PhD candidate

Regional Practice Lead, Research & Knowledge Translation
Interior Health, Research Department | Rural Coordination Centre of BC

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Category 1: Biomedicine, Drugs and Computational Research

Poster #: 1

Presentation Time: 6:35 pm

Paul Brown, Medicine; Nicole Ketter, Science

Clinical effects of *Emblica officinalis* fruit consumption on cardiovascular disease risk factors: a systematic review and meta-analysis

Brown, Paul; Ketter, Nicole; Vis-Dunbar, Mathew; Sakakibara, Brodie

Introduction Cardiovascular disease (CVD) is the leading cause of death globally, accounting for ~17.8 million deaths in 2017. Dyslipidemia, inflammation, and hypertension are all physiological risk factors for developing CVD via the progression of atherosclerosis. Dietary intake has been shown to modulate these risk factors. *Emblica officinalis* (EO) is native to tropical and subtropical regions of India, Nepal, Sri Lanka, and throughout South-East Asia to southern China. EO, traditionally used in Ayurveda—an Indian indigenous system of medicine—has also been examined as a dietary supplement in clinical interventional trials. While results of these small trials indicate improvements to CVD risk factors, questions remain regarding the overall effectiveness of EO on CVD risk.

The purpose of this systematic review and meta-analysis is to: 1) systematically describe the clinical research examining EO; and 2) quantitatively assess the effects of EO on CVD physiological risk factors, including lipid profile and inflammatory biomarkers.

Methods The Pubmed, Embase, Web of Science, and Google Scholar electronic databases were searched for relevant randomized controlled trials (RCT) examining the clinical effects of EO, published up until January 11, 2021. The primary outcome was serum lipid profile, and the secondary outcomes were blood pressure and a biomarker for systemic inflammation. RCTs were qualitatively described, and quantitatively evaluated using meta-analyses.

Results A total of eight RCTs were included for review. Analysis revealed EO to have a significant composite effect at lowering LDL cholesterol (SMD = -0.78 [95% CI = -1.32 to -0.24], I² = 81%, p=0.005), VLDL cholesterol (SMD = -0.52 [95% CI = -0.82 to -0.22], I² = 23%, p=0.0007), and hsCRP (SMD = -1.02 [95% CI = -1.83 to -0.20], I² = 87%, p=0.01) compared with placebo. No included study reported any serious adverse events.

Discussion EO may protect against the development and progression of CVD via beneficial effects on lipid profile and systemic inflammation. However, due to statistical and clinical heterogeneity, these results should be interpreted with caution. EO may offer an efficacious, safe, and affordable option for primary or secondary prevention of CVD as either monotherapy or adjunct to evidence-based dietary patterns and/or standard pharmacotherapy.

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Poster #: 2

Presentation Time: 6:42 pm

Alexis Genereaux-Guidi, Applied Science

Development of an algorithm to process device-based physical activity and location data to characterize physical activity behaviours

Genereaux-Guidi, Alexis; Bernard, Brett; Ravishankara, Adithya; Najjaran, Homayoun; Voss, Christine

Background: Physical activity (PA) is linked to optimal quality of life, however, most Canadians do not meet PA guidelines. To better characterize PA behaviours, wearable devices are used in health research, specifically an accelerometer (ACC) which measures movement, and global positioning system (GPS) which tracks location. Together, these devices allow researchers to measure and analyze PA behaviour in context, providing insight into how, when, and where people are active. However, processing and synthesizing these large volumes of data is a challenge.

Objective: This project aims to develop a streamlined algorithm that has the ability to process and integrate data from GPS and ACC devices and to create summary metrics of PA behaviours.

Methods: The algorithm was developed using the Python programming language and it begins by removing poor data points (such as points where the GPS device lost signal), syncing the device timestamps, and interpolating the data to increase accuracy. Next, the data is run through a filter that smooths the GPS tracks. Well-established movement intensity cut points are then applied to sort data in relation to PA guidelines. The algorithm's performance was evaluated using trial data and activity logs from a family; each participant wore the GPS (BT-Q1000XT, QStarz) and ACC (GT3X+, ActiGraph LLC) devices around their waist for one week.

Results: The result is an algorithm that processes raw PA and geographic coordinate data and outputs an Excel file of clean, useful summary statistics. These include how often participants are engaging in PA levels, the minutes per day and percent of day spent at each PA level, device wear time, and if they met PA guidelines. This output is congruent with ActiLife, a common PA data processing platform. Next steps are to advance the algorithm to provide summary statistics according to GPS information (time spent at home, park, etc.).

Conclusions and Impact: The algorithm allows for efficient processing and analyzing of PA and location data, which is ideal for visualizing PA habits using mapping software. This provides contextual information and enables the pursuit of studies that lead to a deeper understanding of physical activity behaviours.

Poster #: 3

Presentation Time: 6:49 pm

Allyssa Hooper, Medicine

Prevalence of antiphospholipid syndrome and anti-thrombotic treatment use in a cohort of 1444 patients with recurrent pregnancy loss

Hooper, Allyssa; Albert, Arianne Y.K.; Bedaiwy, Mohamed A.

INTRODUCTION: Antiphospholipid syndrome (APS) is an autoimmune disease characterized by the presence of antiphospholipid antibodies (aPLs) that result in clinical manifestations such as thrombosis and obstetrical complications including recurrent pregnancy loss (RPL), placental dysfunction, intrauterine growth restriction (IUGR), and premature delivery.

HYPOTHESIS: Standard of care anti-thrombotic therapy of low-dose aspirin (LDA) and low-molecular weight heparin (LMWH) improves ongoing pregnancy beyond 10 weeks' gestation and live birth rate in women with APS and RPL. Additional anti-thrombotic and immunomodulatory agents including prednisone and hydroxychloroquine (HCQ) improve pregnancy outcomes in refractory obstetrical APS.

OBJECTIVES: The aim of this study is to analyze the prevalence of APS and the anti-thrombotic treatment provided in a cohort of RPL patients. The second aim is to assess ongoing pregnancy beyond 10 weeks' gestation and live birth rate following anti-thrombotic and immunomodulatory treatments including LDA, LMWH, prednisone, and HCQ.

DESIGN: Retrospective cohort study of 1444 RPL patients from the BC Women's Hospital RPL Clinic.

MATERIALS AND METHODS: Patients require both clinical and laboratory diagnoses of APS to be eligible for analysis. Clinical diagnosis includes a history of two or more pregnancy losses. Laboratory diagnosis includes the presence of one or more aPLs on initial testing and on confirmatory testing 12 weeks later. Eligible aPLs include lupus anticoagulant (LA), anticardiolipin antibody (aCL), anti-beta2 glycoprotein (aB2GPI), and antiphosphatidylserine (aPS).

RESULTS: Of the 1444 charts reviewed, 76 patients (5.19%) tested positive for aPLs including 59 LA, 17 aCL, 13 aB2GPI, and 6 aPS. 11 patients were double-positive, with the most common being LA and aCL and 3 patients were triple positive, with the most common being LA, aCL, and aB2GPI. Of the 76 patients, 39 patients received anti-thrombotic treatment. 17 patients were treated with combination LDA and LMWH, 13 were treated with LDA alone, 2 treated with LMWH alone, and the remaining 7 patients were treated with a combination of LDA, LMWH, prednisone, and HCQ.

CONCLUSIONS: 5.19% of patients met the clinical and laboratory criteria for APS diagnosis. 51% of patients received anti-thrombotic or immunomodulatory treatment during pregnancy. Further analysis is to come with regards to pregnancy outcomes following anti-thrombotic treatment.

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Poster #: 4

Presentation Time: 6:56 pm

Graham Landells, Medicine

Immunometabolic dysregulation as a link between sedentary behavior and increased risk of cardiometabolic disease: The protective role of exercise

Landells, Graham; Islam, Hashim; Little, Jonathan

Background: This research forms part of a larger review conducted by researchers from various institutions with the hopes of compiling a position statement regarding the benefits of physical activity on disease processes. There is a detrimental association between sedentary behavior and both impaired metabolic outcomes and elevated plasma concentrations of inflammatory markers. It is generally accepted that adipose tissue dysfunction is an early event in the initiation of immunometabolic derangements that lead to chronic inflammation and cardiometabolic diseases. It seems conceivable that many of the detrimental effects of sedentarism may be attributable to increases in visceral fat mass and the associated inflammatory processes.

Purpose: To propose that a vicious cycle of immunometabolic dysregulation links sedentary behavior to increased inflammatory markers and cardiometabolic disease, to identify the underlying mechanisms, and to evaluate the potential of exercise to interrupt this vicious cycle.

Methods: This project was a narrative review without explicit inclusion or exclusion criteria for studies. Only primary literature was accessed and cited, and an effort was made to reference sources published within the last five years (2015-2020) to ensure our review reflects the current body of knowledge. We consulted a total of 86 sources to develop our hypothesis of an immunometabolic dysregulation cycle, which came from all levels of scientific evidence and consisted of human, animal, and cellular studies.

Evidence: We propose that sedentary behavior fuels a vicious cycle whereby macrophage infiltration of metabolic tissues (e.g., adipose, liver, muscle) induces peripheral insulin resistance leading to elevations in circulating glucose and free fatty acid levels. This hyperglycemia/hyperlipidemia leads to both overactivation of immune cells and reduced responsiveness of these cells to anti-inflammatory stimuli causing them to overproduce/release pro-inflammatory mediators. This further exacerbates peripheral insulin resistance driving the vicious cycle of immunometabolic dysfunction, however, this cycle can be countered with exercise. We identified four themes relate sedentarism to inflammation and immunometabolic disruption that are countered with physical activity: · Adipocyte expansion and macrophage infiltration · Increased toll-like receptor expression and activation · Enhanced endoplasmic reticulum stress · Reduced anti-inflammatory cytokine production and action

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Poster #: 5

Presentation Time: 7:03 pm

Dakshitha Ranatunga, Medicine; Wesley Bedford, Medicine

Effectiveness of Nabilone in Long-term Care Patients Experiencing Agitation and Behavioural Problems

Ranatunga, Dakshitha; Bedford, Wesley; Samper, Sofia; West, Christopher; Koss, Michael

Introduction: Nabilone is a synthetic cannabinoid primarily used to treat nausea in patients undergoing chemotherapy. Anecdotal evidence from physicians in the BC interior has shown that Nabilone may have a role in the long-term care (LTC) setting for the treatment of agitation and behavioural problems, which are usually managed with benzodiazepines and anti-psychotics. It is presently unclear, however, whether evidence supports Nabilone use for this purpose in the LTC setting.

Research Question: How is Nabilone being used to treat long-term care patients and how effective is it in treating agitation/behavioural issues?

Methods: We performed a literature review of the database EMBASE. This database was queried using the keyword "Nabilone" with expanded MeSH terms to capture publications from 1979 - May 2020.

Inclusion Criteria: to match the LTC setting, studies involving at least one participant aged 65 or over were selected. Publications involving Nabilone for any use were included due to the scoping nature of our review. We extracted the variables related to demographics, dosage, outcomes, and side-effects.

Results: 1391 publications were initially identified. We screened abstracts and selected 33 papers satisfying the inclusion criteria. Studies included RCTs (n=15), case-studies (n=7), non-RCTs (n=7) and cohort studies (n=4). We categorized studies based on primary outcome. Most of the literature measured Nabilone's effects on nausea/vomiting (n=13) while other papers covered pain (n=7), symptoms of movement disorders (n=4), agitation/behavioural problems (n=3), sleep (n=3), gastrointestinal disturbance (n=2), and drug-use patterns (n=1). Nabilone was found to effectively treat agitation (d=0.52, p=0.003), also showing benefit for neuropsychiatric symptoms (p=0.004), caregiver burden (p=0.041) and improved sexual disinhibition. Across studies, Nabilone proved to be safe with limited side-effects, the most common being sedation.

Conclusion/Future: This review suggests Nabilone may be safe and effective in managing agitation/behaviour problems in LTC patients, however evidence is scarce and limited to small-scale studies. Results also identified several domains beyond agitation that are relevant to LTC. Now, we plan to conduct a chart-review in the BC interior to gather data from LTC medical records of patients who have been prescribed Nabilone to further investigate the drug's role in treating agitation/behaviour problems.

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Poster #: 6

Presentation Time: n/a pm

Pierre Boerkoel, Medicine

Describing biomarkers for Alzheimer's disease: Localization of amyloid- β in the retina

Boerkoel, Pierre; Xu, Qinyuan (Alis); Lee, Sieun; Hirsch-Reinshagen, Veronica; Mackenzie, Ian; Hsiung, Robin; Charm, Geoffrey; To, Elliot; Liu, Alice; Jiang, Kailun; Sarunic, Marinko, Faisal Beg, Mirza; Cui, Jing, To, Eleanor; Matsubara, Joanne

Background Alzheimer's disease (AD), one of the most common causes of dementia, is a major contributor to morbidity and mortality in the elderly. Diagnosis is challenging and is often made clinically. A conclusive diagnosis can be made post-mortem via neuropathologic scoring. Biomarkers for AD include amyloid- β (A β) and hyperphosphorylated tau proteins. A β is present in the retina, however its relationship to astrocytes and microglia is not well defined. This study attempts to elucidate the laminar distribution and cellular localization of A β in both AD and normal human retina.

Methods Donor tissue was diagnosed by clinical pathologists at Vancouver General Hospital according to the National Institute on Aging Alzheimer's Association guidelines. Study cases included retinal tissue from neuropathologically confirmed AD (N=5) or age-matched controls without dementia (N=7). Immunostaining and confocal microscopy were used to identify A β , nuclei, neurons, astrocytes and microglia. The retinal neurofibril layer (RNFL), ganglion cell layer (GCL), inner plexiform layer (IPL), inner nuclear layer (INL), outer plexiform layer (OPL) and outer nuclear layer (ONL) were manually segmented. Layer thickness, pixel colocalization and percentage of A β , neuron, astrocyte and microglial positive pixels were computed using MATLAB and analyzed in R.

Results Compared to controls, higher A β load was found in peripheral AD retina, particularly in the GCL, IPL, INL and OPL ($p < 0.05$). AD retina showed fewer astrocytes and more microglia than controls. In both control and AD retina, A β was colocalized with neurons, astrocytes and microglia. A β preferentially colocalized with microglia in control retina.

Conclusion Elevated A β load in AD retina as compared to normal controls is expected and is consistent with the findings of other studies. Astrocytes aid in maintenance of retinal tissue; fewer astrocytes in AD retina may be the result of astrodegeneration. Increased microgliosis in AD retina is consistent with other studies as elevated microglial activation is associated with neurodegenerative disease. Increased colocalization of A β and microglia in control retina as compared to AD retina suggests that AD retina is less competent at A β clearance. *In vivo* retinal visualization of microgliosis has been reported raising the possibility of its future use with A β for AD detection.

Category 2: Child and Public Health

Poster #: 7

Presentation Time: 6:35 pm

Katie Del Buono, Health and Social Development

Predictors of breastfeeding exclusivity among women intending to exclusively breastfeed: results from a multi-center study

Del Buono, Katie; Chooniedass, Rishma; Lok, Kris Y. W.; Fan, Heidi S. L.; Tarrant, Marie

Introduction: Breastfeeding remains one of the most significant preventive measures to improve infant and child health. Although the World Health Organization (WHO) recommends six-months of exclusive breastfeeding and many women in industrialized countries intend to do so, most fall short of this goal. Non-evidence-based hospital practices, lack of family support, and community and societal barriers contribute to low exclusive breastfeeding rates.

Objective: The objective of this study was to assess factors associated with two- and six-months exclusive breastfeeding in a cohort of Hong Kong women who planned to exclusively breastfeed.

Methods: We conducted a prospective cohort study and recruited 960 postpartum women who intended to exclusively breastfeed from four public hospitals in Hong Kong. Data was collected directly from participants using a questionnaire during their postpartum stay in hospital. Follow-up at two- and six-months was conducted by telephone. We used multivariable logistic regression to assess the association between sociodemographic characteristics, breastfeeding support variables, hospital practices, and exclusive breastfeeding duration.

Results: While all participants intended to exclusively breastfeed, only 62% (n=595) exclusively breastfed for any duration. Additionally, 68% intended to exclusively breastfeed for six-months but only 22.6% achieved that goal. At the two-months postpartum follow-up, previous breastfeeding experience (OR=2.09; 95% CI 1.59-2.74), exclusive breastfeeding during the postpartum hospitalization (OR=1.82; 95% CI 1.39-2.38), and intending to exclusively breastfeed for six-months (OR=15.73; 95% CI 6.22-39.76) were positively associated with exclusive breastfeeding. At the six-months postpartum follow-up, previous breastfeeding experience (OR=2.15; 95% CI 1.58 - 2.92), exclusive breastfeeding during the postpartum hospitalization (OR=1.79; 95% CI 1.32 - 2.43), and intending to exclusively breastfeed for six-months (OR=9.82; 95% CI 3.51 - 27.47) continued to be positively associated with exclusive breastfeeding, while participants returning to work were almost 40% less likely to continue exclusive breastfeeding (OR=0.63; 95% CI 0.43-0.90).

Conclusion: In-hospital exclusive breastfeeding nearly doubled the odds of meeting the WHO recommended six-months of exclusive breastfeeding. Therefore, unnecessary in-hospital formula supplementation should be avoided where possible. Longer maternity leave and greater breastfeeding support when returning to paid employment may help more new mothers achieve their exclusive breastfeeding goals.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 8

Presentation Time: 6:42 pm

Erin Delfs, Health and Social Development; Helen Chiang, Science

Gaining CLARITY: Gathering Community Perspectives on Youth Mental Health and Resilience in the Central Okanagan to Protect Against Suicide.

Delfs, Erin; Chiang, Helen

BACKGROUND: Resilience, the ability to adapt and feel hope while facing adversity, plays a critical role in protecting against suicide - the second-leading cause of death amongst youth in Canada. Although studies have explored resilience and suicidal behavior amongst at-risk youth, youth who committed suicide but showed no risk factors are often overlooked. Taking a community-level approach to building resilience is necessary to protect all youth against suicide risk before it happens.

OBJECTIVES: The Community-Led Actions Important for Resilience Throughout Youth (CLARITY) Project is a pilot study designed to develop community-based supports for fostering youth resilience and protecting against suicide in the Central Okanagan. The objectives of CLARITY are to determine: 1. What factors of resilience promote hope, optimism, and belonging in youth 2. What types of support from others foster youth resilience 3. How can Central Okanagan communities support young peoples' paths of resilience?

RESEARCH METHODS: Five deliberative dialogues (DDs) were conducted with individuals from the Central Okanagan to explore community factors contributing to youth resilience. DDs bring people together to reflect on a specific set of questions, informed by evidence. Participants included youth (15-18 years old; n=4), emerging adults (18-25 years old; n=9), caring adults (n=7), caregivers (n=2), and community stakeholders (e.g. high-school teachers, landscape architect, youth support workers; n=9). Participants were recruited via community outreach and network connections, and were invited to create a collage about what resilience means to them in a community setting. Dialogues were recorded and analyzed using a theoretically-informed analytical framework.

RESULTS Dialogues revealed "safe spaces" foster youth resilience at the community-level. Safe spaces were described in terms of how they look and feel. Participants described a desire for intergenerational support, radical acceptance, supports that are universally available (versus those people need to disclose information to qualify for), and access to outdoor activities. Specific results aligning with our research objectives will be disclosed in a future publication.

CONCLUSION DDs offer insights into the contexts young people navigate and their implications on mental health and resilience, catalyzing efforts to create substantiated community supports to protect against suicide among all youth in the Central Okanagan.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 9

Presentation Time: 6:49 pm

Aashka Jani, Medicine; Larissa Steidle, Medicine

Patient Factors that Influence Breast and Cervical Cancer Screening Participation

Jani, Aashka; Steidle, Larissa; Martin Ginis, Kathleen

Introduction Cancer screening programs are an essential component of preventative health care. Organized screening programs were introduced in British Columbia for cervical cancer in 1960, and breast cancer in 1988. Following the implementation of these programs, mortality from cervical and breast cancer has decreased substantially. However, there are still a significant number of women who choose not to participate and therefore Canada's target screening rate has not yet been achieved. Understanding the patient factors that are related to non-adherence is essential in identifying underrepresented populations in screening programs, and in turn, potential barriers to healthcare access.

Objectives The purpose of this review was to examine the literature to identify the patient variables that are associated with uptake of screening mammography and pap smears for women in Canada.

Methods A narrative literature review was conducted using Ovid MEDLINE to determine variables that have been identified in association with breast or cervical cancer screening participation. Included articles had to be original studies, had a minimum of 60% of Canadian participants, and had a majority patient age within the recommended screening guidelines. All factors relevant to screening adherence were extracted. Tables were constructed to report variables and whether each study demonstrated a positive, negative, or no association.

Results 23 quantitative breast cancer, 12 quantitative cervical cancer, and 10 qualitative cervical cancer studies were included. The variables most frequently reported in association with increased screening mammography adherence were older age, being married or common-law, household income, fluency in English or French, birthplace in Canada, urban residence, registration with a primary care provider, recency of last pap test, and decreased smoking frequency. The variables most commonly associated with time appropriate pap smears in the literature were younger age, income, education, birthplace in Canada, and registration with a female primary care provider. Moreover, feelings that prevented cervical cancer screening included embarrassment, lack of knowledge, and competing priorities.

Conclusion This review identified many healthcare, sociodemographic, and intrapersonal factors that are associated with breast and cervical cancer screening uptake across Canada. Identification of these factors was the first step in developing targeted initiatives to increase cancer screening participation.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 10

Presentation Time: 6:56 pm

Sofia Samper, Health and Social Development

Sex and Age-Related Differences in Exercise Capacity in Children with Congenital Heart Disease

Samper, Sofia; Harris, Kevin; Voss, Christine

Introduction: Children with repaired moderate-to-complex congenital heart disease (CHD) often have a reduced exercise capacity compared with typically developing children. In typically developing children, maturation affects exercise capacity, which manifests as differences in exercise test performance according to age and sex. There has been little to no analysis of difference due to sex in children with CHD, which may have implications for clinical exercise testing. We hypothesized that males would perform better during stress tests than females, but this sex-difference will be observed only in older children.

Objectives: To assess the difference in performance (exercise test duration) in routine stress tests between males and females with CHD and in relation to age.

Methods: A retrospective chart review was conducted for 383 patients, ages 6-18 yrs, who underwent routine incremental treadmill exercise testing using standardised protocols (Bruce or equivalent hospital protocol) at BC Children's Hospital, the only hospital with pediatric cardiology services in BC. Conditions included were Transposition of the Great Arteries (TGA), Tetralogy of Fallot (TOF), and Fontan Circulation (FON). Data analysis was done in R using a one-tailed, unpaired Welch Approximation T-Test. Significance was set at $p < 0.05$.

Results: The mean age \pm SD of males was 12.98 \pm 3.11 yrs and 13.82 \pm 2.97 yrs for females, respectively. The mean exercise test duration was 10.02 \pm 2.50 mins for males and 8.98 \pm 2.42 mins for females, respectively. Exercise test duration was significantly different between sexes. However, when stratified by age-group (6-12 yrs vs.13-18 yrs), there was only a significant sex-difference in exercise test duration in older children. When analyzing exercise time between males and females for each condition, the only significant differences were found in TOF and FON patients in the older age group.

Discussion and conclusion: As expected, males performed significantly better in exercise tests than females, but these differences were only observed in older children and not consistently so across types of CHD. Additional research is needed to understand how these presently observed results relate to sex-differences that are known to exist in typically developing children. This information will be useful for clinicians when interpreting clinical stress test results in their pediatric patients with CHD.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 11

Presentation Time: 7:03 pm

Sienna Kantymir, Health and Social Development; Ceyanna Pohl, Faculty of Management

The Impact of Climate Change Events and COVID-19 on Rural Mental Health

Kantymir, Sienna; Pohl, Ceyanna; Oelke, Nelly; Szostak, Carolyn; Zinck, Reagan; Banner-Lukaris, Davina; Fournier, Bonnie

Introduction Climate change events (CCEs), such as wildfires, smoke, flooding, and the current COVID-19 pandemic can have lasting effects on one's mental health. Due to isolation and environment-dependent nature, rural communities in BC are inequitably impacted by these events. Mental health resources available are often limited and lack accessibility. Research is needed to identify the mental health impacts of CCEs and COVID-19 and a tailored approach to understanding these impacts is required to develop effective strategies to build resilience in rural communities.

Research Question and Hypothesis The primary aim of our study is to understand the mental health impacts of CCEs and COVID-19 on rural populations in BC. Our second objective is to develop community-based solutions aimed at fostering community and individual resilience. We hypothesize that elevated levels of psychological distress are being experienced in response to CCEs and COVID-19, and that mental health needs in rural communities are not being met.

Research Methods Our mixed methods study focuses on three BC rural communities: Keremeos, Burns Lake, and Ashcroft. Data are being collected using an online survey with an optional art submission section (e.g., photos, stories, poems). The survey will collect demographic and qualitative data regarding mental health. The survey is being promoted using social media, emails to local organizations, and news articles.

Expected Results Preliminary survey results suggest that CCEs and COVID-19 are mutually impacting the mental health of individuals in rural communities. Increases in stress and anxiety have been described as well as a lack of accessible and targeted mental health supports.

Conclusion and Implications Future activities include community consultations to augment survey data and deliberative dialogues with stakeholders to co-create solutions to foster resilience. This study contributes knowledge on the mental health impacts of CCEs and COVID-19 in three rural BC communities. It provides the opportunity to address important knowledge gaps, while using results to enhance mental health supports within these communities. This research will help foster resilient communities through the collaborative development of action plans to help cope with the impacts of CCEs and COVID-19.

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Category 3: Community Health

Poster #: 12

Presentation Time: 6:35 pm

Violet Ignace, Health and Social Development; Caitlin Elias, Health and Social Development; Ethan Dallaire, Irving K. Barber Faculty of Arts and Social Sciences

All My Relations: Indigenous Youth and Elder Wellness Circle

Ignace, Violet; Elias, Caitlin; Dallaire, Ethan; Mee, Ever; Kurtz, Donna; Olsen, Karlyn; Jones, Charlotte; Hutchinson, Pete; Barry, Julianne

Why this research is important (Background): Knowledge and practices are being lost by many Indigenous people due to ongoing colonial oppression and intergenerational trauma. Among Métis Urban (off-reserve) people, those who hunted, fished or trapped has decreased from 46% in 2006 to 33% in 2017. In addition, only 33% of Urban First Nations peoples gathered wild plants/berries. Learning Traditional activities builds a strong Indigenous cultural identity and enhances wholistic wellness. In previous research partnerships with Urban BC Interior Friendship and Métis Center communities, youth/young adults expressed an urgency to reverse this trend by learning/re-learning Traditional Knowledge and practices of land-based activities, gender roles, and identity from local Elders, and Knowledge Keepers.

Community Collective (Research) Goal: Co-plan programs that address Indigenous youth/young adult's identified priorities which will support gender, identity, and wellness recommendations.

Information Gathering Methods: The project is led by three Urban BC Interior Friendship and Métis Centers. Partners include youth/young adults (ages 14-34), Elders, Knowledge Keepers, community members, undergraduate trainees and researchers. Traditional Knowledge and culturally safe, mixed method, community-led Indigenous Methodologies will be used. Project activities will include a literature review, three Talking/Learning Circles per center, community gatherings, and Qualtrics surveys. Short answers, Talking/Learning Circles themes and Likert scale survey questions will inform the design of programs about traditional healing, hunting and gathering practices for youth/young adults. Information gathered will be organized into common themes, and priorities for action shared with communities at a final Celebration through art, dance, and other ceremonies.

Expected Outcomes (Results): Community specific needs will inform the design of locally relevant programs/activities including land-based education. The project will foster ways to sustain ongoing youth/young adult, Elder, and Knowledge Keeper's intergenerational relationships, reciprocal learning and community wellness. Youth/young adults will be supported in their journey of cultural identity and connectedness to Traditional ways of knowing, being, and doing, for positive benefits in mental, physical, emotional and spiritual wellness.

Conclusion: Action plans will inform future programs of learning/relearning of Traditional Knowledge, land-based activities, gender roles, and identity to promote health and wellness.

Poster #: 13

Presentation Time: 6:42 pm

Rachel Shim, Science

Mediterranean Diet compliance in patients with ulcerative colitis

Shim, Rachel; Haskey, Natasha; Ye, Jiayu; Singh, Sunny; Gibson, Deanna L.

Introduction: Diet is a strategy to manage inflammatory bowel disease (IBD). Ulcerative colitis (UC) patients restrict foods to relieve digestive symptoms, increasing their risk for nutrient deficiencies. Given the lack of evidence-based dietary guidelines in IBD, patients with UC are susceptible to fad diets and food restrictions that can have adverse health impacts. The Mediterranean diet pattern (MDP) has been linked to protective effects in inflammatory health conditions, possibly due to increased fibre, antioxidants, monounsaturated fat (MUFA), n-3 polyunsaturated fat (PUFA), and reduced n-6 PUFA. Research has not yet investigated whether individuals with UC can adhere to the MDP.

Objective: To assess dietary compliance of the MDP in patients with UC.

Methods: Eighteen participants (n=11 MDP, n=7 habitual diet) between 18-65 years of age with UC in remission were randomized to follow a MDP or maintain eating habits (habitual) for 12 weeks. 24-hour food recalls, Mediterranean Diet Serving Scores (MDSS) to assess compliance, fecal short-chain fatty acids (SCFAs), and the Simple Clinical Colitis Activity Index (SCCAI) to assess disease-related symptoms were evaluated at baseline and week 12. SCFAs were measured via gas chromatography. T-tests assessed nutrient intakes, SCFAs, and SCCAI, while chi-square tests assessed MDSS.

Results: No significant differences were seen in macro- or micronutrients or MDSS between groups at baseline. Dietary compliance (MDSS) significantly increased in the MDP, with increases in total MDSS ($p=0.001$), fruit ($p=0.0237$), olive oil ($p=0.0237$), legumes ($p=0.0300$), fish ($p=0.0075$), and fibre ($p=0.0244$) without an increase in symptoms (SCCAI) ($p=0.9062$). An increased trend in total SCFAs ($p=0.2061$) and butyrate ($p=0.1230$) was seen in the MDP. No difference in total fat ($p=0.8984$), MUFA ($p=0.5771$), n-3 EPA ($p=0.6377$), or n-3 DHA ($p=0.6523$) was observed in the MDP. Nutrient intakes did not change within the control group.

Conclusions: UC patients were able to comply with the MDP with significant increases in key food group components of the MDP and without a subsequent increase in symptoms. There was a trend towards increased butyrate production in the MDP, which is known to reduce colonic inflammation in UC. Implementing a MDP for IBD may help enhance the nutritional status of this population.

Poster #: 14

Presentation Time: 6:49 pm

Alex Myshak-Davis, Medicine

Primary Care Dietary Interventions for Improved Metabolic Outcomes

Myshak-Davis, Alex; Evans, Janet; Howay, Heidi; Sakakibara, Brodie

Aims: Unhealthy diet is responsible for substantial morbidity and mortality worldwide. Evidence is emerging on the efficacy of a low carbohydrate, high fat (LCHF) diet on weight loss and prevention and management of chronic disease. However, there is little evidence on the clinical utility of delivering a LCHF diet in a primary care setting. In this study, we estimate the effects of a LCHF diet and educational intervention delivered in a family practice setting on laboratory and anthropometric outcomes.

Materials and methods: In this pre-post retrospective study, we examined differences in laboratory and anthropometric variables among individuals ≥ 19 years of age with a chronic condition, who participated in a primary-care LCHF dietary and educational intervention. Data were obtained via electronic medical records. Mean differences of laboratory and anthropometric values at baseline and final follow-up were analysed using a 2-tailed paired samples t-test ($p < 0.05$).

Results: 122 patients met the study's inclusion criteria. 77 were female, and the mean age of the sample was 62.3 years (SD = 13.2 years). Hypertension was the most common chronic disease in the sample ($n=68$), followed by type 2 diabetes ($n=45$), obesity ($n=42$), osteoarthritis ($n=38$), chronic kidney disease ($n=36$). Statistically significant reductions in weight (mean reduction of 3.96 kg ($p < 0.001$)), BMI (mean reduction of 1.46 kg/m² ($p=0.001$)), diastolic blood pressure (mean reduction of 3.32 mmHg ($p=0.037$)) and fasting insulin (mean reduction of 28.11 pmol/L ($p=0.017$)) occurred during participation. Systolic blood pressure, HbA1c, eGFR and ACR showed non-significant improvements. Individuals who participated in >5 educational visits showed a trend towards more clinically and statistically significant decreases in BMI ($p=0.003$), diastolic blood pressure ($p=0.040$) and HbA1c ($p=0.039$), compared to those who had fewer educational visits.

Conclusion: Improvements in patient's weight, BMI, diastolic blood pressure and fasting insulin after participation in LCHF dietary and educational program in addition to standard of care suggest that this particular intervention is a beneficial nutritional and educational program for primary care providers to prescribe in their practice. This study also suggests that greater compliance to the program, as determined by more educational visits results in greater improvement in select laboratory and anthropometric outcomes.

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Poster #: 15

Presentation Time: 6:56 pm

Bethany Kolisniak, Science; Jenna Sim, Health and Social Development

Incorporating Cultural Safety into a Diabetes Prevention Train-the-Trainer Program: Building and Testing Inclusivity Content for a Digital Educational Learning Platform

Kolisniak, Bethany; Sim, Jenna; Cranston, Kaela; Te Hiwi, Braden; Jung, Mary

Background: Cultural safety (CS) is when everyone feels that they are safe and respected in healthcare interactions. Many members of oppressed groups do not feel safe and respected when accessing health services. While CS training is becoming more common, many health professionals still receive little to no CS training.

Objective: This project aims to develop and test the acceptability and understanding of a CS component for mandatory online coach training of Small Steps for Big Changes (SSBC), a diabetes prevention program.

Methods: To develop the training module, a literature review was conducted on Google Scholar to find sources that would inform the CS concepts to be included. Findings were discussed amongst research team members, who have expertise in the areas of CS, diabetes prevention, and knowledge translation. Consensus was reached on what content to include. A script was developed with editorial input from a third-party company. Local actors were hired, and the training module was filmed. The third-party company produced the final video. Future testing of the module will determine its acceptability and effectiveness for teaching CS to SSBC coaches.

Results: From the literature review, 13 sources were selected to determine concepts to include in the CS training. The research team identified three key concepts to include in the module: 1) CS requires continuous self-reflection by the provider; 2) culturally safe care is only defined by the recipient of care; and 3) culturally unsafe interactions are perpetuated by power imbalances in healthcare. The training video consists of a definition of CS, an explanation of the three key concepts, and a roleplay between a coach and client demonstrating examples of both culturally safe and unsafe interactions. The final CS training video is about five minutes in duration.

Conclusion: The development of appropriate CS training materials requires input from experts and literature across disciplines in CS, diabetes prevention, and knowledge translation to ensure it is relevant for SSBC. Future testing of the CS materials will help to determine if a training module of this manner is an appropriate way to educate health and fitness professionals on how to provide culturally safe care.

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Poster #: 16

Presentation Time: 7:03 pm

Hannah Young, Medicine

To identify obstacles and solutions relating to the integration of primary care and cancer care in the Interior Health region: a quantitative study

Young, Hannah; Hayes, Brian; Samper, Sophia; Pandher, Satvir; Brears, Sarah; Atrchian, Siavash; Voss, Christine

Background: Challenges in transition from active cancer care to ongoing post-cancer care by family physicians has been acknowledged across British Columbia and is a growing concern in the Interior Health (IH) region. Previous research has highlighted that insufficient interdisciplinary communication and variable involvement of family physicians in cancer care are some barriers that contribute to these challenges. As the incidence of cancer diagnoses continue to increase in IH, there is an urgent need to optimize the integration of primary care and cancer care to improve outcomes for cancer survivors. This ongoing two-part project (qualitative interviews and quantitative surveys) aims to identify obstacles that family physicians face in providing adequate post-cancer treatment, as well as solutions that family physicians and oncologists propose to mitigate these challenges. The current study (part two) seeks family physicians' and oncologists' insight on this topic via a quantitative survey.

Objectives: 1. What barriers do family physicians in IH face in providing adequate post-cancer treatment in primary care? 2. What solutions do family physicians and oncologists in IH propose to mitigate the barriers faced by family physicians in order to optimize post-cancer treatment in primary care?

Research Methods: All practicing family physicians (n=1232) and oncologists (n=29) in IH will be invited to complete a five-minute survey. The survey will include questions assessing physician confidence, the influence of geographical factors, and the effectiveness of current guidelines in the provision of post-cancer management in primary care, with respect to the top cancer sites in British Columbia (breast, lung, prostate, and colorectal). Survey development was guided by an ongoing scoping review and expert knowledge. Descriptive summary statistics for survey responses will be computed, and potential correlates will be explored (e.g. rural setting).

Clinical Impact: The results from this study will lead to a better understanding of the challenges faced by family physicians in providing follow-up care to cancer survivors, offer solutions to facilitate optimal cancer management in primary care, and promote collaboration between medical disciplines involved in cancer care. The long-term effects of this research will lead to improved support and better outcomes for cancer survivors in IH.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 17

Presentation Time: n/a pm

Karah Hopgood, Science

Baseline RMR in the Analysis of Weight Change Trajectories Over a Period of 6 Months for Participants in the INSPIRE Trial

Hopgood, Karah; Lutes, Lesley; DiLabio, Gino

Introduction: As rates of obesity, a now globally recognized health crisis, continues to rise into epidemic proportions, integrating weight loss interventions is of the utmost priority. Resting metabolic rate (RMR) accounts for 60-70% of total energy expenditure in sedentary people, and therefore, serves as the major determinant of energy balance and weight fluctuations. However, the relationship between obesity and RMR remains unclear, and it has yet to be determined how baseline RMR relates to weight loss success.

Objective: The purpose of the present study is to explore the relationship between RMR and weight loss for participants of a randomized clinical trial (the INSPIRE trial). The objectives of the study are to characterize a sample of weight-loss seeking adults and to evaluate the efficacy of baseline RMR in predicting weight change trajectories across a 6-month period.

Hypothesis: At baseline, a positive correlation was hypothesized between blood pressure and RMR such that participants with higher blood pressure would have higher baseline RMR. A negative correlation was hypothesized between BMI and RMR such that participants with a higher BMI would have a lower RMR. At 3- and 6-months, it was predicted that participants with a lower baseline RMR would experience less weight loss and participants with a higher baseline RMR would experience greater weight loss across the trajectory.

Methods: Fifty-eight adult women with obesity completed 12 weeks of an enhanced Small Changes intervention (a cognitive-behavioural based program) and had their weight, height, RMR, blood pressure, measured at baseline, 3-months, and 6-months. The relationships between RMR, BMI, and blood pressure were assessed via bivariate correlations and the relationship between RMR and weight loss was modelled via growth curves analyses.

Conclusions/Impact: Findings from this research will yield an evaluation of the role of baseline RMR in predicting weight loss. A broader perception of RMR will allow for further exploration into the role that energy expenditure plays before, during, and after a period of weight loss intervention. This can lead into an appraisal of weight-loss effectiveness and maintenance, which are, arguably, the most significant challenges facing the field at present.

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Category 4: Rural, Clinical, and Emergency Care

Poster #: 18

Presentation Time: 6:35 pm

Colin Appleby, Medicine; Andrea DieBold, Health and Social Development

Optimizing Virtual Rehabilitation Services in Northern British Columbia

Appleby, Colin; DieBold, Andrea; Molcak, Haydn; Davina Banner-Lukaris, Haydn; Oelke, Nelly

Introduction. In the face of the COVID-19 pandemic, healthcare systems have been challenged with developing new ways to deliver health care services in a safe manner. Rehabilitation services are a specific area of care that have been adversely affected due to physical distancing restrictions.

Telerehabilitation, a subcomponent of telemedicine, represents an alternative mode to deliver rehabilitation services. However, the lack of infrastructure as well as appropriate triage criteria to identify suitable patients' for telerehabilitation makes the referral process difficult in BC.

Purpose. The purpose of this project was to build consensus on the current requirements for the optimization of telerehabilitation in Northern BC.

Methods. An evidence synthesis was developed and guided by the Rapid Realist Review methodology, with 30 articles meeting the eligibility criteria. Deliberative dialogue, and an integrated knowledge translation approach, was held with health care providers, decision-makers, and patient representation from various locations around Northern BC. The evidence synthesis was shared with participants prior to the dialogue session. Using facilitated discussion, stakeholders discussed key highlights from the evidence report and developed actions for moving virtual rehabilitation care forward. Priorities of actions were identified and strategies were developed for the top two actions.

Results. The evidence report found that telerehabilitation can be utilized for a variety of patients with various conditions and should be flexible in its method of delivery to ensure patient needs are met. The top five priorities identified in the deliberative dialogue session for optimizing telerehabilitation were as follows: 1) accessible, flexible and reliable technology, 2) education and support for patients and providers, 3) re-envisioning the rehabilitation team, 4) needs assessment for implementation, 5) an understanding of diverse patient community and health system needs. Strategies for the top two actions will be presented.

Conclusion. The deliberative dialogue session confirmed that multiple areas of telerehabilitation require improvement to optimize its delivery in Northern BC, and a triage criterion can be addressed once appropriate infrastructure is in place. Moving forward, a comprehensive report summarizing this project will be developed and a follow-up dialogue will be carried out to focus on the next steps.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 19

Presentation Time: 6:42 pm

Remi Kandal, Medicine

Early versus delayed showering after sutures in the emergency department

Kandal, Remi; Salehmohamed, Qadeem

Introduction Lacerations are a common reason patients present to the emergency department (ED), accounting for approximately 5.2% of total ED visits in the United States. Typically, wound care instructions ask patients to keep wounds dry for 1-3 days following the application of sutures. Ostensibly, this allows time for the wound to epithelialize, create a water-proof barrier, and ultimately prevent wound infection. However, there is no evidence that keeping wounds dry actually prevents infection. Arguably, early washing may decrease infection risk by cleansing the wound edges of sweat, dirt, bacteria, and dead skin cells. Patient satisfaction may also be increased by allowing them to continue their usual hygiene routines.

Research Question and Hypothesis Our objective is to determine if early showering is non-inferior to delayed showering with respect to wound infection in patients who receive sutures for traumatic wounds. We hypothesize that early showering will be non-inferior to delayed showering. **Research**

Methods We searched PubMed for papers that mentioned sutures, infections, wound management, and showering. Papers were included that looked at infection rates in early versus delayed showering after patients received sutures. Papers were excluded that did not examine these parameters, or classified early showering as beyond 48 hours. 6 papers were included in this review.

Results Papers included 3 RCTs (n=200, n=857, n=92), 1 case series (n=100), 1 systematic review (n=2150), and 1 best-evidence topic (n=1239). All papers reported no statistically significant increase in infection rate when comparing early and delayed showering. There appears to be no indication that early showering causes an increase in infections.

Conclusions and Clinical Implications/Impact From this literature review, it appears that early showering is non-inferior to delayed showering. This could fill a gap in the literature as there are currently only studies examining early versus delayed showering with surgical wounds, not traumatic wounds that are sutured in the ED. This literature review will inform a randomized trial examining if early showering is non-inferior to delayed showering with respect to wound infection in patients who receive sutures in the KGH ED. This could result in changing wound care guidelines.

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Poster #: 20

Presentation Time: 6:49 pm

Carley Paterson, Arts and Social Sciences

Being there: Understanding the support systems of adults 50 years and older with mental health concerns who live in a rural community in BC

Paterson, Carley; Szostak, Carolyn; Oelke, Nelly

Introduction: The people who we connect with, socially and personally, are important to our wellbeing. This is especially true for adults with mental health concerns (MHC), such as depression, anxiety, or substance use problems. Despite wanting to be connected, they often become socially isolated. Support can be especially important for those who are 50 years and older, and who live in a rural community where health and social services are limited.

Objectives: This research explores the experiences and perspectives of family, friends, and co-workers who provide social/personal support to individuals with MHCs, 50 years or older in BC rural communities. The results will enhance our understanding of the nature of these relationships and inform strategies for improving them.

Methods: Nine adults who provide social/personal support to an adult (50+ years old) with a MHC living in a rural community were recruited through REACH-BC, Patient Voices Network, and various community Facebook sites. Individual semi-structured interviews were conducted. Topics included what makes their relationship easier/harder, rural-specific concerns, and the social impact of COVID-19. Transcripts are being analyzed using thematic analysis through interpretive description, a qualitative framework that emphasizes practical implications of the findings.

Results: Preliminary analyses have identified two primary themes. The “Context of COVID-19” theme encompasses social isolation, and the negative impacts on well-being and relationships caused by COVID-19. The second theme, “Communication Quality” encompasses individual differences and changes in interpersonal communication as a function of the well-being of both individuals and external demands. Other issues addressed by participants include mental health-related literacy and stigma. While literacy varied, no stigmatizing beliefs were expressed, and all participants understood the protective nature of social support. However, stigma within the community was perceived to contribute to MHC.

Discussion & Conclusion: The described impact of COVID-19 demonstrates that although virtual contact allows for connection despite mandated social distancing, in-person contact facilitates “being there” for adults aged 50 or over with MHC. The dynamic quality of interpersonal communication suggests that improvements in communication skills and empathic responding might bolster support systems. The results will inform development of programs intended to enhance the quality of these relationships.

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Poster #: 21

Presentation Time: 6:56 pm

Jason Scott, Arts and Social Sciences

A Comparative Analysis of The Prospective and Retrospective Memory Questionnaire (PRMQ) and The Selective Reminding Task (SRT): Clinical Utility of Proxy vs. Self-Report Approaches

Scott, Jason; Piercy, Jamie; Miller, Harry

Introduction: The Prospective and Retrospective Memory Questionnaire (PRMQ) is a subjective measure of episodic memory and is used in clinical assessment to evaluate the extent to which an individual appraises their own memory performance in everyday life. The evaluation of one's self-reported memory performance may be valuable to clinicians when examining impairments caused by certain neural pathologies, such as acquired brain injuries (Hogan et al., 2020). Often with such pathologies, the specific neural substrates involved with the capacity to recognize a deficit (i.e., self-awareness), including memory, may be compromised. To address this issue, proxied versions of the PRMQ have become implemented to account for fallible memory reports and obtain a potentially more accurate evaluation of memory performance.

Objective: As an initial pilot study, the primary aim is to examine the ability of proxy and self-report PRMQ memory ratings to assess memory impairments when compared to a standardized objective measure of memory ability, the Selective Reminding Task (SRT). Specifically, self-and proxy-reports on the PRMQ will be investigated for differences in the report of memory accuracy when compared to the SRT.

Method: Fifteen adult patients (18+) with various acquired brain injuries (i.e., stroke, Traumatic Brain Injury, etc.) will be recruited from the Psychology Clinic at the University of British Columbia Okanagan, alongside an additional 15 associated proxies. Proxies will be identified as caregivers, family members, or partners that spend a considerable amount of time with the patient (8 + hours a week). Psychology Clinic patients will be administered the PRMQ and the SRT alongside their standard clinical battery. Additionally, collateral interviews will be conducted to obtain proxied versions of the PRMQ. Independent and dependent t-tests will be used to test for differences between performance on the SRT and PRMQ self and proxy rating systems.

Discussion: The comparison of a patient's self-reported memory performance to an objective measure of memory may be useful for clinicians when assessing the specific impairments associated with certain neural pathologies, including deficits in the self-awareness of memory performance. Concomitantly, proxy versions may provide a realistic and accurate appraisal of a patient's memory ability in the context of potentially inaccurate self-report.

[Truncated – please see poster]

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 22

Presentation Time: 7:03 pm

Monique Walsh, Health and Social Development

The co-production of collaboration: Learning through boundary construction in primary care

Walsh, Monique

The co-production of collaboration: Learning through boundary construction in primary care
Introduction Policy changes in primary care are asking healthcare professionals to work in collaborative teams and across organizational boundaries. However, practical experience suggests that collaboration is difficult. Exploring how boundaries are enacted, although seemingly counterintuitive, is instead a way to observe collaboration.

Purpose In order to support primary care, this research seeks to understand when collaboration is happening, who and what are involved, and changes in interactions through collaboration. Research Question How is the co-production of boundaries enacted during collaborative processes in primary care workplaces?

Objectives 1. Conduct a comprehensive interdisciplinary review of collaborative processes. 2.

Explore, document, and extend knowledge on co-production of boundaries within primary care.

Methods The study will provide a comparison across collaborative processes and how they changed during a compressed time period amplified by COVID-19 (January-August 2020) within primary care in a localized region within Interior British Columbia. Phase 1: Semi-structured interviews with 15 key informants (fall 2020) to identify collaborative processes and how they changed. Purposive sampling included, must: (a) work with interprofessional teams; (b) provide clinical, administrative or executive support in primary care; (c) operate within the Thompson Region; (d) be involved with a workplace collaboration during the time period of January-August 2020. Phase 2: Discourse Analysis will be conducted (winter 2021) to trace the collaborative processes over time. Examples of secondary sources include: news articles and modelling; Medical Health Officer mandates; and physician fee code changes. Phase 3: Member checking with key informants (spring 2021) to review the documented changes to collaborative processes or new collaborative processes that have emerged.

Implications At a theoretical level, this research seeks to extend our knowledge around the co-production of boundary construction; to demonstrate how and which boundaries are a way to understand collaboration. At a policy level, by understanding how collaboration is enacted this research could support primary care teams to deliver collaborative policy direction. At a practical level, next steps will be the creation of a tool kit identifying ways to support collaborative processes in the primary care workplace.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 23

Presentation Time: n/a pm

Alex Fontaine, Arts and Social Sciences

Integrated Primary Care: Examining the effectiveness of a virtual warm handoff to improve patient engagement in treatment

Fontaine, Alex; Lutes, Lesley; Iyar, Megumi

Introduction: In response to the increasing need for accessible, efficacious psychological services, Integrated Primary Care (IPC) been considered to meet these demands. Within IPC settings, the “warm handoff” from primary care physician to the mental health provider is patients’ first point of contact with IPC services and is therefore critical for engaging patients in subsequent treatment (e.g., Young et al., 2020). In light of the current COVID-19 pandemic and the resultant rise of virtual care, there is an urgent need to examine the efficacy of the warm handoff in within a virtual context.

Objective: The current study seeks to examine whether a virtual warm handoff to an IPC mental health provider increases the likelihood of initial referral acceptance and intent to continue treatment, compared to the “referral as usual” process.

Hypothesis: Given the empirical support for the in-person warm handoff, it is expected that a virtual warm handoff will promote both greater referral acceptance and greater intent to continue treatment, relative to the “referral as usual” process.

Methods: A between-subjects multiple-group experimental video vignette design was used. Participants from a community sample will be randomized into one of three vignette conditions (i.e., warm handoff in an IPC context, referral as usual in an IPC context, or a referral as usual in a standard primary care context), in which they will receive a hypothetical virtual referral from a physician. Participants will then complete a survey in which they will indicate both their likelihood of initial referral acceptance and intent to continue treatment, measured on a 5-point Likert scale, with higher scores indicating greater likelihood and intent respectively. Moderated hierarchical regression analyses will be conducted to model the effect of different virtual referral types on both the likelihood of initial referral acceptance and the intent to continue treatment.

Conclusions: These results would offer validation for the virtual warm handoff as an efficacious component of IPC for engaging patients in treatment and thus address Canadians’ unmet mental health needs. Given these results, the authors would offer the recommendation to implement the warm handoff as a routine component of virtual IPC care.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 24

Presentation Time: n/a pm

Brian Hayes, Medicine

Towards an optimal integration of family physicians into the post-cancer treatment pathway in BC's interior: A qualitative study of physicians' experiences

Hayes, Brian; Young, Hannah; Sampler, Sofia; Pandher, Satvir; Brears, Sarah; Atrchian, Siavash; Voss, Christine

Background: In light of the growing number of cancer survivors, family physicians are increasingly relied upon to provide specialized post-treatment care and follow up. However, post-cancer care in the primary care setting is challenging, potentially due to insufficient integration and poor interdisciplinary communication. In 2018, the BC Family Physician Oncology Network (FPON) began providing cancer-specific resources and continuing education opportunities to family physicians across the province. It is not clear whether these resources sufficiently address the barriers to integrated care in Interior Health (IH) specifically. Oncologists in IH continue to report significant variability, and at times insufficiency, in the post-cancer follow-up care in primary care settings across IH, leading to concerns around unequal patient care. This may be attributed to a poor understanding of the barriers to integrating family physicians into post-cancer care present within the geographic region of IH itself. Identifying these barriers and exploring potential solutions from the perspective of family physicians and oncologists in IH would allow for the creation of more informed, local solutions.

Objective: The objective of this portion of the project is to gain in-depth insight into the barriers and facilitators that physicians experience and/or witness in post-treatment cancer follow-up in primary care settings across IH.

Methods: Qualitative interviews will be conducted with both family physicians (n = 15) and oncologists (n = 6) practicing across IH. Snowball sampling will be used for recruitment, with the aim to interview family physicians from all four service areas of IH and oncologists from all major hospitals. Recorded via Zoom, these 20-minute one-on-one interviews will be transcribed, and a six-step thematic analysis conducted using NVivo 12 to identify overarching themes. A semi-structured interview script will be used, and all interviews will be conducted by the same researcher.

Clinical Implications: This work is being conducted in conjunction with a quantitative arm addressing the same research question. Together, this mixed-method approach will provide rich insight into the current clinical experience providing care to cancer survivors in primary practices across IH and fuel the development of IH-specific solutions.

Poster #: 25

Presentation Time: n/a pm

Parm Khakh, Medicine

Pregnancy in Women with Left Ventricular Outflow Tract Obstruction: Echocardiographic Changes and Pregnancy Outcomes

Khakh, Parm; Chang, Soohyun Alice; Grewal, Jasmine

Introduction - Left ventricular outflow tract obstruction (LVOTO) malformations are a subgroup of congenital heart defects (CHD). These defects involve impaired ejection of blood from the left ventricle (LV) to the ascending aorta. Pregnancy is a state of increased physiologic demand and profound hemodynamic changes. Studies have shown that severe and symptomatic LVOTO is associated with an increased risk of maternal mortality and morbidity such that pregnancy is contraindicated due to poor compensation. Recent studies suggest pregnant individuals with mild or moderate obstruction have increased propensity for heart failure, arrhythmias and adverse fetal outcomes. Transthoracic echocardiogram (TTE) is well established in assessing changes in LVOT pressure gradients and LV function. LV global longitudinal strain (GLS) is recognized as a marker to detect subclinical LV dysfunction prior to changes being identified via reduced ejection fraction. However, LV GLS is not well studied in the pregnant population with LVOTO.

Question – How does LVOT pressure gradients and LV function measured by LV GLS change throughout pregnancy in women with LVOTO. Secondly, are there fetal or maternal complications associated with these changes.

Methods - This was a retrospective single center study at St. Paul's Hospital. Of the 117 pregnant patients diagnosed with LVOTO from 2009-2019, only 34 pregnancies fulfilled our inclusion criteria. TTE's were assessed for LV pressure gradients and function throughout each trimester. Adverse maternal cardiac, obstetric and fetal/neonatal events were examined and compared with age-matched controls of pregnant women free of significant cardiac disease.

Results – Preliminary results indicated a significant increase in the LVOT pressure gradient from preconception to the 3rd trimester despite a minimal change in LV strain for the case patients with no similar changes in the controls. These pressure and function variations resolved postpartum. Five cases developed gestational hypertension during pregnancy compared to none in the control group.

Conclusion – Our study demonstrated that throughout pregnancy, LVOT pressure gradient increases drastically; however, LVEF and LV GLS remain relatively unchanged for both groups. Due to low event rates and small sample size, the study was unable to detect statistically significant disparities between the two groups for adverse maternal and fetal outcomes.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Category 5: Student and Social Health

Poster #: 26

Presentation Time: 6:35 pm

Sarah Clement, Health and Social Development

Envisioning a Physical Food Hub at UBCO

Clement, Sarah; Hamilton, Casey

Introduction: This project began in March 2020 and has extended until present. Campus Health VOICE 5 Research Project revealed a rate of student food insecurity of 42.3%. The Physical Food Hub project supports student food security at UBCO through wraparound programs, services, and opportunities. This project is multifaceted, with the long term goal of a physical space at UBCO devoted to student food security, health, and wellbeing.

Objectives: The central objective of this project is to support student food security, and consequently overall student wellbeing at UBCO. This project aims to address three components of food security: household food insecurity, capacity, and food systems.

Methods: An environmental scan of existing food security initiatives at postsecondary institutions and in the community was completed virtually. Initiatives were found online and through a snowball sampling method. Conversations included a brief explanation of the project and a semi-structured interview. A literature review was conducted on the topics: health and built environment, community food security, community food centres, student food security, and community-university partnerships. After development of the concept for a physical food hub at UBCO, a virtual consultation process was undertaken with over 100 UBCO community stakeholders including students, staff, and faculty. Participants were contacted by email, and consultations included a presentation of the concept and semi-structured group interviews.

Results: Community consultation indicated strong support for the development of a Physical Food Hub at UBCO to support student food security. Consultations also revealed a need for preliminary decision-making regarding governance, funding, and space. Sustainability, inclusivity, Indigeneity, and accessibility were identified as necessary components of this project. The importance of providing barrier-free programs and services open to all campus community members was also recognized.

Conclusions: This project received strong support and recognition across UBCO throughout the consultative process and beyond. The long term goal of this project is to aid in establishing food security for all students on campus through the creation of a physical space on campus where students can access programs, services, and opportunities that support food security.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 27

Presentation Time: 6:42 pm

Nina Gregoire, Arts and Social Sciences; B. Emma Alcott, Arts and Social Sciences

Racial Bias in Clinical Judgment and the Mediating Effect of Empathy

B. Emma Alcott; Kimberley Kaseweter; Nina Gregoire; Paul G. Davies

Racial Bias in Clinical Judgment and the Mediating Effect of Empathy Introduction Past literature has revealed a pro-White empathy and treatment bias when comparing perceptions toward Black versus White, patients in pain. Promisingly, this bias has been found to be mitigated by a brief perspective-taking intervention. In this study, perspective taking is defined as an empathy inducing process requiring participants to imagine how the patient is feeling and how their pain is affecting their lives. In order to help fill a gap in the literature, the aim of the current study was to evaluate the degree to which previous findings could be replicated when participants were presented with either an Indigenous or White patient.

Hypothesis It was hypothesized that a pro-White bias would be observed for all variables, but that this bias would be reduced in the perspective-taking condition.

Method Undergraduates (N = 391) enrolled in a Psychology course at UBC-Okanagan were randomly assigned to an empathy or control condition, followed by one of four vignettes depicting a patient narrative for an individual with low-back pain. Only patient race and gender varied across the vignettes. Participants then rated pain level and trustworthiness on a visual analogue scale and provided a treatment recommendation rating based on an aggregated scale of Likert-type responses. The vignettes, method of empathy induction, and assessment scales have been previously used and validated in similar research.

Results As there was no effect of gender, this condition was collapsed. The results of three 2 (empathy) by 2 (race) analyses of variance unexpectedly indicated that participants displayed a significant pro-Indigenous bias across all outcome variables. Additionally, although the empathy-intervention significantly increased perceived pain ratings (regardless of patient race), it had no significant effect on trustworthiness or treatment recommendations.

Discussion Caution should be taken in interpreting these results as evidence of an elimination of pro-White bias in healthcare. Importantly, the potential influence of extraneous variables (e.g., social context at time of data collection, lack of stereotypical cues) on the study outcome should be considered. Furthermore, the sample used consisted of undergraduate students, and thus may not be generalizable to healthcare professionals.

[Truncated – please see poster]

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 28

Presentation Time: n/a

Braxtyn Horbay, Arts and Social Sciences

Understanding Weight Stigma As A Barrier To Treatment For Obesity: A Qualitative Thematic Analysis

Horbay, Braxtyn; Lutes, Lesley; Ciszewski, Stefanie

Introduction: The World Health Organization (WHO) recognizes obesity as a chronic illness with substantial physical and mental health consequences. Weight stigma or weight discrimination is a psychosocial consequence of obesity. Research shows that individuals with obesity experience weight stigma from a variety of sources in society such as healthcare professionals, educators, salesclerks, or even family members. Historically, weight-loss treatment plans have focused primarily on changing patient health behaviours such as diet and physical activity to ultimately help the patient lose weight. These health behaviours are often viewed as primary barriers to treatment. When looking to understand the different contributors to treatment success, research has highlighted the importance of treatment barriers to individual weight-loss efforts. However, there is limited research on how experienced weight stigma can potentially act as a barrier for individuals seeking weight-loss treatment.

Objective: The objective of the current study is to address the gap between how experienced weight stigma in individuals with obesity can act as a barrier to weight-loss treatment. This question was explored through qualitative thematic analysis of three overarching domains of weight management, experiences of weight discrimination and body perception, and weight stigma as a barrier to treatment.

Method: The current study sought to explore the relationship between weight stigma and perceived individual barriers to treatment through a qualitative thematic analysis and the use of individual semi-structured interviews that addressed questions within the three domains. Participants were 12 female community members from the Southern Interior region of British Columbia who were predominantly middle-aged ($M = 54$; $SD = 5.16$) and met the criteria for obesity ($MBMI = 34.44$; $SD = 3.12$).

Results: Many prominent themes and subthemes emerged within the overarching domains of weight management, experiences of weight discrimination and body perception, and weight stigma as a barrier to treatment such as “Stress”, “Negative Body Perception”, and “Assumption of Judgement”. Ultimately, weight stigma was found to be understood as a perceived barrier to treatment for individuals with obesity, specifically through the theme of “Prevented Activity Engagement”, a phrase used to describe the effects of weight stigma on participant’s willingness to engage in weight-loss efforts.

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Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 29

Presentation Time: 6:49 pm

Sage Trampoline, Arts and Social Sciences

The Effect of Individual Differences on Perception of Emotion in Music: Implications for Music Therapy

Trampoline, Sage; Wellspring, Ian; Woodworth, Michael

Introduction Music therapy is increasingly used in clinical settings to address a variety of concerns including depression and anxiety. Music as a therapy tool has also been found to improve mood, therapy adherence, and motivation, consequently improving therapeutic outcomes. Interestingly, individual differences may impact one's ability to interpret emotion within music. For instance, Mohn and colleagues found that certain personality differences impact emotion recognition in music, finding a significant relationship between openness to experience and accurately detecting happiness. However, there is a dearth of other research considering personality constructs and perception of emotion in music. One such construct is psychopathy, which is routinely associated with emotional deficits and defined by a lack of empathy. Extant research has not yet considered how psychopathic traits and related empathy might impact musical emotion perception. The present study therefore aims to utilize Mohn and colleagues' methodology to investigate the relationship between these personality constructs and perception of emotion in music.

Hypotheses It is hypothesized that higher empathy levels will allow for increased perception of each of six basic emotions (i.e., sadness, anger, happiness, disgust, fear, surprise) within music. It is also hypothesized that those with higher levels of psychopathic traits will have decreased accuracy in detecting negatively valenced emotions (i.e., fear, disgust).

Method A sample of 570 undergraduate students taking Psychology courses at UBCO have completed externally validated measures including the SRP-IV to assess psychopathic traits (Paulhus et al., 2016), the BES-A to assess empathy (Carré et al., 2013), and a music-emotion task consisting of 18 instrumental music clips representing different emotions (Mohn et al., 2011). Several regressions will assess whether empathy or psychopathic traits predict accuracy scores on the music-emotion task. Data analysis is ongoing, and the initial results will be considered during the presentation.

Implications Information gleaned from this study could guide practitioners in determining when and with whom to utilize music therapy based on individual differences, resulting in a more effective therapeutic tool when combined with appropriate personality constructs. For example, knowing that individuals high in empathy are more perceptive of emotionality in music could lead to a more effective utilization of music in therapy.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 30

Presentation Time: 6:56 pm

Anne Tseu, Arts and Social Sciences; Kirthana Ganesh, Arts and Social Sciences

Adjusting in a Pandemic: Experiences of Incoming International Students

Tseu, Anne; Ganesh, Kirthana; Khatri, Nikita; Kaur, Tanyapreet; Wirtz, Derrick

Introduction: There are currently an estimated 640,000 international students across Canadian postsecondary institutions. Adjustment to new cultures has often been shown to be stressful. The COVID-19 pandemic has been a significant global event that has affected all aspects of life in different ways. Although there is research showing evidence of the negative impact the pandemic has had on international students globally, the experiences of incoming cohorts of international students have not been studied. Given that international students are sometimes at higher risk for mental health concerns, it is important to understand their experiences with adjustment to Canada in the context of COVID-19 and the role of their own culture during this process.

Research Question/Hypothesis: The objective of our study is to explore how the lives of international students have changed since moving to Canada across various domains, such as academics, social support, and finances. We hypothesize that the consequences of the pandemic will impact international students' abilities to form new social relationships, interact and learn, which will affect their adjustment to Canada.

Research Methods: Our study will be a qualitative one, conducted through one-on-one interviews with a sample of 5 students, to gain rich and in-depth information about their experience. Our target population are international graduate UBCO students who moved to Canada to start their degree in Fall 2020. The interview will be semi-structured. Suitable prompts have been added to some questions, to help guide the conversation to obtain as much relevant information as possible. The interview script includes questions regarding participants' expectations and experience of moving and adjusting to Canadian culture, financial and social impacts in the context of a pandemic, as well as how their university experience has been affected.

Results: After the data collection and analysis have been completed, the themes that emerge will be discussed.

Impact: Findings from our study will address gaps in the literature. It is anticipated that the results of this study will further facilitate better support systems among the student body. Further, we anticipate that the results will enable UBCO to be better prepared to provide appropriate supports to future international students.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 31

Presentation Time: 7:03 pm

Rebekah Underhill, Health and Social Development; Lucas Standing, Arts and Social Sciences; Thomas Pool, Health and Social Development

Okanagan Overdose Response Project

Underhill, Rebekah; Standing, Lucas; Airth, Lauren; Pool, Thomas; Hamilton, Casey; Bottorff, Joan

Introduction The COVID-19 pandemic has exacerbated the existing opioid epidemic; these crises account for BC's highest recorded number of overdose deaths occurring in 2020, which prompted awareness of the need for harm reduction. Harm reduction refers to reducing the harms associated with high-risk behaviour. Research indicates that young adults have increased their substance use during COVID-19, signaling the need to assess how these health crises are affecting students.

Objectives This project aimed to: a) explore how the UBCO community (students, faculty and staff) is impacted by the opioid crisis including barriers to support, and b) provide an opportunity for the UBCO community to collaborate on creative solutions.

Methods The UBCO Campus Health Harm Reduction Team (HaRT), comprised of two Campus Health Specialists and three work-study students, facilitated six online dialogues in July and November 2020. Dialogues were advertised in the Wellness Centre: online and through UBC social media. Each semi-structured dialogue encompassed group discussions over Zoom that lasted an hour and were led by two HaRT facilitators. Zoom provided the option to remain anonymous. A total of 20 UBCO students, staff and community members participated. Dialogue questions focused on three topics: substance use patterns, the impact of COVID-19 on substance use and solutions to support lower risk substance use.

Results Five themes were evident in the dialogues: substance use stigma, insufficient resources and support, minimal substance use education, and COVID-19 stressors. Participants reported that substances were being used to cope with pandemic and academic demands, yet stigma at UBCO made it difficult for people to access support. Additionally, participants noted a lack of resources for people who use substances and their loved ones, leaving them feeling ill-equipped. Suggested solutions to address these concerns included accessible education, an anti-stigma campaign, and substance use support that included drug-checking.

Conclusion The findings indicated the need to strengthen harm reduction programming at UBCO. Based on these findings, HaRT launched a multi-faceted harm reduction service in partnership with Interior Health. The service includes confidential drug-checking, substance use education and referrals to support services. These initiatives have been positively received at UBCO.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 32

Presentation Time: n/a pm

Erin McArthur, Arts and Social Sciences

Exploring the Relationship Between Body Image and Self-Compassion in a Community Sample of Women Participating in a Small Changes Weight Management Program

McArthur, Erin; Lutes, Lesley; Ciszewski, Stefanie

Introduction: Body dissatisfaction is a subjective sense of dissatisfaction with one's self-image. Poor body image has been associated with numerous negative outcomes including poor mental and physical health. While body image is a significant factor related to body weight and seeking weight loss treatment, little research has examined body image in the context of a weight management program. Self-compassion, which refers to a mindful way of coping with pain by showing kindness towards the self, has recently been linked with positive body image. Weight management programs that incorporate small daily lifestyle changes (Small Changes) have had positive results in sustaining weight loss and improving participants well-being. However, no research has examined the role of self-compassion in improving body image in a sample of women seeking treatment for weight management using a Small Changes approach to weight-loss.

Objective: The purpose of this study is to explore the dynamic relationship between self-compassion and body image in a community sample of women participating in a Small Changes weight management program alone compared to a modified version of the program, specifically focusing on self-compassion and well-being as part of the treatment (INSPIRE).

Hypotheses: It is expected that body dissatisfaction and self-compassion will be negatively correlated and that baseline levels of self-compassion will predict change in body image at post-assessment. It is also expected that group assignment (INSPIRE vs Small Changes) will moderate the relationship between change in both self-compassion and body image.

Methods: Participants will include 58 women seeking weight management treatment as part of the INSPIRE Randomized Controlled Trial. Body image will be assessed by the Body Shape Questionnaire and self-compassion will be assessed using the Self-Compassion Scale. Simple regression will be used to evaluate the relationship between self-compassion and body image; evaluating both baseline and global self-compassion with pre- and post- assessment levels of body image. Multiple regression will be used to assess which features of baseline self-compassion predict change in body image.

Conclusions/ Implications: Results will have implications for how we approach weight management programs by incorporating well-being intervention techniques such as self-compassion to improve participants overall body image and well-being.

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Category 6: Virtual and Digital Health

Poster #: 33

Presentation Time: 6:35 pm

Brett Bernard, Health and Social Development

Maximizing the utility of accelerometry and global positioning systems in health research: family-based physical activity as an applied example

Bernard, Brett; Genereaux-Guidi, Alexis; Ravishankara, Adithya; Homayoun, Najjaran; Voss, Christine

Background: A major determinant of health and well-being is the amount of physical activity (PA) an individual participates in. Currently, many Canadians do not meet PA guidelines. Children are particularly vulnerable as PA habits formed in childhood tend to persist throughout the rest of life. It is well documented that parents are important facilitators for their child's PA, but it is difficult to measure the associations between parental supervision, parental PA and child PA. Accelerometry (ACC) data shows intensity of PA while global positioning system (GPS) data shows location. These tools facilitate investigation into what settings and times correlate with PA in children. However, the true potential of ACC and GPS data remains underutilized as advanced data processing skills and expertise with geographic information systems (GIS) applications are required.

Objective: The current pilot study seeks to explore whether ACC and GPS data can be used to measure family-based PA in terms of time, location and intensity of PA, accrued when the family is together.

Methods: Two adults and one child wore a GT3X+ ActiGraph accelerometer and a BT-Q1000XT QStarz GPS device around their waists for 7 days. Data will be processed with a custom-written algorithm to clean GPS tracks and to categorise PA behaviours according to well-established PA intensity thresholds that are related to optimal health outcomes. Participants' data will be mapped in GIS (ArcMap, Esri Inc., Redlands CA) and specific times and locations of PA behaviours will be identified (solo or as a family). Interpretation of PA locations will be aided by over-laying publicly available GIS data, such as active transportation networks and parks (City of Kelowna Open Data Catalogue).

Expected Results and Impact: This pilot study will provide concrete examples of how ACC and GPS data can yield useful contextual information about PA behaviours. Specifically, we expect to identify PA 'hotspots' and the relationship between child and parent PA behaviours. This technology has potential for broad application in health research, including research on children's independent mobility (i.e. roaming neighbourhoods without adult supervision) and the link between the built environment and active transportation behaviours (adult and children).

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 34

Presentation Time: 6:42 pm

Cara Johnston, Health and Social Development

Evaluation and Refinement of a Bank of Text Messages to Promote Behaviour Change Adherence Following a Diabetes Prevention Program.

Johnston, Cara; MacPherson, Megan; Cranston, Kaela; Locke, Sean; Jung, Mary

Introduction: Given the increasing reliance on mobile technologies and widespread use of short messaging services (SMS) as a communication strategy, SMS provides an opportunity to improve the delivery of healthcare virtually. SMS has been shown to be an effective way to reach a broad audience engaging in physical activity and dietary interventions. Understanding how interventions are developed is necessary for future research to implement effective SMS interventions.

Research Question & Hypothesis: This study aimed to evaluate and refine a bank of 124 SMS messages that were developed using a theoretical framework (the Behavior Change Wheel) for future implementation to support exercise and dietary maintenance once participants complete the Small Steps for Big Changes (SSBC) diabetes prevention program.

Methods: The study design consisted of two phases. 1) Evaluation: Five SSBC trainers and 13 past SSBC participants were asked to review a bank of 124 SMS messages using a 5-point Likert scale on readability, usefulness, and relevance. Each message was followed by a text box for suggestions on improvements. 2) Refinement: an average score was calculated for each message (ranging from 3-15). Any message with a score <14 was refined using participant feedback.

Results: On average, messages received a score of 13.77/15±0.76, with SSBC trainers scoring messages 0.81 higher than did participants. Questions received an average of 2.6 suggestions for improvement (range=0-5). 60 messages received a score <14 and were edited based on feedback from participants; 23 messages received a score >14 but had multiple suggestions so were refined based on feedback; 11 messages received consistent critique around applicability to the program and were removed.

Conclusion: This study involved the evaluation and refinement of a bank of SMS messages which are suitable for use following the SSBC program. These messages are based on behaviour change theory and have been refined based on feedback from those with lived experiences as diabetes prevention program trainers and participants. The message bank was positively assessed by those representative of future message senders and recipients and will be further tested to determine its effect on adherence to diet and exercise changes made during the SSBC program.

Please see conference posters here: https://osf.io/ezxkv/wiki/Posters_by_Category/

Poster #: 35

Presentation Time: 6:49 pm

Taylor Regier, Applied Science; Hans Fuhrmann, Science

Designing Smartphone Solution to Provide Personalized Feedback on Non-prescription Medicines

Regier, Taylor; Fuhrmann, Hans; Struik, Laura; Bottorff, Joan; Hasan, Khalad

Introduction Non-prescription medications are often an individual's first course of action for managing symptoms of minor health issues. Previous studies have found that improper non-prescription medicine use resulting in adverse drug reactions is a frequent cause of emergency room visits, hospitalizations, and even death. We developed a smartphone app to provide personalized feedback to users on non-prescription medications. With the app, a user can scan over-the-counter medications using a smartphone camera and receive personalized feedback based on their medical conditions and medication intake, thus reducing the potential for adverse drug reactions. **Research Question and**

Hypothesis The app is designed to assist users in making informed decisions about nonprescription medicines. The next step in this research is to conduct interviews exploring (i) pharmacists' assessments of the app features and personalized feedback styles as they commonly make suggestions on non-prescription medicines and (ii) users' feedback on the usefulness of the app to guide purchase of non-prescription medicines. We hypothesized that both groups would find the app useful for guiding the selection of non-prescription medicines.

Research Methods We are conducting semi-structured interviews via Zoom exploring pharmacists' assessments of the app. After collecting data from 6 pharmacists, we will interview 12 users who purchase over-the-counter medicines to collect their feedback on using the app - particularly regarding app features, usefulness, efficiency, user-friendliness, and accessibility.

Results Data from 4 pharmacists revealed that they perceived the app holds significant potential in reducing adverse events caused by drug complications. They also indicated that the app would potentially reduce the number of questions that they receive regarding drug interactions. However, they expressed concerns about liability and scalability of the app once it is deployed in the app stores.

Conclusions Preliminary findings indicate this smartphone app has potential to guide users by providing personalized feedback on over-the-counter medicine. User feedback on the app will be important in determining the acceptability and perceived usefulness of the app as a decision support tool to guide selection of non-prescription medications and reduce the risk of drug complications.

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Poster #: 36

Presentation Time: 6:56 pm

Sarah Park, Medicine

TeleRehabilitation with Aims to Improve Lower extremity recovery post-stroke (TRAIL): Study Protocol

Park, Sarah; Tang, Ada; Barclay, Ruth; Bayley, Mark; Eng, Janice; Mackay-Lyons, Marilyn; Pollock, Courtney; Pooyania, Sepideh; Teasell, Robert; Yao, Jennifer; Sakakibara, Brodie

INTRODUCTION: While stroke is an acute event, it has long-term health consequences such as limb weakness and deficits, as well as cognitive impairments. Unfortunately, stroke survivors have limited access to rehabilitation, particularly beyond time-limited hospital-based services. It is still common for stroke survivors to report unmet needs with regards to lower extremity function, which are in turn associated with poor functional outcomes, balance issues, and high incidence of falls. Telerehabilitation can be used to mitigate issues surrounding accessibility of rehabilitation services but there is a paucity of studies investigating its efficacy specifically for lower extremity recovery.

OBJECTIVE: To examine the feasibility and proof-of-concept of a telerehabilitation program designed to improve lower extremity recovery among community-living stroke survivors.

HYPOTHESIS: The TeleRehabilitation with Aims to Improve Lower extremity recovery post-stroke (TRAIL) program will demonstrate sufficient feasibility to support a larger, multi-site randomized controlled trial and stroke survivors will show trends of improvement in the clinical outcomes.

METHODS: National, multi-site, single group pre-post study. Participants: Individuals ($n = 32$), ≥ 19 years old, within 18 months of their stroke living in the community with lower extremity impairment will be recruited using five partner sites of the Canadian Partnership for Stroke Recovery CanStroke Recovery Trials Platform. Intervention: In groups of 2, participants will receive the 4-week 12-session TRAIL program. Two (60-90 minutes) sessions/week will be delivered via face-to-face videoconferencing by physiotherapists to administer an evidence-based exercise program. Participants will also work with therapists to co-develop personalized self-managed exercise plans to be completed between sessions. Outcomes: Feasibility outcomes in the areas of process, resources, management, and scientific and clinical outcomes including functional mobility and balance, lower extremity strength, motor impairment, quality of life, self-efficacy, and goal setting will be examined virtually. Statistical Analysis: Feasibility measures will be treated as binary outcomes with "success" or "revise" based on pre-defined thresholds. Clinical outcomes will be analyzed using paired sample t-tests for statistical significance ($p < 0.05$).

CONCLUSION & IMPACT: The low-cost and remote delivery of TRAIL may enable a large number of Canadians in both urban and rural regions to access specialized stroke care and extend opportunity for rehabilitation.

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Poster #: 37

Presentation Time: 7:03 pm

Michelle Yang, Medicine

A student-delivered Community Outreach teleheAlth program for Covid education and Health promotion (COACH): Study protocol

Yang, Michelle; Clayton, Cam; Schmidt, Julia; Zwicker, Jill; Harris, Devin; Pelletier, Chelsea; Sakakibara, Brodie

Background: Quarantining, social isolation, and physical distancing are ongoing prevention strategies to reduce transmission of the novel coronavirus (COVID-19). As a result, communities have closed public places, restricted travel, instituted voluntary home curfews, and cancelled events. While important for minimizing the spread of COVID-19, these strategies are also shown to compromise one's ability to manage their health and thus, increases risk of adverse health events. In this study, we report on the protocol to evaluate the novel student-delivered Community Outreach teleheAlth program for Covid education and Health promotion (COACH), a two-month health coaching program delivered via telephone/video-conference.

We hypothesize that COACH will improve health promoting behaviour in community-living adults, ≥ 65 years of age. We also anticipate COACH will improve secondary outcomes in areas of perceived stress, depressive and anxiety symptoms, social support, health-related quality of life, and health promotion self-efficacy.

Methods: In this single-group pre-post study, we will recruit 75 community-living older adults (≥ 65 years of age) who have access to telephone/video-conferencing technology. Our primary outcome will be measured using the Health Education Impact Questionnaire. Secondary outcomes will be measured using Depression, Anxiety and Stress Scales, Medical Outcomes Study: Social Support Survey, MOS Short Form-36, and Self-Rated Abilities for Health Practices Scale. Participants will receive: (1) a self-management manual with information about chronic disease management and prevention, and strategies to better manage health-related behaviours; (2) a self-report evaluation on health behaviours; (3) COVID-19 education and reinforcement of provincial orders; and (4) six 30 to 45-minute telephone/video-conference tailored health coaching sessions with a trained student-coach. In each session, coaches will follow the evidence-based 5A self-management counselling model to help participants identify health behaviour goals and develop readily achievable plans for participants to follow in between sessions. S

Significance/Impact: COACH represents a low-cost, easily mobilized, and proactive approach to ensure effective health self-management among community-living older adults during unprecedented times like the COVID-19 pandemic. We anticipate COACH will prevent health complications resulting from quarantining, social isolation, and physical distancing, and potentially lower the risk of older adults contracting COVID-19 by providing education and reinforcing provincial health directives.

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10 Minute Presentations

Presentation Time: 7:30 pm

Kimberley Rutledge, Arts and Social Sciences; Mariza Micallef, Arts and Social Sciences

Food security at UBCO: What's your recipe?

Rutledge, Kim; Micallef, Mariza; Hamilton, Casey; Airth, Lauren; Bottorff, Joan

Introduction Household food insecurity is a situation in which an individual worries about or does not have enough money to purchase the food they need to support their wellbeing. At UBCO, previous research has indicated that 42.3% of students experience some level of household food insecurity, and that these rates are higher for students who identify as LGBTQ+, BIPOC, disabled, international students, and/or graduate students.

Objectives a) To learn about the lived experience of student household food insecurity. b) To obtain advice from students about how UBC may support student household food insecurity, food literacy, and the broader campus food system.

Methods This qualitative study was conducted using the VOICE methodological framework (Community-Based Participatory Action Research, health promotion strategies, and youth-adult partnerships). 12 "Mouthful" table talks were held with 54 UBCO students. Participants completed a screening tool to determine self-identified food insecurity status. A meal was shared with participants as they discussed questions related to their experiences with household food insecurity, food literacy, and the campus food system. Table talks were audio recorded, transcribed, and analyzed into categories.

Results Participants shared how household food insecurity negatively impacts their physical, mental, social, and academic health. They described the coping strategies that they implement to manage their financial hardships. The majority of students reported that heavy and stressful workloads competed with their meal times and with building their food literacy. Societal and economic structures were identified as major barriers to achieving food security, including cost of education and living, systemic racism and discrimination, and an increasing competitive academic and career environment. Participants called on UBC to increase financial support for students and to take policy and advocacy approaches to increasing affordability.

Conclusion Participants described systemic and institutional structural barriers which keep students in poverty. Until systemic changes are made to increase equity within the student population, and especially for students who are marginalized, household food insecurity (i.e. poverty) will always be an issue. UBCO may lead by example through policy/practice changes and advocacy to support student finances, increased affordability, and increased equity for students who are marginalized.

Presentation Time: 7:45 pm

Brianna Tsui, Health and Social Development

Environmental and Demographic Determinants of Daily Physical Activity in Children and Youth with Disabilities in Canada

Brianna Tsui; Emily Bremer; Kelly Arbour-Nicitopoulos; Ritu Sharma; Christine Voss

Background. Physical activity (PA) is important for mental and physical health in all children. There is little data about PA levels and its determinants in Canadian children and youth with disabilities. Currently, the National Physical Activity Measurement Study (NPAM) is the first, large scale study in Canada to investigate PA levels in children and youth with disabilities.

Research Question. What are the main demographic and environmental factors that affect the amount of PA in children and youth with disabilities in Canada? **Methods.** 133 children and youth with disabilities ages 4-17 years in the larger NPAM study wore Fitbits® (Charge HR) for 28 days to assess PA (steps/d). Mean steps/d was calculated for each participant for valid days ($\geq 1,500$ steps/day). Geographic Information Systems (GIS) was used to analyze local environmental factors near participant homes. A five-kilometer coastal buffer (ocean, great lake) was created to determine participants' proximity to coastline. Urban-rural location was identified using Statistics Canada classification. Daily maximum temperature ($^{\circ}\text{C}$) from government historical weather records was extracted for the weather station closest to each home. Demographic data (age, gender, disability type) was parent reported. Using R, simple and multiple regression analyses assessed associations between demographic factors, environmental factors, and daily steps. Significance was set at $p < 0.05$.

Results. Mean age was 10 ± 3 years with 98 boys and 35 girls. 34 participants had a physical disability and 99 were non-physical. Steps/d were 9256 ± 3105 steps across 16 ± 9 days. A significant inverse association was between age and steps/d (-193 steps/year of age). Mean steps decreased by 193 for each additional year of age. Participants with non-physical disabilities tended to have higher steps/d (9533 steps) than participants with physical disabilities (8445 steps; $p = 0.07$). There were no associations between gender and environmental factors with steps/d. **Conclusion.** Older children with disabilities are less active than younger children with disabilities, which is observed in typically developing children. Environmental and demographic factors in this study had little or no effect on daily PA in children and youth with disabilities. These findings suggest that further investigation must determine what factors influence daily PA in children and youth with disabilities.

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Presentation Time: 8:00 pm

Liisa Wainman, Medicine

Development of a rodent spinal cord injury model permissive to study the cardiovascular effects of rehabilitation approaches designed to induce neuroplasticity

Wainman, Liisa; Ahmadian, Mehdi; Erskine, Erin; West, Christopher

Background and Aims: Spinal cord injury (SCI) induced dysregulation of the cardiovascular (CV) system occurs primarily due to altered descending control over the sympathetic preganglionic neurons. Within the somatic nervous system, the development of pre-clinical models of SCI has provided researchers with a powerful tool to study the effects of neuroplasticity on functional outcomes. To date, a similar pre-clinical model that spares sufficient descending sympathetic pathways to enable the study of neuroplasticity within the sympathetic nervous system but still induces a substantial decline in cardiac and hemodynamic function has not been forthcoming. To address this need we developed a moderately-severe midline contusion injury model at the T3 spinal level, measured in vivo hemodynamic and cardiac function invasively via catheterization, and quantified lesion site characteristics.

Methods: A total of 36 Wistar rats were assigned to either SCI (n=13) or naive (n=23) groups. For spinal cord contusion, a T3 laminectomy was performed and the animals were injured at the T3 spinal segment using an Infinite Horizon impactor with 300 kdyn of force while under isoflurane anesthesia. At 14 days post-SCI, left-ventricular and arterial catheterization was performed to assess in vivo cardiac and hemodynamic function. Following in vivo measures, the spinal cord was harvested, cut, and stained to determine lesion site characteristics via immunohistochemistry. Between-group differences in all outcomes were analyzed using an independent samples t-test. Statistical significance was set at $p < 0.05$.

Results: SCI produced a decrease in left ventricular maximum pressure (LVmax) (naive=120±9 mmHg vs SCI=99±12 mmHg, $p < 0.001$) and maximal left ventricular pressure rise (dP/dtmax) (9984±1049 vs. 6101±787 mmHg/s $p < 0.001$), arterial systolic blood pressure (127±14 vs. 97±10 mmHg, $p < 0.001$), diastolic blood pressure (76±11 vs. 57±8 mmHg, $p < 0.001$) and mean arterial pressure (93±12 vs. 69±8 mmHg, $p < 0.001$). Immunohistological staining and visualization of the epicenter of the cord revealed 17±4% tissue sparing.

Conclusions: Our novel 300 kdyn contusion SCI produced significant decreases in cardiac and hemodynamic function while preserving 15-20% of tissue at the epicentre. These findings suggest that our novel 300 kdyn contusion injury is a useful pre-clinical model of SCI to study rehabilitation approaches designed to induce neuroplasticity.