Conference for Undergraduate Health Research

Welcome to the 2022 International Conference for Undergraduate Health Research (CUHR) - Brought to you by the Undergraduate Health Research Exploration (UHRE)

We are excited to have you join us for this 2-day virtual conference. Below you will find the itinerary for 83 presentations spread over 7 rooms with specific zoom links. We want to thank the Faculty of Health at York University for supporting this conference.

We welcome you to join us for keynote speeches at 12 PM on both days and then make your way to the zoom rooms with the student presentations starting at 1 PM.

We hope you enjoy the conference!

Sincerely,

CUHR Organizing Team

MAIN ROOM - INTRODUCTION TO CONFERENCE - DAY 1

Zoom Link:
https://yorku.zoom.us/j/96474049028?pwd=MEpVdVJDOHl0eXVuM2N6bExBZzdKQT09

Start	End	Title
12:00 PM	12:15 PM	Welcome + Introductions
12:15 PM	12:55 PM	Keynote Speech: Dr. Harvey Skinner, PhD, CPsych, FCAHS

DAY 1 ROOM A

Zoom Link:
https://yorku.zoom.us/j/92993678424?pwd=dGZjK3BkZk9YMkpnaGVwT3JuaDZ4UT09

Start	End	Title	Presenter
01:00 PM	01:15 PM	Stopping the Stomach Ache: Transient Receptor Potential-Mediated Targeting of Activity Blockers Into Gut Nociceptors For Selective Blockade of Abdominal Pain	Nurit Engelmayer
01:15 PM	01:30 PM	Glycaemic dynamics in women with gestational diabetes mellitus	Andrés F. Valenzuela Hinrichsen
01:30 PM	01:45 PM	Effects of a 12-Week Resistance and Plyometric Exercise Training program with Greek Yogurt Supplementation on Markers of Systemic Inflammation - A Secondary Analysis	Zahra Davoodi
01:45 PM	02:00 PM	The Association Between Glycaemic Index and Load and Cardiovascular Disease Mortality: A Systematic Review and Meta-analysis	Fei Yi Teenie Siu
02:00 PM	02:15 PM	Enter Meeting ID Here: A cross-sectional study on the association of the study from home (SFH) setup on the nutritional status of undergraduate students in the College of Home Economics, University of the Philippines Diliman	Patricia Ceferina Isabelle R. Galindez (Principal Investigator)
02:15 PM	03:00 PM	**BREAK**	
03:00 PM	03:15 PM	A cross sectional analysis assessing the healthfulness of menu items of Canadian chain restaurants by applying proposed Canadian Front of Package regulation thresholds	Marah Akour

Start	End	Title	Presenter
03:15 PM	03:30 PM	Ex vivo mouse models of renal fibrosis induced via ureter obstruction and cisplatin	Anupama Bhadwal
03:30 PM	03:45 PM	Overweight and obesity diagnosis and related factors using National Health and Nutrition Examination Survey 2003-2006	Reagan Alexander Reid
03:45 PM	04:00 PM	A Systemic Literature Review on Evolving Clinical Practice Guidelines for Prostate Cancer Screening; Evidence from last two decades (1991-2020)	Elif Gokcen Bozkurt
04:00 PM	04:15 PM	The potential use of focused high-energy extracorporeal shockwave therapy for the control of Streptococcus mutans and Candida albicans biofilms	Antonia Belén Olivares Melossi
04:15 PM	04:30 PM	The role of the kidney in maintaining brain perfusion during acute anemia: Can experimental studies inform clinical care?	Helen Jiang
04:30 PM	04:45 PM	Treatment of Apathy in Parkinson's Disease: A Bayesian Network Meta-Analysis of Randomised Controlled Trials	Yong Jung Hahn
04:45 PM	05:00 PM	The relation between the prevalence of musculoskeletal pain in the upper extremities among children and adolescents in Israel	Shay Berg, Oren Lidor, Noy Segal

DAY 1 ROOM B

Zoom Link:
https://yorku.zoom.us/j/96385670771?pwd=c05QRDl3RHRpRkpDenhXa0hjZkNudz09

Start	End	Title	Presenter
01:00 PM	01:15 PM	Pain management among patients with sickle cell disease at Moi Teaching and Referral Hospital, Kenya.	Nyakundi Caleb Mariera
01:15 PM	01:30 PM	Burnout among nurses in Moi Teaching and Referral Hospital, Kenya	Romeo Warera Ngesa
01:30 PM	01:45 PM	Impact of COVID-19 on utilization of maternal healthcare services in public facilities within Eldoret Municipality, Kenya	Sharon Jerop Kipkemoi
01:45 PM	02:00 PM	Implementing Best Practices When Conducting a Web-Survey – Review of a Recently Administered Web-Survey and Current Literature	Prabdeep Panesar
02:00 PM	02:15 PM	Flipping Research Methods: Evaluating Students' Perceptions of a Flipped Classroom Design for Remote Delivery	Charlotte Kerr
02:15 PM	03:00 PM		

		BREAK	
03:00 PM	03:15 PM	Provision of surgical services amidst Covid-19 pandemic at Moi Teaching and Referral Hospital, Kenya	Salome Chepkorir
03:15 PM	03:30 PM	A Gender-Based Analysis on Violence & Harassment Against Costa Rican Indigenous Women	Janani Manivannan
03:30 PM	03:45 PM	COVID-related worry and alcohol use among essential workers during the pandemic: A secondary analysis	Christina Simms
03:45 PM	04:00 PM	Quality of life in siblings of children with disabilities: A comparison of parent-report and sibling self-report ratings following participation in an online group intervention.	Tamiko Isaacs
04:00 PM	04:15 PM	A systematic review of patient-reported outcomes of cognitive dysfunction in multiple sclerosis	Aidan Peters
04:15 PM	04:30 PM	Do Ecological Models for Invasive, Non-indigenous Species and Biodiversity Loss have any Relevance for the ongoing COVID-19 Pandemic? A Review Taking Particular Account of the One Health Approach to Managing the Present Pandemic and Preventing Future Ones	Ariana Fathi
04:30 PM	04:45 PM	Family Stories' Effect on Coping with Cancer	Jodi Crawford
04:45 PM	05:00 PM	COVID-19 Health & Labour Realities of Migrant Asian Women in Toronto, Ontario	Benton J. Oliver

DAY 1 ROOM C

Zoom Link:
https://yorku.zoom.us/j/94330966724?pwd=K3kwYzZRUWFUUIR6K1h6bmZ2enkzUT09

Start	End	Title	Presenter
01:00 PM	01:15 PM	Shifting Architectures of Cognition and Brain Function in Older Adulthood	Patrick Hewan
01:15 PM	01:30 PM	Parenting Imposters: A correlational study between Parenting Styles and Imposter Phenomenon	Deeaanj Hinduja
01:30 PM	01:45 PM	Actively Open-Minded Thinking: A Predictor of Rational Thinking in Adolescents	Emillie Thuy-Linh Vu
01:45 PM	02:00 PM	Examination of scientific reasoning tasks in a sample of adolescents	Christiane Marie Canillo

02:00 PM	02:15 PM	Advantages of three-dimensional technologies in a progressive view of healthcare	Amelia Serafino
02:15 PM	03:00 PM	**BREAK**	
03:00 PM	03:15 PM	Caregivers' Behavioural Responses to Infant Pain: The Role of Culture and Physiology	Haleh Hashemi
03:15 PM	03:30 PM	Resistance to Miserly Processing In Adolescents	Joshua T. Rubenstein
03:30 PM	03:45 PM	The differences in the occupational experiences of parents of children with and without attention deficit hyperactive disorder	Yaffa Matitya
03:45 PM	04:00 PM	Anti-Vaccine Culture on Tiktok	Mary Angel Kaye Conje
04:00 PM	04:15 PM	Pain-related Content in Autobiographical Memory of Youth Undergoing Major surgery	Chenyue Zhang
04:15 PM	04:30 PM	Quality of life among people living with diabetes in Ghana: A cross-sectional cohort study	Wambui Kamau
04:30 PM	04:45 PM	Investigating the influence of reward-related processes on the relationship between childhood adversity and COVID-related stress and anxiety.	Farhat Ullah
04:45 PM	05:00 PM	COVID-19 and Development: A Centralized Resource for Accessible Public Information	Julian Carusone

MAIN ROOM - INTRODUCTION TO CONFERENCE - DAY 2

Zoom Link:
https://yorku.zoom.us/j/98460343320?pwd=cmV2b216dFpNKzdTWC9QQ3BPWUlZUT09

Start	End	Title
12:00 PM	1:00 PM	Keynote Speech: Dr. Kimberly Badal, PhD

DAY 2 ROOM A

Zoom Link:
https://yorku.zoom.us/j/92111392267?pwd=VGdldXFjVmM3SzJwZlZ1R2VSd0ozQT09

Start	End	Title	Presenter
01:00 PM	01:15 PM	Re-analysis of interdisciplinary approaches and social support on ACLR Athletes: Understanding how multiple stakeholders affect female sport	Casey Ann Arguelles

Start	End	Title	Presenter
		injury recovery	
01:15 PM	01:30 PM	Impact of COVID-19 Pandemic on the Physical and Mental Health of Patients with Parkinson's Disease: A Systematic Review and Meta-Analysis of 13,878 Patients	Aaron Shengting Mai
01:30 PM	01:45 PM	The Disability Wiki Project: A Virtual Community for Disability Advocacy using Artificial Intelligence	Bushra Kundi
01:45 PM	02:00 PM	Framing Sport as a Platform for Sustainable Development: A Case Study on the 2023 Canada Winter Games	Kyara Simoes
02:00 PM	02:15 PM	Usefulness of three-dimensional (3D) anatomical table in pre-surgical phases to minimalize the complications rates.	Azzurra Mandolito
02:15 PM	03:00 PM	**BREAK**	
03:00 PM	03:15 PM	Using Thin Slicing of Client Emotions to Detect and Combat Client Resistance to Psychotherapy	Michelle Park
03:15 PM	03:30 PM	Understanding and Improving Bicultural Identity Integration	Jessica Soliman
03:30 PM	03:45 PM	Acculturation, Acculturative Stress, and Risk-Taking: An Experimental Approach	Ashmita Mazumder
03:45 PM	04:00 PM	The Effect of Self-Affirmation on Self-Esteem & Well-Being in Adults During Covid-19 Pandemic	Sagarina Ghosh
04:00 PM	04:15 PM	Global citizenship education in the Philippines and Sri Lanka: a collaborative discourse and curriculum analyses for quality education	Renchillina Joy G. Supan
04:15 PM	04:30 PM	Research on the influencing factors of willingness to COVID-19 vaccination based on the Theory of Planned Behavior——taking the college students as an example	Jingyi Xia

DAY 2 ROOM B

Zoom Link:
https://yorku.zoom.us/j/93770747167?pwd=QVFUanFldHg0cmZqdzVJQUQyS24vQT09

Start	End	Title	Presenter
01:00 PM	01:15 PM	The impact of armed conflict on the physical and mental health of affected populations: a perspective from World Health Organization's institutional responses	Consuêlo Maria Braga Pierre Branco

Start	End	Title	Presenter
01:15 PM	01:30 PM	Exploring the use of metaphor in informal cancer caregivers' experiences supporting hematological cancer patients undergoing allogeneic stem cell transplantation	Arta Taghavi Haghayegh
01:30 PM	01:45 PM	The relationships between lifestyles, perceived stress, health locus of control, and health motivation of higher education students in Malaysia.	Bing Jie Lin
01:45 PM	02:00 PM	Long-lasting insecticidal nets ownership and Malaria morbidity in the Krachi East Municipality, Ghana	Israel Wuresah
02:00 PM	02:15 PM	Cutting the Meat at the Joint: The Role of Defining How Animals are Viewed and Treated in the Governance of (Re-)Emergent Pandemic Zoonoses in International Law	Victoria Cassar
02:15 PM	03:00 PM	**BREAK**	
03:00 PM	03:15 PM	CALIPER: Establishing a comprehensive database of pediatrics reference intervals for biomarkers of health and disease through community initiatives	Elina Farahani
03:15 PM	03:30 PM	Identifying and Overcoming Barriers to Participation in Health and Physical Activity Programs Among Trans, Non-Binary, and Gender Non-Conforming University Students	Ghazal Haddadi
03:30 PM	03:45 PM	Investigating Process Acuity and Self-Enhancement Bias of Psychotherapists vs. Non-Therapists using a Novel Skills Test	Max Cooper
03:45 PM	04:00 PM	Relation of serum levels of Trimethylamine N-oxide (TMAO) and CVD and all-cause mortality: a systematic review and dose-response meta-analysis of prospective cohort studies.	Fei Yi Teenie Siu
04:00 PM	04:15 PM	Protective Factors in the Early Home Environment: Exploring Sensitive Caregiving and its Associations with Caregiver Depression and Child Language Outcomes.	Rhonda Liane Baker
04:15 PM	04:30 PM	Bilateral Salpingo-Oophorectomy and Sleep	Shelby Davies

DAY 2 ROOM C

Zoom Link:
https://yorku.zoom.us/j/92351875684?pwd=bEJZSXo4NVhQN2JEZm1YOFhJMGZaUT09

Start	End	Title	Presenter

Start	End	Title	Presenter
01:00 PM	01:15 PM	The Impact Of The International Wildlife Trade When Creating Pandemic Prevention Legislation: A Review Of Grey Literature	Ryan Austin Jeevanayagam
01:15 PM	01:30 PM	Adolescent Gender-Based Violence Amidst the Novel Coronavirus: A Scoping Review	Liran Leidershnaider
01:30 PM	01:45 PM	Glaucoma Self - Care Habits And Psychological Status Changes During The Covid-19 Pandemic: The Patient's Perspective	Urtė Žakarytė
01:45 PM	02:00 PM	Living with Family during COVID-19	Uyen Nhi Nguyen
02:00 PM	02:15 PM	Knowledge and Practice of radiation protection among oral health science students at the University of the Witwatersrand.	Atiyyahbanu Ismail Master
02:1 PM5	03:00 PM	**BREAK**	
03:00 PM	03:15 PM	Evaluating the Impact of Student Demographics on Lecture Capture Viewing Habits of Second-Year Undergraduate Students	Hening Sun
03:15 PM	03:30 PM	The Effect of Social Media Food Images on the Well-Being of Women at risk for and not at risk for an Eating Disorder	Marley Leslie
03:30 PM	03:45 PM	Gender-based violence against trans* individuals in sport: A look into the harm experienced by five trans and non-binary athletes in North America	Raiya Taha Thomure
03:45 PM	04:00 PM	The Influence of Family factors on Juvenile delinquency: A review paper	Arti Anil Pote
04:00 PM	04:15 PM	How did Nunavummiut Youth Cope during the COVID-19 Pandemic? A Qualitative Exploration of the Resilience of Inuit Youth Leaders involved in the I-SPARX Project	Alaina Thomas
04:15 PM	04:30 PM	Trauma-and-Violence-Informed-Sport for Development (TVISFD) approach within the work of practitioners and scholars in the sport-for-development (SFD) field.	Raghdah Zakariya

DAY 2 ROOM D

Zoom Link:
https://yorku.zoom.us/j/95984219322?pwd=TVRCcDZUa3owRklBcWl4OGpjRFpGZz09

Start	End	Title	Presenter
01:00 PM	01:15 PM	Epithelial Ovarian Cancer Causes Muscle-Specific	Shahrzad

		Fibrosis In A Murine Mouse Model	Khajehzadehshoushtar
01:15 PM	01:30 PM	Genetically Modified Bacteria for Targeted Elimination of Adherent-invasive Escherichia coli in Inflammatory Bowel Disease	McMaster Synthetic Biology Research Team
01:30 PM	01:45 PM	Developing Ex-Vivo Culture System of Mouse Uterus	Yvonne Ping
01:45 PM	02:00 PM	Oral contraceptive use and menstrual cycle influence acute cerebrovascular response to standing	Concetta Barranca
02:00 PM	02:15 PM	Pharmacological predictions of capsaicin analogs and their selectivity in TRPV1 channel	Vicente Joaquín Agüero López
02:15 PM	03:00 PM	**BREAK**	
03:00 PM	03:15 PM	Mitochondrial phenotypes caused by HUWE1 deletion in oocytes	Sara Sugin
03:15 PM	03:30 PM	Aetiology of Severe Adult Bacterial Community-Acquired Pneumonia Requiring Intensive Care Unit Admission at the University of Malaya Medical Centre, Kuala Lumpur, Malaysia: A 4-Year Retrospective Observational Study (2017-2020)	Leong Tung Ong
03:30 PM	03:45 PM	Validating a biomarker and new potential therapy target in chronic lymphocytic leukemia and multiple myeloma	Alita Gideon
03:45 PM	04:00 PM	Identifying the presence and development of muscle degradation and regeneration in a mouse model of ovarian cancer	Reagan Alexander Reid
04:00 PM	04:15 PM	Understanding microglial off-target contamination in Patch-seq datasets of human and mouse neurons	Yiyue (January) Jiang
04:15 PM	04:30 PM	Perceived Agency of Audiovisual Stimuli Does Not Affect Sensitivity to Synchronization During the Synchrony Judgment Paradigm	Kian Yousefi Kousha

* All times are in Eastern Standard Time (EST)

Presentation Abstracts

Presenter: Nurit Engelmayer

Title: Stopping the Stomach Ache: Transient Receptor Potential-Mediated Targeting of Activity Blockers Into Gut Nociceptors For Selective Blockade of Abdominal Pain

Abstract: Inflammatory bowel diseases (IBD) are a group of disorders characterized by intestinal inflammation manifesting as visceral pain, diarrhea, and impaired quality of life. Although there are numerous methods for treating gut inflammation, there are currently limited options for treating pain in IBD patients, necessitating the development of a strategy to alleviate visceral pain caused by these conditions. My project aims to understand the mechanism of IBD-induced pain and develop approaches for its treatment. Transient receptor potential TRPV1 and TRPA1 cation channels are known to mediate inflammatory pain. Prior attempts to block these channels have been unsuccessful due to dangerous side effects. Alternatively, our lab demonstrated that cationic derivatives of local anesthetics like QX314 can be selectively shuttled through active TRPV1 channels, selectively blocking somatic pain. We implemented this strategy to reduce visceral pain in a rodent model of IBD. We examined gut sensitivity by inducing colorectal distention and abdominal withdrawal reflexes were counted as a measure of gut sensitivity. Local application of QX314 together with capsaicin, a TRPV1 channel agonist used to activate the channels, blocked IBD-mediated gut hypersensitivity. Application of QX-314 into the colon of naïve rats did not affect pain sensitivity. Importantly, when we applied QX-314 alone into the inflamed gut, inflammatory-mediated abdominal pain diminished. These findings suggest that during gut inflammation, TRPV1 and TRPA1 channel are activated by proinflammatory factors and this activation is sufficient to allow the selective entry of the local anesthetics into pain-related neurons, blocking their activity and reducing inflammatory pain. We are examining this hypothesis using selective antagonists of TRPV1 and TRPA1 channels. These results would contribute to our understanding of the disease and pain mechanism in IBD offering a solution for localized pain relief in IBD patients.

Presenter: Andrés F. Valenzuela Hinrichsen

Title: Glycaemic dynamics in women with gestational diabetes mellitus

Abstract: Introduction: Gestational diabetes mellitus (GDM) is defined as any degree of glucose intolerance with onset or first recognition during pregnancy. The newborn to GDM pregnancies associates with metabolic, haematological and cardiological disorders, respiratory distress, and neurological impairments. Continuous glucose monitoring (CGM) records allow analysing glycaemic excursions related to the activity of patients during their daily routine. We analysed the glycaemic dynamics pre-pregnancy and during pregnancy in women with GDM, hypothesising that women with GDM before her pregnancy have an unstable glycemia. Materials and methods: CGM FreeStyle Libre TM device was used for glycaemia recording before (149 times, 6 months before pregnancy) and during (107 times, 32 weeks of pregnancy) pregnancy in a woman diagnosed with GDM at 24 weeks of pregnancy. The woman showed normal body mass index and was non-diabetic before

getting pregnant. After GDM diagnose, the woman was under controlled diet and exercise. CGM data was analysed for average ($\bar{X}$), standard deviation (SD), coefficient of variation (%CV), interquartile range (IQR), mean of daily differences (MODD), mean amplitude of glucose excursion (MAGE), low (LBGI) and high (HBGI) blood glucose index.
Results: The metrics $\bar{X}$, IQR and HBGI were higher in pregnancy compared with pre-pregnancy (157 vs 115 mg/dL, 53 vs 42 mg/dL, 11.6 vs 5.6, respectively). However, SD, %CV, and MAGE were lower in pregnancy (25 vs 27 mg/dL, 15.6 vs 23.1, 11 vs 15.4 mg/dL, respectively). Conclusion: GDM associated with changes in the glycaemia dynamics compared with the pre-pregnancy period. Higher IQR and HBGI may reflect a more unstable glycaemia in pregnancy that could be ameliorated by reduced variability and intensity of changes in glycaemia. This is a pilot study in a longitudinal analysis of a patient with GDM, therefore more data is needed.

Presenter: Zahra Davoodi

Title: Effects of a 12-Week Resistance and Plyometric Exercise Training program with Greek Yogurt Supplementation on Markers of Systemic Inflammation - A Secondary Analysis

Abstract: Wholefood dairy products contain protein (i.e., whey and casein) and other bioactive micronutrients (e.g., calcium, vitamin D) that modulate metabolic processes and can help to ameliorate systemic inflammation. Greek yogurt (GY) is a fermented dairy food that elicits some anti-inflammatory effects making GY of particular interest for modulating inflammation. Therefore, this secondary analysis aimed to examine the effects of GY supplementation versus an isoenergetic carbohydrate pudding (CP) on systemic inflammatory cytokines (interleukin-6 [IL-6], IL-1Beta [1L-1B], IL-10, tumour necrosis alpha [TNF-a]) following 12 weeks of resistance/plyometric exercise training in young, healthy, normal-weight males. Thirty males, who were low dairy consumers and naïve to resistance exercise, completed 12 weeks of resistance/plyometric training (3days/week) combined with supplementation of either 200g of GY 3x/day on training days and 150g 2x/day on non-training days, or 47g of an isoenergetic bolus of CP on the same schedule. Rested, fasting blood samples were obtained at baseline (week 0), weeks 1 and 12, and serum concentrations of IL-6, IL-1B, IL-10, TNF-a were analyzed. IL-1B decreased significantly in both groups at week 12 from baseline and from week 1 (time effect, $p = 0.021$). IL-6 reduced significantly between weeks 1 and 12 in the GY group only (interaction, $p = 0.049$). TNF-a was elevated at week 12 compared to baseline in the CP group only (interaction, $p = 0.041$). There were no main effects or interactions for IL-10. This is the first study to investigate the effects of GY and exercise training on systemic inflammation. These results, in healthy young males, indicate an anti-inflammatory effect of GY with exercise given the observed pro-inflammatory cytokine responses, specifically IL-6 and TNF-a. Future research should be primarily designed to investigate the influence of GY supplementation with exercise in different populations to fully elucidate GY's influence on systemic inflammatory markers.

Presenter: Fei Yi Teenie Siu

Title: The Association Between Glycaemic Index and Load and Cardiovascular Disease Mortality: A Systematic Review and Meta-analysis

Abstract: The glycemic index (GI) and glycemic load (GL) are proposed to predict risk of cardiovascular disease (CVD) and associated deaths. The evidence for the association for GI/GL with all-cause and CVD mortality is inconsistent. We therefore conducted a systematic review and meta-analysis to explore the relation between high GI and high GL diets with mortality from all-causes, CVD, MI, and stroke. We aimed to assess the association of GI/GL with total and CVD mortality and its components. MEDLINE, EMBASE, and Cochrane were searched through October 15, 2021. Prospective cohort studies of ≥1 year investigating the association between GI/GL and mortality for all-causes, CVD, stroke, and MI were included. Using Cochrane methodology, full article review and data extraction were conducted by two independent investigators. Data were analysed using the generic inverse variance method with random effects model. The number of studies included for GI/GL were: all-cause mortality 12/11, CVD mortality 12/10, stroke mortality 4/3, MI mortality 1/1. The significant associations for GI were: all-cause mortality (RR, 1.16 [95% CI, 1.07-1.26]; p=0.0004), CVD mortality (RR, 1.14 [1.01-1.28]; p=0.03), and stroke mortality (RR: 1.31 [1.06-1.61]; p=0.01). For glycemic load, significant associations were found for stroke mortality (RR, 1.31 [1.06-1.61]; p=0.01). Subgroup analysis showed significant associations only for women for GI and all-cause mortality (RR, 1.16 [1.08-1.23]; p<0.0001) and CVD mortality (RR, 1.32 [1.10-1.59]; p=0.003) and for GL and all-cause mortality (RR, 1.15 [1.05-1.25]; p=0.001) and CVD mortality (RR, 1.26 [1.04, 1.54]; p = 0.02). The associations seen in men did not reach significance. The test for subgroup differences between sexes reached significance (P<0.05) for GL and all-cause mortality (Chi²=5.88, df=1 (P=0.02)). High GI was associated with increased all-cause mortality, CVD mortality, and stroke mortality, with significant associations in women but not men.

Presenter: Patricia Ceferina Isabelle R. Galindez

Title: A cross-sectional study on the association of the study from home (SFH) setup on the nutritional status of undergraduate students in the College of Home Economics, University of the Philippines Diliman

Abstract: The consequences of infectious diseases and in particular, the COVID-19 pandemic, have devastated numerous populations since its onset. The widespread increase in cases and casualties compelled countries worldwide to declare a state of public health emergency. Education systems have also been affected, as governments worldwide have pushed for the closure of schools to minimise the transmission of the virus. In the Philippines, the government transitioned from traditional to flexible learning. Several studies have established that the pandemic has caused changes in an individual's lifestyle, nutrition-related behaviour, and intake. Notably, a decrease in overall caloric intake was observed due to poor diet quality. This becomes a concern for students, specifically undergraduate students, as they are vulnerable to malnutrition and unhealthy nutritional habits due to their lack of time for proper meals considering their heavy workload, as well as possible lack of social support and self-discipline. Given these circumstances, this study aims to explore the impact of the pandemic on nutritional intake by examining the association of the study from home (SFH) setup on the macronutrient intake of undergraduate students in the College of Home Economics, University of the Philippines Diliman (CHE-UPD). This will help in understanding how the SFH setup has affected study-life balance in relation to nutritional status. The study participants will consist of students from the CHE-UPD to gather high response rates due to their accessibility to the

researchers. Their sociodemographics and perceived daily time spent on academic-related activities will be collected using questionnaires before conducting the non-consecutive three-day 24-hour food recall to assess their usual macronutrient intake. The data from the questionnaires will be analysed using frequency and percentages in order to get the proportion of distribution of the respondents, while the association between the daily time spent on academic-related activities will be analysed using Spearman correlation.

Presenter: Marah Akour

Title: A cross sectional analysis assessing the healthfulness of menu items of Canadian chain restaurants by applying proposed Canadian Front of Package regulation thresholds

Abstract: Health Canada recently proposed the regulations requiring Front of Package Labelling (FoPL) on pre-packaged food items if the item is "high in" sodium, sugar and/or saturated fats (3S nutrients). However, these FoPL regulations are not applicable to foods sold in the restaurant sector, although eating out at restaurants has increasingly become a part of Canadian diets. The aim of this study was to examine the proportion of menu items in Canadian chain restaurants that would carry a FoPL, using the thresholds established for pre-packaged foods. Data were obtained from the 2020 University of Toronto MenuFLIP Database containing nutritional information from 141 Canadian chain restaurants. After exclusion of toppings/add-ons and items missing any 3S nutrients, 16,524 menu items were analyzed. Food items or meals meeting or exceeding 15% Daily Value (DV) or 30% DV respectively for any of the 3S nutrients, were assigned an FoPL. Most (89.3%) of the menu items would carry at least one FoPL, with 50.6% requiring two FoPL. Sodium (65.2%) and saturated fats (65.9%) were the two nutrients with the highest proportion of FoPL. When analyzed by food category, 78% and 80.4% of the beverages and desserts respectively, would carry an FoPL for sugar. Entrées and starters would carry the highest proportion of FoPLs for sodium (88.3% and 93.2%, respectively) and saturated fats (80.1% and 76%, respectively). These results show that a large proportion of menu items exceeded the thresholds for 3S nutrients set by Health Canada, and would require high in warning FoPL, if applied to this sector. Restaurants can be desirable for many reasons such as convenience; however, Canadians should have increased accessibility to the nutritional quality of menu items. These results suggest that Health Canada should consider the broader application of healthy eating policies and regulations, including FoPL, to include the restaurant sector.

Presenter: Anupama Bhadwal

Title: Ex vivo mouse models of renal fibrosis induced via ureter obstruction and cisplatin

Abstract: Renal fibrosis is a common endpoint for chronic kidney disease which affects about 10% of the global population. It is characterized as an accumulation of the extracellular matrix that can lead to end stage renal failure. Current research models include in vivo mouse models which induce fibrosis via ureter obstruction or cisplatin treatment. However considerable resources are required to generate and maintain these in vivo models, limiting current research into fibrosis and potential therapeutics. This study aims to generate ex vivo models of renal fibrosis using ureter obstruction and cisplatin treatment. The renal artery of mouse kidneys was cannulated and attached to a bioreactor allowing for

ex vivo organ perfusion. Fibrosis was then generated by ureter obstruction or a one-time high dose (10mg/kg) of cisplatin. Ureter obstruction kidneys were cultured for 4, 11, and 21 days, while cisplatin treated kidneys were cultured for 1, 4, and 7 days. Masson's Trichrome and Sirius Red stains were used to detect collagen accumulation, which was used as an indicator of fibrosis. Preliminary results indicate accumulation of collagen with both models as time progresses. However, longer time points and further data analysis including but not limited to RNA sequencing and immunofluorescence staining to determine the levels and patterns of relevant renal fibrosis markers are required. Furthermore, assessing kidney function through oxygen consumption and urine production can provide insight into the effectiveness of the ex vivo mouse model for renal fibrosis.

Presenter: Reagan Alexander Reid

Title: Overweight and obesity diagnosis and related factors using National Health and Nutrition Examination Survey 2003-2006

Abstract: Background: Obesity is an ever-prevalent epidemic that has affected millions of people across the globe. Obesity is often operationalized as having a body mass index (BMI) score over 30 or having the presence of excessive fat accumulation that can impair health. Majority of obesity related research focuses on the health consequences that arise from excess weight while relatively little attention has been paid to the potential biases that may exist when diagnosing obesity. The aim of this study is to assess whether certain demographic, medical, and behavioral patterns will lend an individual a higher likelihood of being told they are overweight by a physician. Methods: This study used the National Health and Nutrition Examination Survey (NHANES) data from the years 2003-2006. NHANES data is collected using cross-sectional surveys and physical examinations. The dependent variable, being told you were overweight by a physician was assessed via questionnaire. Multiple factors such as demographic, medical, and behavioral variables were probed using chi squared test. Logistic regressions were performed to examine whether being told overweight by a physician was a predictor of variables within the multivariable models of demographic, medical, and behavioral factors. Results: 20470 individuals were included in the sample as they meet the inclusion criteria of have having a response to the question of "were you told you are overweight by a physician?". When adjusted across all three models the lion share of factors showed no significant difference. However, outliers such as women and BMI categories showed a significant difference in being more likely to be told they were overweight across all three models. Conclusion: Further research needs to be done to better understand this topic. Future research should focus on comparing obesity classification between BMI and Edmonton obesity staging system to assess whether bias exists in BMI based classification of obesity.

Presenter: Elif Gokcen Bozkurt

Title: A Systemic Literature Review on Evolving Clinical Practice Guidelines for Prostate Cancer Screening; Evidence from last two decades (1991-2020)

Abstract: Evidence-based guidelines for health policy and medical treatment including diagnostic testing for certain conditions should be based on the best available scientific evidence, and tests to screen for certain diseases are increasingly common in medical

practice. However, over the last few decades, selection and detection criteria for screening and disease definitions for several important disorders have changed significantly. Major health organizations have recommended changes in several common disease definitions, often resulting in the expansion of the criteria for screening, diagnosis and treatment, leading to overmedicalization and overuse of health services. In this study we aim to conduct a systematic literature search to reveal changing patterns in Prostate Specific Antigen (PSA) testing for routine prostate cancer (PCa) screening. We followed the standard procedure for systematic literature reviews, including a Prisma Flowchart and a two-phase screening method to select the final pool of research articles to be included in the study for data extraction and visualization. We screened 1880 articles for title and abstract in pairs, 53 of them were selected for full-text screening, and finally with extra articles from reviews we extracted data from 97 articles. After, we collated and visualized the results to evaluate how some of the major policy thresholds, such as the recommended starting age for screening, screening interval and the threshold of PSA for biopsy referral changed over time, across different countries and institutions, spanning the period of 1991-2020. When we compare the screening recommendations for starting ages, screening intervals and biopsy thresholds among major health organizations in the United States and Europe, we see that despite the universal nature of the scientific evidence base, they adopt different and conflicting guidelines. We conclude that there is urgent need for better decision-support tools as a guide for health policy makers and clinicians regarding clinical practice guidelines (CPGs).

Presenter: Antonia Belén Olivares Melossi

Title: The potential use of focused high-energy extracorporeal shockwave therapy for the control of Streptococcus mutans and Candida albicans biofilms

Abstract: Antimicrobial resistance has become a global problem in the field of health care. Because of this, new treatment methods have been used and others are under development. Focused high-energy extracorporeal shockwave therapy (fhESWT) has been effective for the treatment of a wide variety of conditions including biofilm-mediated diseases. However, its use in dentistry remains unexplored, where chronic biofilm-mediated diseases, such as dental caries and periodontitis, are among the most prevalent worldwide. The aim of this study was to investigate the effect of fhESWT on the growth of the clinically-relevant microorganisms Streptococcus mutans and Candida albicans in mono-species and dual-species models in vitro. For this study, an interdisciplinary approach was employed. A 3D printed model was created in order to facilitate the application of fhESWT on S. mutans UA159 and C. albicans 90028. fhESWT were applied at increasing impulses of 0, 250, 500 and 1000. After application, serial dilutions were plated to obtain CFU counts and growth curves were carried out using a multimodal plate reader. Subsequently, biofilm formation was evaluated in a microplate assay with crystal violet staining. Significance was determined with ANOVA, considering a p-value of <0.05. No significant results were obtained for CFU counts and growth curves before and after fhESWT application for both S. mutans and C. albicans. Nevertheless, significant reductions were observed for S. mutans biofilm formation after the application of fhESWT compared to control. In the case of C. albicans, a trend towards growth inhibition was observed after the use of fhESWT, but this did not reach significance. In the dual-species model, a low number of impulses was associated with biofilm inhibition; however, the opposite was observed after

500 and 1000 impulses. The use of fhESWT is a promising alternative for the growth modulation of clinically relevant oral microorganisms and biofilms.

Presenter: Helen Jiang

Title: The role of the kidney in maintaining brain perfusion during acute anemia: Can experimental studies inform clinical care?

Abstract: Background and context: Evidence of increased stroke incidence in patients with renal failure suggests that the kidneys play an important role in supporting brain perfusion. In addition, surgical patients with anemia (low hemoglobin) surgery have an increased risk of kidney injury, stroke and mortality by undefined mechanism. We assessed the relationship between the kidney and brain utilizing a model of acute blood loss and fluid resuscitation (hemodilutional anemia) to test the hypothesis that the kidney plays a central role in maintaining brain perfusion. Research Objective: The goal of this study was to determine if removal of both kidneys (bilateral nephrectomy) in anesthetized rats affected brain oxygenation before and after initiating acute hemodilutional anemia. Methods: With Animal Care Committee approval, we performed sham or bilateral nephrectomy on anesthetized rats prior to acute hemodilution of 50% of their blood volume with hydroxyethyl starch (n=6). Heart rate, mean arterial pressure, arterial blood gases-oximetry and brain microvascular pO2 (OxyLED, oxyphor G4) were measured. Analysis by two-way ANOVA repeated measure was performed with $p<0.05$ taken to be significant. Results: Measured values for heart rate and mean arterial pressure were not different between groups. Brain microvascular pO2 were lower at baseline in nephrectomised rats (20.2 ± 1.8 vs 32.8 ± 1.7, $P<0.001$). Following hemodilution, microvascular brain pO2 in the nephrectomised rats decreased further, significantly below baseline values (15.0 ± 1.8 vs 20.2 ± 1.8, $p=0.022$). Differences resolved after 60 minutes. Discussion: Bilateral nephrectomy resulted in an acute reduction in brain microvascular oxygenation at baseline. This effect was more pronounced after acute hemodilutional anemia. These data support the hypothesis that the kidney contributes to maintain brain oxygenation under both resting conditions and after the hemodynamic stress associated with acute anemia. This suggests that the kidneys play a central role in ensuring optimal brain oxygen delivery. This information may be used to optimally treat anemic patients at risk of acute blood loss, renal injury, and stroke.

Presenter: Yong Jung Hahn

Title: Treatment of Apathy in Parkinson's Disease: A Bayesian Network Meta-Analysis of Randomised Controlled Trials

Abstract: Background: Apathy is an important but unrecognised aspect of Parkinson's disease (PD). The optimal therapeutic options for apathy remain unclear. Early recognition and treatment of apathy can reduce the significant burden of disease for patients and their caregivers. Here we conducted a meta-analysis to evaluate the comparative efficacy of different treatment modalities of apathy in PD (CRD42021292099). Methods: We screened Medline, Embase, and PsycINFO databases for articles on therapies for apathy in PD. The outcome of interest is the reduction in apathy scores post-intervention and is measured by standardised mean differences (SMD) with 95% credible intervals (CrI). We included only randomised controlled trials examining interventions targeted at reducing apathy. Results:

Nineteen studies involving 2,372 patients were included in the quantitative analysis. The network meta-analysis found pharmacotherapy to be the most efficacious treatment, significantly better than brain stimulation (SMD -0.43, 95% CrI -0.78 to -0.07), exercise-based interventions (SMD -0.66, 95% CrI -1.25 to -0.08), supplements (SMD -0.33, 95% CrI -0.67 to 0), and placebo (SMD -0.38, 95% CrI -0.56 to -0.23). Subgroup analysis of pharmacotherapy versus placebo found similar efficacy of dopamine agonists (SMD -0.36, 95% CI -0.59 to -0.12, P=0.003) and alternative medications (SMD -0.42, 95% CI -0.61 to -0.23, P<0.001). The remaining comparisons and subgroup analyses did not demonstrate any significant treatment effects. Conclusion: Our meta-analysis of randomised controlled trials showed that pharmacotherapy is the most efficacious treatment option, with dopamine agonists having similar efficacy as other medications. Further research is needed to determine the optimal management strategy.

Presenter: Shay Berg

Title: The relation between the prevalence of musculoskeletal pain in the upper extremities among children and adolescents in Israel

Abstract: Musculoskeletal disorders are more common among children and adolescents these days, due to more frequent usage of mobile devices. It is currently estimated that about 75% of the world's population is exposed to high risk ergonomic factors due to abnormal position for long hours a day. However, only a few research has been done about the correlation between gaming, mobile phone use, and musculoskeletal pain in general and among children in particular. This study aimed to evaluate the relationship between the prevalence of musculoskeletal pain in the upper extremities among children and adolescents in Israel and the prolonged use of mobile phones and gaming. Another goal is to examine differences in pain level between males and females. Hundred subjects, aged 11-18 years will be recruited via social media. Each subject will answer an online survey, specifically built for the current study, which rate usage time and refer to gender, device type and level of pain during and after use. Furthermore, each subject will answer a formal questionnaires of pain - Standardized Nordic Questionnaire (SNQ) and Visual Analog Scale (VAS). In addition, videos taken at the time of use will be analyzed with The Rapid Upper Limb Assessment (RULA), in order to evaluate the ergonomic risk factors. The subjects will be divided into two groups – only mobile phone users and mobile phone and gaming users. Data analysis will be conducted for each group separately. The correlation between ergonomic risk factors and pain will be tested whiting each group and compared between the groups. Data is being collected now. The results will serve as a base for an ergonomic risks prevention and intervention.

Presenter: Nyakundi Caleb Mariera

Title: Pain management among patients with sickle cell disease at Moi Teaching and Referral Hospital, Kenya.

Abstract: An estimated 300,000 children are born with Sickle Cell Disease (SCD) worldwide and three-quarters of these births are in sub-Saharan Africa, with 50-90% of the children dying before fifth birthday. Sickle cell disease is the most common haemoglobinopathy in Kenya with a high prevalence in western Kenya; approximately 4.5% children are born with

SCD and 18% with sickle cell trait. Pain is one of the most common crises experienced by SCD patients. However, there is still lack of effective pain management in sickle cell patients and practices vary by region and population. Although SCD is commonly treated at MTRH, there lacks published data on pain management among the patients. Therefore this study aimed at determining pain management among SCD patients at MTRH. A descriptive cross-sectional study design was conducted among 29 participants that were randomly selected. A questionnaire gathered data on pain characteristic, management and barriers to effective management. Descriptive statistics and Fisher's exact were conducted. Only 9 participants had completed the questionnaire. Acute pain was reported by 7 (77.8%) participants [95% CI: 1.44-2.11], with pain being most prevalent among those aged 11 to 20 years (75 %, p=0.539). Females had a 33% lower odds of having pain than males (cOR: 0.67 95% CI: 0.04-9.47). Notably, 62.5% of the participants had pain in back and joints regions while 37.5% in chest and abdominal. Nearly half (44.4%) of the participants preferred nonsteroidal anti-inflammatory drugs (NSAIDs) and increased fluid intake for pain management. Unavailability and not being able to afford medications were the most common (89.1%) barriers to accessing medications. About two thirds (66.7%) of the participants paid for services/medications from their pockets. Unavailability and unaffordability of sickle cell medication is a critical barrier to effective pain management.

Presenter: Romeo Warera Ngesa

Title: Burnout among nurses in Moi Teaching and Referral Hospital, Kenya

Abstract: Burnout, a psychological state characterized by emotional exhaustion, depersonalization and loss of professional accomplishment can occur among persons especially those that are overworked. Nurses in Kenya work under a high patient-nurse ratio of 8 nurses per 10,000 population. Moi Teaching and Referral Hospital (MTRH) is a national referral hospital and the second largest hospital in Kenya serving a population of 24 million people. The study aimed at assessing burnout among nurses at MTRH. A descriptive cross-sectional study was carried out among 278 participants (nurses) at MTRH. Stratified simple random sampling was employed. Maslach burnout inventory was used in data collection and the data was analyzed by Stata 13 software. Descriptive and chi-square statistics were computed. A total of 159 participants returned the questionnaires. The results found that 13.2% (21) participants reported a high degree of emotional exhaustion, 46.5% (74) moderate degrees and 40.2% (64) a low degree. Notably, 49.7% (79) participants reported a high degree of depersonalization, 18.2%(29) moderate, and 28.3% (45) low degrees. Only 3.8% (6) did not experience depersonalization. Notably, 44.0% (70) of the participants had low professional accomplishment, 17.0% (27) moderate, and 39.0% (62) a high professional accomplishment. Nurses aged 50-59 years had a significant high professional accomplishment compared to other age groups (p = .004). In addition nurses that were managers, clinical nurse educators and auditors also had a significant high professional accomplishment compared to those working in other departments (p < .00). Depersonalization was highest in the nurses working in the departments of renal 90%, reproductive health 77.1% and outpatient 76.9%. Nurses reported to have experienced alarming levels of emotional exhaustion, depersonalization and loss of professional accomplishment.

Presenter: Sharon Jerop Kipkemoi

Title: Impact of COVID-19 on utilization of maternal healthcare services in public facilities within Eldoret Municipality, Kenya

Abstract: Maternal healthcare aims to promote a holistic approach to women's health which encompasses family planning, prenatal and postpartum care. It also involves maternal physical, mental, emotional and social wellbeing. Utilization of maternal healthcare services helps reduce both maternal and infant mortality resulting from pregnancy complications. During the peak of COVID-19 pandemic, there was general public fear associated with the disease and national containment measures put in place by the government that influenced seeking of health care services globally. The study is aimed at assessing the impact of COVID-19 pandemic on the utilization of antenatal, contraceptive and postnatal care services in Eldoret Municipality, Kenya. A retrospective study design was employed among four health facilities that were purposively selected for the study. Data was collected using a records review checklist. The data was collected from all entries for family planning, antenatal and postnatal service visits recorded in facility registers during the 5 months preceding the national COVID-19 lock down in March 2020, and the first 5 months into the COVID-19 containment period in the same year. Descriptive data was analyzed and presented in percentages. The results reveal that there was a 7% increase in contraceptive uptake from 7351 to 8478 visits. There was a 10.5% decrease in antenatal care services uptake from 9769 to 7906 visits. There was a 3.4% increase in postnatal care uptake from 1351 to 1447 visits. Despite the restrictions, lockdowns and challenges caused by pandemic results indicate that there was an increase in utilization of maternal health services; postnatal clinic, contraceptive uptake however, antenatal clinic uptake decreased. The findings therefore depicts that women in Eldoret Municipality are aware of the importance of utilizing maternal healthcare services to their benefit.

Presenter: Prabdeep Panesar

Title: Implementing Best Practices When Conducting a Web-Survey – Review of a Recently Administered Web-Survey and Current Literature

Abstract: Introduction. Over the last few decades engagement in internet use and online communication has increased, and with the restrictions of the pandemic, investigators have optimized online research. While this offers greater accessibility, ability to target unique population types, reductions in cost and time efficiency, the chances of collecting fraudulent responses increases, particularly with anonymous and incentivised surveys. The aim of this study is to critically examine strategies for ensuring data integrity when conducting web-surveys based on current literature and knowledge acquired from a recently administered web-survey. Methods: A critical review of current literature was conducted to identify articles which addressed methods for preventing or identifying fraudulent data when conducting online research. These findings were applied to our analysis of web-survey data collected from an anonymous pan-Canadian cross-sectional survey to investigate the needs of blood cancer survivors. The survey was advertised on social media and provided a modest honorarium. Results: To detect and prevent fraudulent responses within our study, based on current literature, similar questions were compared for inconsistencies, open-ended responses were reviewed to identify resemblances, personal information was collected to discern matches, and CAPTCHA was implemented. Following analysis of these

parameters, 40% of responses were omitted from our survey leading to differences in the evaluated data. However, current literature suggests a further need for targeted recruitment by distributing the survey through email with single use links, including specific disclaimers stating that participants will not be compensated if suspected of falsified responses and that investigators may contact participants to confirm eligibility, as well as further implementing software to collect paradata and metadata. Discussion: It is essential to take precautions and implement strategies to prevent the collection of fraudulent data responses when conducting online research to ensure high data quality, avoid erroneous results and maintain validity and reliability of the research.

Presenter: Charlotte Kerr

Title: Flipping Research Methods: Evaluating Students' Perceptions of a Flipped Classroom Design for Remote Delivery

Abstract: Research has supported the use of a flipped classroom, in which content delivery occurs outside of class, often through pre-recorded videos, while class time is devoted to active learning activities, such as collaborative problem-solving tasks and group discussions. This study analyzed the effectiveness of using a remotely delivered flipped classroom approach for teaching Introduction to Research Methods in psychology through examining students' experiences in the learning environment. Participants were recruited from two sections of Introduction to Research Methods in psychology at York University during the Fall of 2021 (n = 212). Students' experiences, perceptions, confidence in skills, engagement with pre-recorded lectures and live classes, perceived difficulty of course content and assessments and views of online learning were assessed through a course feedback survey. 90.57% of students found the pre-recorded lectures impactful on their learning, while 76.42% found the applied activities impactful. The less students engaged with pre-recorded lectures, the less positive their perceptions of the course were and the lower their confidence in their research skills. The more difficult students found both the course content and assessments, the less they believed that the design of the course was an effective way to teach research methods and the less confidence they had in their research skills. Finally, the less students enjoyed online learning, the less positive their perceptions of the course were and the less confidence they had in their research skills. This study supports the efficacy of a flipped classroom, suggesting that pre-recorded lectures are an effective way to deliver course content, thus, freeing up class time to complete applied activities. However, as a flipped classroom may be not suited toward all students, a hybrid system may address the needs of a diverse group of learners.

Presenter: Salome Chepkorir

Title: Provision of surgical services amidst Covid-19 pandemic at Moi Teaching and Referral Hospital, Kenya

Abstract: The emergence of Covid -19 in 2020 in Kenya has had significant effects on surgical services delivery. The disease remains a trending threat to staff and patient safety. Despite several measures by the Government; restrictions, protocols and vaccinations to curb the spread, Covid -19 has taken a slow decline. Covid-19 being transmissible via respiratory droplets in close proximity renders the surgical services highly risky for both staff

and patients. The study aimed at assessing the effects of Covid-19 on the provision of surgical services in the surgical units at Moi Teaching and Referral Hospital, Kenya. A descriptive cross-sectional study was conducted in four surgical departments of Moi Teaching and Referral Hospital. Simple random sampling was used to recruit forty (40) participants (healthcare providers), self administered questionnaires were used to collect data on delay of surgeries. The data was analyzed using Microsoft excel. The results obtained from the forty administered questionnaires showed that surgeries were delayed until the patients were tested for Covd-19 and the results obtained. 100% (n= 40) affirmed this. Fewer surgeries were performed during this period as reported by 32.5% (n=13) of the respondents. Seventy one percent; 71% (n=33) of the respondents reported incidences of staff infection (taken to isolation or given mandatory leave) and even deaths that contributed to staff shortage that further compromised the service provision. It was also reported that the surgical team were reluctant to operate on patients diagnosed with the infection, 68% (n=28). From the findings, the study concluded that Covid-19 disease adversely affected the service provision at the surgical department at Moi Teaching and Referral Hospital. The study therefore recommends the following: that adeguate and quality Personal Protective Equipment be provided, that adequate information be given to staff periodically and regular testing of staff and prompt treatment be a priority.

Presenter: Janani Manivannan

Title: A Gender-Based Analysis on Violence & Harassment Against Costa Rican Indigenous Women

Abstract: Episode three in the Grounded Project at York University emphasizes land rights and food sovereignty; however, many underlying issues were established through the qualitative research. Thirteen interviews were conducted using open-ended questions that helped interviewees talk about their experiences and stories. These interviews were then reviewed and studied to learn more about the land recovery process within Costa Rica. An important issue that emerged was the violence and harassment toward the indigenous women during their fight for land recovery in Costa Rica. The gender-analysis framework helps differentiate the use of social structures, gender roles, and the overall gender construct that affects land recovery's impact on women and men in Costa Rica. The indigenous women have a different experience when discussing land recovery solely due to their gender. Gender roles and responsibilities are also an essential aspect of this, where women have a more multifaceted involvement in the recovery process. Bringing these challenges and impacts to the international and domestic level, women must have the support necessary from their communities to understand the differences in the issues faced.

Presenter: Christina Simms

Title: COVID-related worry and alcohol use among essential workers during the pandemic: A secondary analysis

Abstract: Background: The COVID-19 pandemic introduced a new set of stressors for individuals globally, with essential workers among those most vulnerable to the virus and associated anxiety/worry. With the known link between anxiety/worry and increased alcohol consumption, there has been concern regarding the impact of COVID-related worry on

alcohol use in essential workers who have been under a high degree of stress. The current study looks at COVID-related worry as a mediator between essential worker status and increased alcohol use. Methods: Participants (N=335; 56.7% male; mean age of 32.05 years) were adult Canadian drinkers recruited via an online crowdsourcing platform who took part in a larger study. Participants completed an online survey at the end of April 2020, including measures of essential worker status, COVID-related worry, alcohol use prior to and during the pandemic, and general anxiety. Two mediation analyses were conducted to identify associations between essential worker status and two unique alcohol use outcome variables, with COVID-related worry as a mediating variable and general anxiety as a covariate. Results: 27% of the sample reported that their workplace was deemed essential during the initial COVID lockdown. No statistically significant direct or indirect associations were found between essential worker status and either alcohol use frequency or quantity of alcohol consumed, and COVID-related worry did not have a mediating effect in the association between essential worker status and alcohol use. Conclusion: No hypothesized associations were found, possibly due to data collection being limited to the initial months of the pandemic, as the data does not represent the full psychological effects COVID has had on essential workers over time. Further research should be conducted on current alcohol use and COVID-related worry in sub-groups of essential workers to identify populations that may be most at-risk for increased alcohol use due to the ongoing pandemic.

Presenter: Tamiko Isaacs

Title: Quality of life in siblings of children with disabilities: A comparison of parent-report and sibling self-report ratings following participation in an online group intervention.

Abstract: Many children with disabilities have a sibling living at home with them who may be exposed to inequalities in the family relationship. Siblings of children with disabilities are at increased risk for developing mental health problems, and their mental health needs often go unnoticed. Group support programs for siblings of children with disabilities have demonstrated effectiveness in providing support and reducing psychological symptoms. Studies have used the Pediatric Quality of Life Inventory™ Version 4.0 (PedsQL™ 4.0) to obtain parent proxy-reports and sibling self-reports of intervention efficacy; however, they often only report parent responses. Very few studies have directly compared parent and sibling reports, although sibling self-reports are extremely important to obtain. Our overarching objective is to explore parent and child (sibling) self-reports on the PedsQL 4.0™ pre- and post-intervention after sibling enrollment in the iSibworkS intervention. Based on extant literature, we predicted that parents would report significantly lower PedsQL™ 4.0 scores compared to sibling self-report pre- and post-intervention; parents and siblings would show improved PedsQL™ 4.0 scores pre-to-post intervention. Participants were 31 pairs of siblings of children with disabilities between the ages of 8-13 years old and their parents. Siblings participated in the iSibworkS intervention a six-week program delivered through Zoom Healthcare. Study results revealed a statistically significant effect between parent and sibling reported scores on the PedsQL™ 4.0. There was no statistically significant effect on pre- and post-intervention scores. Additional analysis revealed statistically significant findings related to age and gender on the outcome measure. These findings support the need to obtain parent and sibling reports for measures of pre- and post- intervention outcome, as the differing perspectives provide more complete information about quality of life.

Presenter: Aidan Peters

Title: A systematic review of patient-reported outcomes of cognitive dysfunction in multiple sclerosis

Abstract: Multiple sclerosis (MS) is a relatively common neurodegenerative disease that adversely affects physical functioning, mental health, and cognitive functioning. Cognitive dysfunction in MS is associated with declines in quality of life (QOL), employability, and day-to-day functioning. Reports of cognitive dysfunction from persons with MS (pwMS) could potentially offer practical and ecologically valid experimental endpoints, and outcomes to track patient changes over time and screen for who require a neuropsychological battery. Therefore, we reviewed patient-reported outcome (PRO) measures of cognition used with pwMS to (i) assess their feasibility in clinical/experimental settings; and (ii) evaluate their relationships to clinical variables and health outcomes. PubMed and PsycInfo databases were searched from 2010 to 2021 to yield 3103 articles. Of these, 41 articles were removed for being duplicates and 2845 were removed during title and abstract screening for failing to meet inclusion criteria. Full texts of the remaining 217 articles were screened and data were extracted from texts meeting inclusion criteria. Of the cognitive PRO measures used in these studies, some were MS specific, and others were generic. Some were associated with neurologist ratings of disability severity, disease course, QOL, employment, and daily functioning. Thus, cognitive PROs show promise for use in MS clinical care and research. However, investigation of their validity and reliability, and relations to objective tests, depressive symptoms, and physical functions, is necessary before their implementation in routine practice. A valid and reliable cognitive PRO could better incorporate the voices of pwMS into their care, help clinicians decide which pwMS require neuropsychological referral, and provide a tool to monitor changes in cognitive functioning. In research, an effective cognitive PRO could be used as a screening tool for recruiting cognitively impaired pwMS, and as an endpoint in clinical trials to evaluate the effects of new drug therapies or other interventions on cognition.

Presenter: Ariana Fathi

Title: Do Ecological Models for Invasive, Non-indigenous Species and Biodiversity Loss have any Relevance for the ongoing COVID-19 Pandemic? A Review Taking Particular Account of the One Health Approach to Managing the Present Pandemic and Preventing Future Ones

Abstract: Over human history, most pandemic and epidemics have been caused by viruses and/or zoonoses. Invasive species have been involved in transferring zoonotic diseases to humans. This can include the role of the Black Rat (Rattus rattus) in the Black Death. The COVID-19 pandemic has shone a spotlight on failures in management for zoonoses, with researchers agreeing that the SARS-Cov-2 has a "probable animal origin" (Haider et al., 2020; also see Mallapaty, 2020). The first objective of my BIOL 4000 thesis was to review the links between emerging information about the spread of COVID-19 and the ecological literature on invasive species. I placed the global spread of the SARS-CoV-2 virus into the framework of existing ecological models for managing invasive, non-indigenous species, and considered the relevance of these models for managing the COVID-19 pandemic. My

second objective was to review the links between the human security framework which has its roots in the scholarly field of political science, and the One Health model. The latter model has recently emerged from the interdisciplinary space that includes health practitioners, ecologists and political scientists, with the goal of providing a rationale for policy-makers to invest in proactive management strategies that prevent future pandemics. I ended my thesis with a case study that compares and contrasts the New Zealand with the United Kingdom responses to the COVID-19 pandemic. I clarify broad metrics for a successful and poorly managed response. I conclude that New Zealand's strong science-based politics and policies have been a success in economic terms. Human, animal and ecosystem health are intertwined and, thus, need to be considered as one. The One Health model is simply the latest effort to make this clear. Moving forward, evidence-based policies, elimination strategies for invasive species and ecological models can be useful in helping governments and policymakers to make science-based decisions. The human security framework and One Health models create explicit pathways for connecting ecosystems with animal and human health. A comparison of the NZ and UK governments showed that in NZ, science-based decision-making and prevention strategies prevailed, allowing the country to recover from the pandemic much faster than the UK. Ultimately, when diverse policy and scientific experts come together, a more coherent, integrated prevention strategy can be created. Rather than reactive strategies that are slow to start, and are always playing "catch-up," governments should aim for a proactive approach that can pre-empt future pandemics before they start.

Presenter: Jodi Crawford

Title: Family Stories' Effect on Coping with Cancer

Abstract: Coping with cancer can be extremely challenging. As well as being physically trying, cancer has been associated with psychological factors like depression and anxiety. When one is able to improve their coping skills, it can also increase their ability to manage their illness, their sense of wellbeing, and even more positive physiological response, including enhanced immunity. This literature review and supporting survey delve into the power of family stories to construct the resiliency, hope, and strength that can contribute to effective coping skills. The literature reveals that delving into one's own past and referencing family stories of resiliency can contribute to patients' wellbeing, be conducive to coping, and perhaps improve one's physical health. Family stories – whether passed through the generations or newly discovered – provide a sense of well-being and aid with coping, in a way that is especially pertinent for those dealing with adversities, such as life-threatening illness. We conducted a survey of individuals diagnosed with various types of cancers at different stages in their treatment. In response to open-ended questions, participants provided anecdotes of familial inspiration, such as when family members displayed resilience and courage in the face of their own cancer diagnoses or other illnesses, or in relation to family immigration stories. Study participants expressed the effect that these family stories had on their own coping skills as helping them "feel less isolated and alone." One participant stated, "I learned to live in the moment, enjoy life, keep a positive outlook as much as I can." And another was inspired by "my mother's strength in coping with the unknown in terms of her future". "I felt empowered…", was how one participant expressed the effect of a family story of resilience on her own ability to cope.

Presenter: Benton J. Oliver

Title: COVID-19 Health & Labour Realities of Migrant Asian Women in Toronto, Ontario

Abstract: Amidst the COVID-19 pandemic, migrant Asian women in Toronto, Ontario, experienced heightened discrimination. Precarious immigration status rendered many women ineligible for emergency income support and thereby unable to stay at home, physically distance, or stop work to survive. At the same time, migrant women involved in more feminized labour (such as a holistic practitioner or erotic worker) reported increased harassment from local law enforcement. Most egregious was the attack on three Asian businesses in Atlanta on 16 March 2021. The attack resulted in the murder of eight people, six of whom were Asian women. Within Canada, Butterfly Toronto: Asian and Migrant Sex Workers Support Network, is still inundated with the continuous request for crisis support. This research project is interested to explore the intersection between labour and immigration legislation in Canada, particularly as experienced amidst COVID-19, from the perspective of migrant Asian women. The main research question is: how did COVID-19 reconfigure health and workplace realities for migrant Asian women in feminized labour? Through a systematic review of literature and relevant documentation, I will examine existent labour and immigration legislation that structure everyday realities for migrant Asian women in the Greater Toronto Area. I will use this research to inform a pilot program (created in collaboration with Butterfly Toronto) and propose strategies to manoeuvre the racial and gendered vulnerabilities created through law enforcement.

Presenter: Patrick Hewan

Title: Shifting Architectures of Cognition and Brain Function in Older Adulthood

Abstract: Understanding how the brain changes with age is crucial for mitigating age-related cognitive decline and developing treatments for neurodegenerative disease. However, we lack effective models that combine changes in cognition across the lifespan, with changes in the associated neural circuitry. This has led to the perception that aging is only associated with cognitive and neural losses, and a failure to appreciate that older adults may approach mentation from a different starting point. The shifting mental mode hypothesis of aging addresses this, positing that changes in cognition, affect, and brain function combine to create an exploitative bias of prior knowledge over exploratory search as the basis for thought and action in older adults. To provide additional support for this hypothesis, we are conducting a combined behavioural and functional magnetic resonance imaging study. The behavioural protocol will be composed of three exploration-exploitation (E&E) tasks which cover foraging, information search, and reinforcement learning. The neuroimaging protocol will include a task-related functional scan during the performance of an E&E task and a structural scan to provide markers of brain health. We will recruit 60 healthy young and 60 cognitively normal older adults who will complete a brief cognitive battery comprising cognitive control and semantic knowledge measures as well as the E&E battery. We predict an age-related exploitation bias across all behavioural tasks and an associated increase in functional connectivity between brain networks implicated in cognitive control and semantic cognition, consistent with the shifting mental mode hypothesis of aging. Our findings will provide insight into the shifting architecture of cognition and brain function in older adulthood and support a more unitary account of mental functions in late-life development.

Presenter: Deeaanj Hinduja

Title: Parenting Imposters: A correlational study between Parenting Styles and Imposter Phenomenon

Abstract: Impostor Phenomenon has gained a significant amount of traction in recent times. The idea of the Impostor Phenomenon is the belief that one has success only due to luck and not because of talent, effort or qualifications; it was first identified in 1978 by Clance and Imes. Individuals with impostor syndrome are more likely to experience depression, stress, anxiety, and low self-esteem due to their constant fear of being exposed. Early familial processes, such as sibling comparisons and parental expectations, may eventually contribute to impostor feelings. Nevertheless, in the etiologic context of the impostor phenomenon among children and adults, very few studies deal with features of the family environment, particularly parent-child relationships and parenting styles. Understanding the connection between the impostor phenomenon and parenting styles can help solve the issues related to the impostor phenomenon in a more effective way. Diana Baumrind's Parenting styles theory was used to understand the parenting styles that the participants experienced.
The study aims to assess the influence of perceived parenting styles on the tendency of impostor syndrome experienced by young adults. 150 participants took part in this study, from 16 to 24 years of age. The Clance Impostor Phenomenon Scale by Clance, P. R (1985) and the Scale of Parenting Style questionnaire by Gafoor, K. A and Kurukkan, A(2014) were used to identify the extent of the impostor phenomenon and parenting styles. They were circulated through an online questionnaire using the snowball sampling technique.

Presenter: Emillie Thuy-Linh Vu (co-author is presenting instead)

Title: Actively Open-Minded Thinking: A Predictor of Rational Thinking in Adolescents

Abstract: The study of rational thinking involves the assessment of how well individuals track truth and seek goals, which are critical competencies for success in the modern world. Extensive research on rational thinking in adults has found that "actively open-minded thinking" (AOT) is a significant predictor of rational thinking, even after statistically controlling cognitive ability. AOT is a thinking disposition that is characterised by one's tendency to consider alternative perspectives, including perspectives that may not be consistent with one's prior beliefs. This study aimed to identify whether AOT and rational thinking are measurable in adolescents. We predicted that similar data patterns would be found in adolescents as in adults on parallel measures of rational thinking, and that our version of the Actively Open-minded Thinking scale (AOT) would be a reliable measure for youths. We also predicted that AOT would be a significant predictor of performance in measures of rational thinking when cognitive ability was statistically controlled. Participants (n = 146) were students in Grades 9 to 12. All completed the AOT scale adapted for youths and the Shipley-2, a measure of cognitive ability. Participants also completed probabilistic and statistical reasoning tasks and scientific reasoning tasks to measure rational thinking. We found that the AOT scale for youths was moderately reliable and the response patterns on each question of this scale demonstrated parallel patterns in this adolescent sample as has been shown in adult samples. Also, AOT was a statistically significant predictor of at least

one measure of rational thinking when cognitive ability was statistically controlled. These findings suggest that AOT and rational thinking are measurable in adolescent samples. Efforts to foster rational thinking and related tendencies, such as AOT, are supported by this work.

Presenter: Christiane Marie Canillo

Title: Examination of scientific reasoning tasks in a sample of adolescents

Abstract: Scientific reasoning involves using tools that have been developed for research but can also be applied for judgement and decision-making. Examples include understanding the use of falsification strategies, the limits of correlational evidence, and understanding converging information on judgement and decision-making tasks. Compared to adult samples, relatively less research has been conducted on these paradigms in developmental samples, such as adolescents. In the current research study, adolescent performance on several scientific thinking tasks are examined. In particular, general performance patterns are broadly compared with data patterns that have been reported on parallel tasks in adult samples. It was hypothesized that adolescents would display similar response patterns as adults, regarding the level of accuracy and frequency of different types of incorrect responses. It was also hypothesized that scientific thinking would be significantly positively correlated with cognitive abilities and actively open-minded thinking (AOT), a thinking disposition. One hundred and forty-eight (n = 148) adolescents completed an experimental battery of several judgement and decision-making tasks, including scientific thinking and the AOT scale. The data were collected from one independent school across North America, in-person. Results from this study indicate that the sample adolescents showed incongruent performance on scientific reasoning compared to previously studied adult samples. Specifically, variable performance was evidenced through frequency response patterns across the 13 scientific reasoning tasks, with participants performing poorly in more items than others. In addition, while correlational analyses indicate that the Scientific Reasoning subtest with the AOT scale was positively correlated, its numeric value was considerably low. Further study of these tasks using online administration and a more balanced and representative sample will be useful to replicate the current study.

Presenter: Amelia Serafino

Title: Advantages of three-dimensional technologies in a progressive view of healthcare

Abstract: The aggressiveness of the tumor is its ability to infiltrate the surrounding structures, compromising vases, nerves, organs. The 3D anatomical table can provide an accurate three-dimensional model based on two-dimensional tomography. This can be used to study the relationship of the mass to its environment; it allows the clear observation of the tumor localization from every possible perspective, facilitating the choice of an adequate action strategy and the use of the most appropriate tools. A typical example of the versatility of this technology is the case of a young woman diagnosed with a benign liver tumor. Localization of the mass would have required a very invasive procedure, using traditional methods. A three-dimensional reconstruction gave a clear picture of the situation allowing a conscious use of another cutting-edge technology: the da Vinci surgical system. A minimally invasive surgical procedure resulted in the successful removal of the mass. In a progressive

vision of healthcare, it is necessary that the "doctor of the future" be provided with the right tools, following a path that is continuously updated in skills, knowledge and experience; based on a balanced synergistic combination of modernity and tradition.

Presenter: Haleh Hashemi

Title: Caregivers' Behavioural Responses to Infant Pain: The Role of Culture and Physiology

Abstract: Background and context: Pain due to vaccination procedures is a common experience in infancy and childhood. Parents' behaviour responses to their child's pain and distress have been frequently associated with children's pain outcomes. Among many predictors of parents' behaviour responses, culture has been linked to how caregivers behave when soothing their distressed infant. Furthermore, physiological arousal due to situational anxiety is known to impact behaviour in stressful contexts, with higher physiological arousal resulting in less frontal lobe processing (including thinking through the lens of culture) hence, acting more instinctively. Objective: The objective of the current study was to examine the direct associations between caregivers' (1) acculturation and (2) physiological arousal and their behavioural responses towards their infant in pain and (3) examine whether physiological arousal moderates this association. Methods: 159 parent-toddler dyads were recruited from two paediatrician practices in Toronto. Parents were on average 35 years old and the children were 12 months old. Parents were educated (most with university or college degrees or higher) and culturally diverse. Dyads were videotaped during the infant's 12-month immunization appointments and their cardiac data were collected. The caregivers filled out questionnaires which included questions about their cultural identity. Nine multiple linear regressions were conducted to examine the three research questions. Results: Results suggest acculturation predicts caregivers' behaviour response to their infant in pain. Specifically, caregivers who identified more with mainstream North American culture showed more proximal soothing behaviours, while caregivers who identified with collectivist heritage culture used less verbal reassurance behaviours when soothing their infant in pain. However, caregivers' physiological arousal did not predict caregiver behaviours nor did it moderate the relationship between caregivers' acculturation and behaviour response.
Conclusion: The findings from this study further our understanding of the mechanism by which caregiver's culture and physiological arousal interact and how they may affect behaviours.

Presenter: Joshua T. Rubenstein

Title: Resistance to Miserly Processing In Adolescents

Abstract: The Comprehensive Assessment of Rational Thinking (CART) is a prototype measure to assess rational thinking in adult samples. Direct measures of miserly information processing are one domain of measures on the CART that significantly predicts other measures of rational thinking, cognitive ability, and thinking dispositions in adult samples. Miserly processing tasks assess the ability to override the automatic responses in favor of an alternative, more cognitively taxing correct response. There is less research examining developmental samples on their performance across tasks that require resisting the miserly response. This research aimed to examine if tasks requiring miserly information processing

in developmental samples is comparable to response pattern observed in adults. Frequency analysis was used to examine mean performance within the domain of Miserly processing, as well as in the sub-domains (Cognitive Reflection, Disjunctive Reasoning and Ratio Belief bias). Pearson correlation will be used to compare miserly information processing with cognitive ability, measured using the Shipley-2 Vocabulary and block pattern raw scores. Frequency distributions among the Miserly Processing domain were well distributed, with mean performances across all three sub-domains of Ratio Belief bias, Disjunctive Reasoning, and Cognitive Reflection tasks converging with adult performance. Miserly Processing was significantly associated with Shipley Block and Vocabulary raw scores, as well as with academic English performance. Lastly, there was high inter-reliability among the 23 tasks within the sub-domain, suggesting a high level of agreement among these tasks that make up the miserly processing domain. These results support a general convergence of performance among adolescents with adult samples. Future research should recruit larger, more representative samples to validate the CART-Y structure, as well as to relate miserly information processing to measures of intelligence. This research supports a growing body of literature in understanding the convergence of cognitive sophistication with rational thinking across developmental samples.

Presenter: Yaffa Matitya

Title: The differences in the occupational experiences of parents of children with and without attention deficit hyperactive disorder

Abstract: Background: 'Occupational Experience' refers to a person's subjective perception of his\her occupations and is divided into dimensions and patterns of the occupation. The role of parenting is complex and demanding, requires many resources and can lead to impairment of the occupational experience in a variety of areas. Studies show that (ADHD) Attention Deficit Hyperactive Disorder can directly and indirectly cause a significant burden on caregivers both financially and mentally. Various studies have examined the role of parenting through the parent's occupational experience among different populations. However, the occupational experiences of parents of children with ADHD have not yet been studied and a deeper understanding of their subjective experience of occupations is needed.
Aim: The purpose of this study is to examine and compare the dimensions and patterns of the occupational experience among parents of children with and without ADHD.
Methods: 120 parents of children aged 6-12, with and without ADHD, completed questionnaires regarding their subjective occupational experiences, in reference to the dimensions and patterns of their occupations in the daily life.
Results: Significant differences were found between several dimensions of the parents' occupational experiences, specifically the dimensions referring to "experiencing pleasure and joy", "contributing to community and society", and "activities of meaning and spirituality".
Conclusion: The study emphasizes the differences in the occupational experience between parents of children with ADHD and without ADHD. These findings should be addresses in health services and specifically in occupational therapy intervention.

Presenter: Mary Angel Kaye Conje

Title: Anti-Vaccine Culture on Tiktok

Abstract: The COVID-19 pandemic gave rise to more social media discussions surrounding health and medicine, resulting in the spread of misinformation and more discourse. The aim of this study is to investigate and analyze the discussion and content produced regarding COVID-19 vaccines on TikTok. Following netnography methods, COVID-19 and vaccine-related hashtags were searched on TikTok. Twenty-one videos and their corresponding comments were observed. Field notes were recorded, coded, and analyzed for themes. Major themes include pro- versus anti-vaccine discussions, comedic versus educational content and TikTok's promotion of accurate information. Vaccine hesitancy was evident for both pro- and anti-vaccine users. For example, anti-vaccine users cited their belief of conspiracy theories and pro-vaccine users were concerned of the speed of development or feared long-term side effects. TikTok also implemented fact-checks and promoted pro-vaccine content creators to counteract anti-vaccine rhetoric and the spread of misinformation. While TikTok remained a platform for entertainment, this study revealed that TikTok was becoming a hub of information with many health professionals contributing to the spread of accurate and digestible scientific information. This study reveals that TikTok can be a source of health-related information and discourse with potential real-life implications. Further studies are needed to investigate how using social media as a resource can impact one's beliefs and ideas about health and science, and its implications on decision-making.

Presenter: Chenyue Zhang

Title: Pain-related Content in Autobiographical Memory of Youth Undergoing Major surgery

Abstract: Few studies have investigated the association between post-surgical pain and autobiographical memory in the pediatric population and, to our knowledge, no study has examined whether the content in recalled memory is associated with children's post-surgical pain. This study aimed fill these gaps by examining whether the episodic specificity of physiological-related content in the memories recalled by youths four weeks after surgery is related to the average of first three days post-surgical pain. Patients were recruited as part of a larger study investigating psychosocial and biological factors in pediatric post-surgical pain. Thirty-seven children undergoing major surgery (e.g., spinal fusion) were recruited. Youths' pre-surgical and post-surgical pain levels were measured using self-report 11-point Numerical Rating Scale (NRS). Memory interviews were administered 3-4 weeks after surgery. Participants were asked to recall the first day after their surgery. Memory interviews were coded for content related to pain and medical or surgical procedures which was further categorized into episodic (any details related to the first day after surgery) and semantic categories (details irrelevant to the first day after surgery). Non-parametric Kruskal-Wallis tests did not demonstrate significant differences in the proportion of episodic pain ($H(2) = 0.22$, $p = 0.90$), episodic medical/surgical ($H(2) = 2.62$, $p = 0.27$), semantic pain ($H(2) = 1.4$, $p = 0.50$), or semantic medical/surgical details ($H(2) = 4.02$, $p = 0.13$) between the different levels of post-operative pain intensity.

Presenter: Wambui Kamau

Title: Quality of life among people living with diabetes in Ghana: A cross-sectional cohort study

Abstract: Diabetes Mellitus (DM) is one of the leading causes of global morbidity and mortality influenced by factors such as food, diet, and lifestyle practices. The aim of this student-led study is to understand the day-to-day experience of people living with diabetes in Ghana, prior to and during COVID-19, in order to provide future directions for improving the quality of life (QoL) in similar patients. Six elderly participants with DM were recruited from Hohoe Municipal Hospital, Volta Region, Ghana. Data collection consisted of a three part closed-ended online survey based on: socio-economic and demographic; health status; and the impact of COVID-19 on food security. Survey completion was followed by individual virtual open-ended interviews, conducted by the primary student investigators. Participants' (female-to-male, 1:1) age ranged from 63 to 77 years. Majority (66.67%) of the participants had DM for over 10 years and 83.3% are on pension pay. One participant experienced increased food insecurity due to COVID; however, 50% of the participants endured some form of food insecurity irrespective of the COVID-19 pandemic. Thematic analysis was used to develop and analyse four major themes based on the interviews: (1) medication adherence; (2) diet and activity levels; (3) resource access, provider care, and support; (4) the impact of the COVID-19 pandemic and food insecurity. Medication and suggested diet are generally adhered to—if available. Due to limited options participants often resorted to holistic means alongside or as an alternative to their pharmaceutical diabetic prescription. Emotional, financial, instrumental, and appraisal support, as well as access to information and health related resources have a significant impact on the QoL, however are limited to diabetic patients living in Ghana, thereby requiring improvement. Future research should consider exploring interventions and policies that emphasise support and access to better diabetic care.

Presenter: Farhat Ullah

Title: Investigating the influence of reward-related processes on the relationship between childhood adversity and COVID-related stress and anxiety.

Abstract: COVID-related stress is higher in vulnerable populations including those who have experienced childhood trauma. Recent work demonstrates that greater anticipation of rewards is associated with reduced levels of COVID-related stress. Given that childhood adversity predicts dysregulation of reward-related processes, this study examined whether the anticipation and consumption of rewards indirectly influence the relationship between childhood adversity and COVID-related stress and anxiety. It is important to explore whether reward-related processes differentially influence how emerging adults cope with stressors. A diverse sample (N = 195) of emerging adults (M = 23 years) were recruited from the community. Participants completed self-report questionnaires assessing childhood adversity (Childhood Trauma Questionnaire – CTQ), reward anticipation and consumption (Temporal Experiences Pleasure Scale – TEPS), COVID-related stress and anxiety (COVID Stress and Anxiety Scale – CSS/CAS), and current life stress (Perceived Stress Scale – PSS). Mediation analyses were conducted to determine whether there is a unique mediating role of reward anticipation and consumption. Reward anticipation but not consumption, partially mediated the relationship between CTQ and PSS (b = .0442, 95% CI [.0107, .0830]). While CTQ predicted CSS and CAS (b = .4313, 95% CI [.0968, .7659]; b = .0538, 95% CI [.0133, .0943]), reward anticipation and consumption did not mediate this relationship. Reward anticipation selectively mediated the relationship between childhood trauma and current life stress. Identifying deficits in reward anticipation can inform coping strategies that target

goal-directed action. However, this mediation was not demonstrated with COVID-related stress and anxiety. The CSS/CAS assessed COVID-related stress and anxiety over 7 days, while the PSS assessed current life stress over 30 days. It is possible that reward-related processes are associated with dispositional measures of stress, which may be better reflected over a longer time period, as assessed by the PSS. Thus, these findings highlight the importance of examining COVID-related stress longitudinally.

Presenter: Julian Carusone

Title: COVID-19 and Development: A Centralized Resource for Accessible Public Information

Abstract: There is a need for knowledge translation and further investigation into the psychological effects that SARS-CoV-2 infection along with the COVID-19 pandemic have on development. The effects of this current health crisis on learning, psychosocial, neurocognitive, and mental health outcomes across early childhood, childhood, adolescence, and young adulthood require careful investigation. It is also important to explore the effects of infection and the pandemic on those with neurodevelopmental differences, pregnant individuals, and parents. The overarching aim of this in-progress project is to provide an accessible website for the public, educators, clinicians, and researchers that is used for knowledge translation and asking users about their lived experiences. The best-evidence synthesis model is being utilized to conduct a scoping review of psychological and medical databases containing relevant empirical articles. Surveys will investigate the psychological functioning of children and adolescents post-infection, as well as the effects that SARS-CoV-2 infection, COVID-19 lockdowns, restrictions, and masking requirements have on learning, social relationships, pregnancy, parenting, etc. A mixed-methods approach will be implemented to analyze moderated website comments and survey data, with the goal of analyzing responses from, at minimum, 100 people per survey. Preliminary results of the scoping review suggest that SARS-CoV-2 infection and COVID-19 pandemic restrictions have had noteworthy effects on learning, psychosocial, neurocognitive, and mental health outcomes that have been documented via evidence-based approaches. These findings will be outlined on the website. Future research will investigate trends related to comments and survey responses. The website and associated research from this resource will help inform the public, educators, clinicians, and researchers on the adverse developmental effects associated with this current health crisis. This knowledge translation is key to providing the public with information that may help them make informed health decisions for themselves as well as children and youth in their care.

Presenter: Casey Ann Arguelles

Title: Re-analysis of interdisciplinary approaches and social support on ACLR Athletes: Understanding how multiple stakeholders affect female sport injury recovery

Abstract: Background: Anterior Cruciate Ligament (ACL) injuries is one of the most common and most expensive sport injuries that requires an immense amount of time, effort, and patience. Many athletes face challenges during the rehabilitation process due to psychological barriers that inhibit the athletes ability to properly recover and return to sport, which can also be exacerbated in adolescent athletes who experience external pressures

outside of their sport. This paper views recovery from a biopsychosociological approach in order to improve rehabilitation of athletes after ACL injury and reconstructive surgery (ACLR). Recent research has discovered that social support (or the lack of it) from multiple stakeholders (i.e., clinicians, parents, peers) plays a significant role in an adolescent athlete's recovery from ACLR. However, the nature of optimal social support and how it may differ across different stakeholder roles is not well understood. Purpose: The purpose of this re-analysis is to understand the role, nature, and impact of social support from different stakeholders during recovery, from the perspective of adolescent athletes with ACLR.. Methods: Qualitative thematic re-analysis of raw interview transcripts from multiple previous studies examining athletes' experiences of ACLR, with particular focus on social support. The study conducted in 2020 consisted of 25 participants and the study conducted in 2022 consisted of 10 participants. Results: Analysis is currently underway. Implications: Understanding social support from multiple stakeholders can assist clinicians and help improve treatment and recovery protocols by personalizing the treatment to the athlete's needs. This research can highlight areas where patients lack assistance and where treatments can be improved through the perspectives of the athletes.

Presenter: Aaron Shengting Mai

Title: Impact of COVID-19 Pandemic on the Physical and Mental Health of Patients with Parkinson's Disease: A Systematic Review and Meta-Analysis of 13,878 Patients

Abstract: Background: The common and unique clinical, neuropsychological, and socio-economic factors affecting Parkinson's disease (PD) during COVID-19 pandemic across different populations have not been systematically studied. To address this, we conduct the first meta-analysis of factors that impact the well-being of PD patients during the pandemic. Methods: Medline and Embase were searched for relevant articles published between 2020-2022. Measured outcomes included perceived decrease or worsening in physical activity, exercise, PD symptoms, balance, mood, depression, anxiety, cognition, and sleep. Results: 27 studies involving 13,878 patients from America, Europe, Asia, and Africa were included. The pooled prevalence estimates showed decreased (between 17-56%) physical activity and exercise, worsening PD symptoms, balance, mood, depression, anxiety, cognition, and sleep. Patients in lower-income countries have higher odds of reporting worsening anxiety (aOR 8.94, 95% CI 1.62-49.28, P=0.012), sleep (aOR 5.16, 95% CI 1.15-23.17, P=0.032), and PD symptoms (aOR 3.57, 95% CI 0.96-13.34, P=0.058). Lockdown or home confinement was associated with lower odds of decrease in exercise levels (aOR 0.13, 95% CI 0.02-0.78, P=0.025) and worsening mood (aOR 0.48, 95% CI 0.24-0.95, P=0.035). Younger age was correlated with decreased physical activity (β -0.30, 95% CI -0.53 to -0.07, P=0.012), exercise (β -0.11, 95% CI -0.15 to -0.07, P<0.001), worsening PD symptoms (β -0.08, 95% CI -0.15 to -0.01, P=0.018), and sleep (β -0.14, 95% CI -0.27 to 0, P=0.044). Female PD patients reported a greater decrease in physical activity (β 11.94, 95% CI 2.17-21.71, P=0.017) and worse sleep (β 10.76, 95% CI 2.81-18.70, P=0.008).Conclusions: This large meta-analysis of PD patients in diverse populations identified a high prevalence of physical and mental worsening, with patients in lower-income countries being exceptionally vulnerable during the COVID-19 pandemic. Younger patients and female gender responded differently to changes in physical activities and sleep. Reactions to lockdown measures were not consistent across populations.

Presenter: Bushra Kundi

Title: The Disability Wiki Project: A Virtual Community for Disability Advocacy using Artificial Intelligence

Abstract: There is a lack of availability of structured disability data which is a major challenge preventing effective and continuous disability equity monitoring globally. In order to expose and monitor systemic discrimination and social exclusion, developing a platform that enables searching for disability data is crucial. The Disability Wiki project uses the social model of disability and aims to create an accessible multilingual disability website that structures and integrates data regarding people with disabilities while serving national and international disability advocacy communities. The storage of data will be endowed with a document upload function that allows for automated and manual paragraph tagging as well as an intelligent natural language search capability querying function in the supported languages. To enable disability communities to upload and search for disability documents, we designed and implemented a Virtual Community platform that uses Wikibase, Semantic Web, Machine Learning as well as Web Programming Tools. Through the use of Health Informatics and Artificial Intelligence techniques such as Semantic Web, Machine Learning, and Natural Language Processing, we have developed a virtual community that facilitates the upload, sharing, and access to disability data. Once the documents are uploaded to the Virtual Community, they are tagged semi-automatically with meaningful keywords, and verified before being uploaded to the disability Wikibase. Once the documents are uploaded, the public users can perform semantic search using the intelligent and multilingual search engine known as QAnswer. The platform data model was designed based on the United Nations Convention on the Rights of Persons with Disabilities (CRPD) but the platform's ontology can be further expanded to fit international contexts as well as any advocacy reports, disability policy and legislations.

Presenter: Kyara Simoes

Title: Framing Sport as a Platform for Sustainable Development: A Case Study on the 2023 Canada Winter Games

Abstract: The term sustainability has been studied and analyzed from a number of perspectives, with various sectors using different interpretations—resulting in a multitude of definitions. While sustainability considerations are nothing new, there has been a refocusing of the concept in sports in recent years, with considerable attempts being made to incorporate it into policy and practice. While the issue of sustainability has been studied in the sport literature, there is still a lack of clarity in practical understandings, prompting the question of how is sustainability conceptualized and applied in sport? Researchers have largely focused on mega-events in their studies on sport sustainability, as they are projected to have a larger impact on society. In turn, leaving considerable gaps in the knowledge concerning the influence of smaller-scale sport events for sustainable development. Thus, this research study presents an exploratory case study of the 2023 Winter Canada Games to attempt to conceptualize sustainability in sport. Data on the 2023 Games was collected by method of semi-structured interviews with two members of the Host Society, and thematically organized to highlight key themes of sustainable development in the context of sport. Findings demonstrated three distinct themes, (1) sports as a platform for sustainable

development; (2) the importance of sustainable sport legacies; and (3) the impact of small-sport events on a small town. A greater collection of research on sport sustainability is necessary to successfully promote and incorporate sustainable strategies, practices, and policies into sporting events. Recommendations are made to sports groups in order to improve future events, with the goal of contributing to the conversation about sport and sustainable development.

Presenter: Azzurra Mandolito

Title: Usefulness of three-dimensional (3D) anatomical table in pre-surgical phases to minimise the complications rates.

Abstract: The tumor mass linked to the surrounding tissues represents a considerable obstacle for a complete surgical resection of many types of cancer. Therefore, it is essential for next generations of healthcare professionals to address this issue by high technological tools such as the 3D anatomical table, which allows to virtually analyze the tumor region through tomographic images. Here, we describe the use of the 3D anatomical table in a patient with a massive retroperitoneal liposarcoma that stretched from the diaphragmatic base to the pelvis and including the right kidney. The 3D reconstruction allowed to highlight every connection of the tumor mass with the right renal vein and the circulatory system. Our experience corroborated the usefulness of high technological tools like the anatomical table in pre-surgical phases to minimize complications. Overall, the digital technologies may be essential along with classical medicine for the doctor of the future.

Presenter: Michelle Park

Title: Using Thin Slicing of Client Emotions to Detect and Combat Client Resistance to Psychotherapy

Abstract: BACKGROUND. Client resistance, where the client resists the therapy direction and/or the therapist, is considered challenging for both clients and therapists. For clients, resistance may result in the loss of confidence in the therapist and the helpfulness of therapy. For therapists, it may influence feelings toward the client and the belief in their ability to improve during therapy. Therapists have been shown to have difficulty perceiving resistance during therapy sessions, as it requires awareness of verbal and nonverbal communication. Client emotions, which manifest as nonverbal behaviours, have been understudied as a marker for therapy. Combatting resistance is crucial because it is negatively related to important psychotherapy outcomes, including outcome expectations (OE). OBJECTIVE. The aim of this study is to test the predictive ability of an under-utilized method in therapy research, thin-slice methodology. METHODS. Untrained observers rated client emotions shown in thin slices/short video clips using an online survey consisting of 10 emotions from resistance research. The predictive ability of the thin slice ratings of client emotions was indicated by the strength of the relationship between observer ratings and (1) Client Outcome Expectations (COE) (2) Therapist Outcome Expectations (TOE) of the clients and therapists from the video data. It was predicted that less negative ratings of thin slices of resistance would predict lower COE and TOE. RESULTS. When raters perceived less resistance, thin slice ratings predicted higher COE for all client emotions. However, when raters perceived less resistance, thin slice ratings did not predict COE for any client

emotion. CONCLUSIONS. This study highlights the promise of thin-slice methodology for rapidly detecting important therapy events such as resistance and predicting therapy outcomes such as COE. Further, this study underscores the critical need to enhance therapist awareness of resistance through training in order to identify key client emotions/nonverbal behaviour during therapy sessions.

Presenter: Jessica Soliman

Title: Understanding and Improving Bicultural Identity Integration

Abstract: The current project focuses on bicultural and biracial individuals, i.e., those who identify with two cultures and incorporate them into their self-concept. More specifically, this study focuses on bicultural identity integration (BII), the extent to which an individual perceives their cultural identities as compatible (high BII) or oppositional (low BII) (Davos, 2016). Research has shown that low BII is often associated with high tension, internal conflict, oppositional social behaviour, feelings of social isolation, and higher depression and anxiety (Benet-Martínez et al., 2002; Tikhonov et al., 2019). Conversely, those with high BII often demonstrate higher self-security, assimilative social behaviour, feelings of social acceptance, and lower depression and anxiety (Benet-Martínez et al., 2002; Tikhonov et al., 2019). The current project also incorporates positive self-talk, a cognitive intervention strategy that has been found to increase levels of self-esteem and security (Brinthaupt et al., 2009). A modified version of positive self-talk, referred to as positive identity reflection, will be explored as an intervention strategy to increase BII levels and subsequent mental health outcomes such as self-esteem, social belonging, and overall life satisfaction. Furthermore, this project will explore the role that parents/guardians play in shaping their dependents' attitudes towards their cultural/racial identities (i.e., their BII). The current project ultimately aims to further understand and improve the identity development and mental well-being of bicultural and biracial individuals. As the multicultural population continues to increase across Canada (Government of Canada, Statistics Canada, 2020), studies like this that aim to address the needs of these underserved communities become increasingly vital.

Presenter: Ashmita Mazumder

Title: Acculturation, Acculturative Stress, and Risk-Taking: An Experimental Approach

Abstract: In order to get a deeper understanding of risk-taking cross-culturally, it is important to consider social determinants of this behaviour. Acculturation refers to the process of adapting cultural values upon interaction with individuals from dissimilar cultural groups. The process of acculturation may be accompanied by unique stressors termed acculturative stress. Both acculturation and acculturative stress may play a role in risk-taking behaviour. The current study aims to investigate the influence of acculturation and acculturative stress on risky behaviour using an experimental approach. East and South Asian participants (n = 219) were asked to complete two rounds of the Balloon Analogue Risk Task (BART) separated by an experimental trial. For the experimental trial, participants were randomly assigned to one of three conditions and exposed to suggestive cultural primes, per the cultural frame shift model. Acculturation and acculturative stress were measured using self-report questionnaires. While our study found no effect of acculturation or priming, we did find a significant effect of acculturative stress on risk-taking. Specifically,

environmental acculturative stressors were associated with lower risk-taking and impaired reward processing. The current study has implications regarding public policy and interventions aimed at the successful integration of immigrants assimilating in Canada. The results also highlight the role of community and social context that can influence risky decision-making.

Presenter: Sagarina Ghosh

Title: The Effect of Self-Affirmation on Self-Esteem & Well-Being in Adults During Covid-19 Pandemic

Abstract: Self-affirmation is any behaviour that proves the adequacy of the adaptability and self-ethics of an individual. An online intervention was done to determine if self-affirmation had an effect on the self-esteem and well-being of adults (N=25) from the age of 21 to 30. The online nature of the intervention allowed for a more geographically expansive sample, with participants ranging from Asia, North America and Europe. Studies correlating self-affirmation, self-esteem and well-being as a separate construct and not a byproduct of positive psychology interventions have been inconclusive. Furthermore, most self-affirmation interventions have been done in response to a direct threat, as opposed to an environmental threat on such a large scale, which was in this case, the COVID-19 pandemic. Participants volunteered and were accepted based on certain exclusion criteria. The participants (N=25) were made to respond to the Rosenberg Self-Esteem (RSE) scale and the Flourishing Scale (FS) both pre and post intervention. They were provided operationalized instructions and required to write their own self-affirmations for the intervention. Positive self-affirmation was performed for eight days, and the results were analysed non-parametrically, using Wilcoxon's test. It was seen that self-affirmation has a statistically significant positive effect ($p </= 0.001$) on both self-esteem and well-being.

Presenter: Renchillina Joy G. Supan

Title: Global citizenship education in the Philippines and Sri Lanka: a collaborative discourse and curriculum analyses for quality education

Abstract: Global citizenship education is an educational framework that aims to provide students with opportunities and resources for personal development and local-to-global learning. That is, to instill citizenship characteristics that impart critical thinking, cultural sensitivity, and environmental consciousness. As part of the United Nations's Sustainable Development Goals for 2030, mainstreaming this framework may provide students with the skillset and tools to become active citizens, irrespective of geographical borders. The current volunteer research project, organized in three parts, aimed to collate primary and secondary resources into a discourse analysis on global citizenship education in the Philippines and Sri Lanka. Such was to inform and later create a working syllabus that may be used among international organizations to mainstream global citizenship in practice. Part 1 is to contrast the unique psycho-educational landscapes of both countries to highlight the socio-political climate and impacts of civic and global citizenship education learning. Part 2 is to use the existing discourse analysis to devise working curricula for organizations and institutional partners. Finally, Part 3 is to take our research into action in the Philippines and Sri Lankan organizations to demonstrate global citizenship in practice; for implementation and

contribution to the Sustainable Development Goals. Our preliminary discourse analysis suggests that the theme of active citizenship is prominent in both the Philippines and Sri Lanka. Complementary themes of global citizenship included: multiculturalism, social justice, peace-building and social cohesion. Continued efforts to mainstream global citizenship education are underway, with networking and potential collaboration with international organizations and partners. There is an active duty to provide quality education at all levels and tackle the Sustainable Development Goals. These preliminary findings help scaffold the later stages of the project to transform the discourse analysis into active work in practice on Philippine and Sri Lankan grounds.

Presenter: Jingyi Xia

Title: Research on the influencing factors of willingness to COVID-19 vaccination based on the Theory of Planned Behavior——taking the college students as an example

Abstract: In the beginning of the Boxer Year, the outbreak of the COVID-19 epidemic seriously threatens human health and society. According to previous researches, vaccination can reduce epidemic threat to life and health effectively, yet the prerequisite is the vaccination rate must reach a certain level to form group immunity. Relevant research on COVID-19 vaccination either focus on single factor mechanism which do not cover all the aspects, or apply for quantitative analysis method which fail to escape the logical trap focusing on correlation rather than causal link. In order to make up for the shortcomings of previous research, the study utilize Grounded Theory to conceive a model for the influencing factors of college student's willingness to vaccinate form bottom to the top based on the Theory of Planned Behavior(TPB). It is worth noticing that study adopts the grounded path of Strauss and Cobin instead of classical theory, selecting the TPB as theoretical basis for model construction in order to organize the information emerging from the original data more rigorously. The research suggests that, firstly, the epidemic situation, risk perception, policy arrangement, personal constitution, protection demand and organizational guarantee affect the vaccination willingness by influencing the vaccination attitude. Secondly, the organizational call, surrounding people and social expectation affect the vaccination willingness by influencing the subjective norm. Thirdly, the convenience affects the vaccination willingness by influencing the perceived behavior control. Further, the study analyzes the factors in each dimension of the model, offering suggestions on the design of policy instruments in order to enhance the willingness of college students to vaccine, and to provide a guidance for the vaccination plan in major public health emergencies.

Presenter: Consuêlo Maria Braga Pierre Branco

Title: The impact of armed conflict on the physical and mental health of affected populations: a perspective from World Health Organization's institutional responses

Abstract: Global health inequality is a main challenge to the World Health Organization (WHO) in its public agenda. Conflict settings are included, as they raise health and well-being concerns for a large number of affected populations. Moreover, the performance of WHO has been affected throughout the COVID-19 pandemic by the political and social environment around the globe; geopolitical conflicts, war, social inequity and poverty were highlighted as contributors. Our aim in this review-study is to assess and summarize how

armed conflict affects social determinants and adverse health outcomes, focusing on indicated areas hosting large humanitarian crisis according to the United Nations Office for the Coordination of Human Affairs; outline prevailing mental health disorders, morbidity indicators and dislocation of population in the selected countries; identify some examples of institutional interventions that may help to mitigate the impact of these conflicts, notably WHO and the International Committee of the Red Cross. Our data analysis shows that the Social Determinants of Health (SDH) in these settings reflect and reinforce existing inequalities, loss of human rights and the vulnerability of those who are disadvantaged because of poverty or marginalization. Evidence suggests that the accumulation of multiple stressors acutely compromises brain performance, relationships, life satisfaction and produces detrimental mental health diagnosis, besides high levels of mortality, disability and morbidity, for both adults and children, when compared to health outcomes in non-conflict settings. Conflict countries have weak health systems, leading to malfunctioning of these systems during the pandemic. This resulted in a decrease in operation of essential services driven by a lack of health care facilities, workers and resources; breaches of medical neutrality were also present. There is a need to further explore WHO's strategies, regional, local and nationally, to provide healthcare in active conflict zones, with the purpose to avoid deterioration of human health caused by conflict's SDH, stressors and violence.

Presenter: Arta Taghavi Haghayegh

Title: Exploring the use of metaphor in informal cancer caregivers' experiences supporting hematological cancer patients undergoing allogeneic stem cell transplantation

Abstract: In qualitative research of patients' experiences of cancer, the exploration of their use of metaphors has provided insight into the various meanings that motivate patients' behaviours and actions in the context of coping with and managing a cancer diagnosis. For example, common metaphors of the "battle" and "journey" of cancer have been interpreted as tangible linguistic tools for describing the lasting impact of diagnosis not only on the appraisal of the cancer experience, but on one's decisions and life experiences more broadly. In contrast, there is limited research about the use of metaphor by informal cancer caregivers, in their descriptions of their experiences in caring for their loved ones. The aim of this study, currently in progress, is to critically examine the common metaphors in informal cancer caregivers' descriptions of their caregiving role. This analysis draws on a review of current literature of the use of metaphor by caregivers in non-cancer context (e.g., dementia), and a secondary analysis of qualitative interviews collected from our ongoing study of informal caregivers of patients with hematological cancer receiving stem cell transplantation. Based on our analysis, we identify similarities and differences with respect to the use of metaphor among cancer and non-cancer caregivers. In our preliminary analysis, major themes focus on the use of metaphor to communicate the suspension of cancer caregivers' own needs within the context of caregiving, and the ways in which the caregiving role is reframed to sustain motivation. These findings suggest that identifying the common metaphors used by informal cancer caregivers can provide insights into the demands and complexities inherent in providing emotional, physical and practical support to a loved one with cancer, and guide the development of interventions that are sensitive to these caregivers' appraisal of their role.

Presenter: Bing Jie Lin

Title: The relationships between lifestyles, perceived stress, health locus of control, and health motivation of higher education students in Malaysia.

Abstract: Young adults in Malaysia were found to display poor lifestyle practices, reported by several recent studies. It can negatively affect one's health in ways such as increasing the onset of non-communicable diseases (e.g. diabetes and heart disease). However, successful changes in habitual behaviours are usually difficult to achieve as behaviour emerges in a complex interplay of various factors; for instance, personal and cultural factors. In view of this, what other factors can be used in urging changes in lifestyle behaviours? Based on Self-Determination Theory (SDT), this study set forth to compare health locus of control, health motivation, and perceived stress of tertiary students vary in lifestyles in Malaysia, and determine if these variables serve as predicting factors of lifestyle. 256 students (183 females) with the average age of 22 were recruited through convenience sampling to answer an online survey consisting of validated scales relevant to perceived stress, locus of control, health motivation, and lifestyle. One-way ANOVA and standard multiple regression were conducted to analyse the data. Results showed that perceived stress, self- and other-focused motivation were significantly associated with lifestyle while locus of control and introjected motivation were not. Besides, perceived stress, locus of control, self-, and other-focused motivation were also found to predict lifestyle, with perceived stress being the strongest predictor. These results were only partially explained by SDT, suggesting that intrinsic and extrinsic motivation can influence our lifestyle choices whereby introjected motivation and personal control over health are not able to. The findings imply that perceived stress, personal control, self- and other-focused motivation can affect and predict lifestyle. The outcome of this research can be used in refining the strategies used to encourage healthy lifestyle practices by focusing on enhancing the emotional and motivational aspects of higher education students in Malaysia.

Presenter: Israel Wuresah

Title: Long-lasting Insecticidal Nets Ownership And Malaria Morbidity In The Krachi East Municipality, Ghana

Abstract: Malaria-related morbidity and mortality are issues of great concern to public health globally, though many cases reside within Sub-Saharan Africa. Millions of people, especially children, and pregnant women suffer severely from malaria. Seasonal chemoprevention, indoor residual spraying, and nationwide and point distribution of LLINs are among the measures deployed in Ghana. However, reports from OPDs indicate millions of malaria cases annually. The study aimed at identifying the levels of ownership and usage of the treated bed nets, and describing the relationship between ownership of LLINs and malaria morbidity. The 30-cluster sampling method was deployed, where a modified WHO EPI survey method for more rural areas, and a random walk sampling for more urban areas, were used to sample households within specified clusters. Selected households' heads/representatives were interviewed. Ownership of LLINs was high (73.4%) but a moderately low usage level (49.5%) was identified. Aside from sleeping under them, participants (22.9%) had other uses for the LLINs. Malaria morbidity was found to be 59.6%. The female sex [AOR = 2.1 (95% CI: 1.15, 3.87) p=0.016], married couple [AOR = 3.4 (95% CI: 1.76, 6.74) p<0.001], cohabitants [(AOR = 6.1 (95% CI: 2.15, 17.02) p=0.001] and

separated or divorced partners [AOR = 9.4 (95% CI: 1.09, 81.27) p=0.041] were more likely to own a bed net. Also, usage of the bed net increases as ownership increases.
The usage of the bed net was poor despite a high ownership rate. The study recommended service points and periodic household and/or community sensitization on LLINs usage as measures to increase usage levels.

Presenter: Victoria Cassar

Title: Cutting the Meat at the Joint: The Role of Defining How Animals are Viewed and Treated in the Governance of (Re-)Emergent Pandemic Zoonoses in International Law

Abstract: The COVID-19 pandemic has highlighted the urgent need to improve the governance of preventing and responding to emerging infectious disease threats, especially pandemic zoonoses. The One Health approach to governance of zoonotic disease – a collaborative, multi-sectoral, multi-jurisdictional, and transdisciplinary approach to health that acknowledges the interdependence of humans, animals, plants, and the environment – is recognized as providing the most promising way forward. However, the One Health approach faces a critical challenge: the regulatory regimes involved in responding to pandemic zoonoses exist across various fragmented global governance systems (i.e., food, environmental, health, and trade). These governance systems often have competing aims and employ different understandings of how animals are viewed and treated. This paper aims to describe some of the most prominent ways animals are viewed and treated in international law, drawing upon primary and secondary legal instruments to describe the different statuses assigned to animals within international law and how this determines the corresponding evaluative stance we take. This status and value accorded to animals, in turn, shapes the nature of the relationship within individual-level human-animal interactions, as well as the way in which these relationships are regulated at a population-level within international governance systems. By identifying the various types of status, value, relationship, and governance approaches involved in the global governance of animals that may be reservoirs of zoonotic pathogens, we may begin to understand the implications of the fragmented conceptualization and practice around how animals are viewed and treated and its impact on the governance structures concerned with the prevention and response to pandemic zoonoses.

Presenter: Elina Farahani

Title: CALIPER: Establishing a comprehensive database of pediatrics reference intervals for biomarkers of health and disease through community initiatives

Abstract: Reference intervals are health-associated benchmarks required to support appropriate clinical evaluation of blood test results. Despite significant physiological change throughout growth and development, there is a paucity of age- and sex-specific reference intervals for biomarkers in paediatrics, which consequently increases the risk of diagnostic error. The Canadian Laboratory Initiative on Pediatric Reference Intervals (CALIPER) has worked to close this gap by establishing paediatric reference intervals for over 200 biomarkers of health and disease (www.caliperdatabase.org). Our aim is to continue recruitment of healthy Canadian children and adolescents as part of the CALIPER project to support planned analyses and expand the utility of the database. A community outreach

strategy was applied, and partnerships were formed with community centres and schools across the Greater Toronto Area. From September 2021 to March 2022, 215 (54.4% male, 45.6% female) participants aged 0 to 18 (mean (SD): 15.7 (±2.20)) years were recruited prospectively with informed consent. 111 participants were excluded due to history of chronic illness, acute illness within 7 days, and/or use of prescribed medication. Blood was collected through venipuncture (SST and KEDTA Tubes, BD Vacutainer), centrifuged within 4 hours, and stored at -80°C. Further work is planned to analyze stored samples for biomarkers wherein limited health-associated paediatric data is available (e.g., coagulation factors) and establish age- and sex-specific reference intervals for knowledge translation. Through community outreach and partnerships, CALIPER continues to advance the field of paediatric reference intervals to support paediatric health and clinical decision-making nationally and globally.

Presenter: Ghazal Haddadi

Title: Identifying and Overcoming Barriers to Participation in Health and Physical Activity Programs Among Trans, Non-Binary, and Gender Non-Conforming University Students

Abstract: It is important to ensure that trans, non-binary, and gender non-conforming students have access to the many benefits of physical activity (PA), which research suggests may include improved confidence, self-esteem, socio-emotional skills, and academic success. Unfortunately, little research has assessed accessibility and other aspects of involvement in PA for the trans, non-binary, and gender non-conforming community. This study aims to identify barriers and promotive factors for participation in PA among gender minority students at Keele Campus, York University, and build knowledge intended to make facilities and programs at York and other Canadian university campuses more inclusive and beneficial. Participants will be aged 18+, able to speak and read in English, registered as a student at York University and identifying with one or more of the following: trans, non-binary, gender non-conforming. The study uses a mixed-methods design consisting of an online survey followed by an online focus group interview. Using a quality participation framework, the survey will collect demographic information and ask participants questions regarding their PA experiences–in general, at York University broadly, and across particular programs and facilities at the university– including barriers and facilitators to participation. Additionally, focus groups will allow participants to expand on their PA experiences and suggest strategies to facilitate high-quality and inclusive PA experiences, in general, and at York specifically. The results of this research will contribute to the literature on inclusive PA experiences for trans, non-binary, and gender non-conforming University students, and will inform strategies for creating a safe, comfortable, and engaging environment.

Presenter: Max Cooper

Title: Investigating Process Acuity and Self-Enhancement Bias of Psychotherapists vs. Non-Therapists using a Novel Skills Test

Abstract: Emerging research finds that psychotherapists consistently demonstrate self-enhancement bias, overrating their skill performance. However, research shows that therapists' immodesty predicts poorer client outcomes. Studies comparing trained therapists with untrained individuals assigned to perform psychotherapy have also found differences in

client outcomes to be negligible, corroborating concerns that current psychotherapy training is ineffective and insufficiently grounded in empirically-supported foci and methods. Researchers have identified empirically-supported negative process markers that reliably predict treatment outcomes and suggest that developing acuity for these markers should improve performance. However, few tests exist to evaluate therapist skills and none to our knowledge assess therapists' ability to identify empirically-supported markers of negative psychotherapy process. We thus developed the Process Error Detection (PED) task to measure therapists' skill in detecting process errors. The PED consists of 16 brief videorecorded patient-therapist exchanges, showing 8 erroneous and 8 non-erroneous therapist responses. Participants assess each videorecorded exchange for the presence of therapist response errors. The PED's structure follows existing validated skills tasks, but its simple binary response pattern allows rapid administration and easy scoring, obviating the need for laborious expert coding. Scores were collected for 160 participants (80 untrained participants and 80 community clinicians and psychotherapy students) through online testing of the PED to examine differences between trained and untrained respondents. Self-enhancement bias was also measured through post-test performance self-ratings. Results are pending analysis. We hypothesize that: (1) due to the current lack of training in process marker acuity, trained participants will not outperform untrained in process error detection; and (2) due to self-enhancement bias, trained participants will rate their performance higher than untrained, despite no expected difference in performance . That the PED remains an unvalidated measure represents a limitation of the study, but also an opportunity to evaluate this new easily administrable skills test with potential utility for psychotherapy training.

Presenter: Fei Yi Teenie Siu

Title: Relation of serum levels of Trimethylamine N-oxide (TMAO) and CVD and all-cause mortality: a systematic review and dose-response meta-analysis of prospective cohort studies.

Abstract: Cardiovascular disease (CVD) is the leading cause of death globally. Raised serum levels of Trimethylamine N-Oxide (TMAO) is associated with CVD. However, it is unclear whether a dose-response relationship exists. We therefore conducted a systematic review and meta-analysis to assess the relation between TMAO levels and total CVD, CVD mortality, and all-cause mortality. MEDLINE, EMBASE, and Cochrane were searched through October 2020. Prospective cohort studies of ≥1 year duration investigating the association between TMAO levels and total CVD, CVD mortality, and all-cause mortality were included. Full article review, data extraction and risk of bias assessment were conducted by two independent investigators. Risk estimates of extreme comparisons were pooled using the random effects model and expressed as relative risk (RR) and 95% confidence interval (CI). Inter-study heterogeneity was assessed and quantified. Dose-response was assessed using one-stage linear mixed model. Certainty of evidence was assessed using GRADE. 17 studies (n=28,748) with total CVD (2404 cases), CVD mortality (183 cases) and all-cause mortality (2414 cases) were included. TMAO was associated with higher risk of total CVD (RR=1.46 [95% CI, 1.20-1.79]; low certainty) and all-cause mortality (RR=1.30 [1.13-1.50]; moderate certainty) and not for TMAO with CVD mortality (RR=1.53 [0.87-2.69]; very low certainty). There were significant positive linear dose-responses for 1μmol/L increases in TMAO levels for both CVD (RR=1.03 [1.02-1.05])

and all-cause mortality (RR=1.03 [1.01-1.04]). Downgrades were applied for inconsistency (total CVD and CVD mortality) and imprecision (CVD mortality) and upgrades for a dose-response (CVD and all-cause mortality).We demonstrated that high TMAO levels were associated with higher risk of CVD and all-cause mortality. Additionally, the association was linear with each 1µmol/L increase in TMAO associated with 3% RR increase in both CVD and all-cause mortality. Further studies of TMAO with CVD disease and mortality are needed.

Presenter: Rhonda Liane Baker

Title: Protective Factors in the Early Home Environment: Exploring Sensitive Caregiving and its Associations with Caregiver Depression and Child Language Outcomes.

Abstract: Maternal depression is considered a psychosocial adversity that can influence language development during a child's first years of life. Language outcomes during early childhood have been linked to later language abilities and academic success, creating an imperative to understand what factors in the home environment might work to buffer against this kind of adversity. Maternal responsiveness is supported as a modifiable, and potentially protective factor in the home that facilitates language processes. Maternal cognitive sensitivity is a feature of maternal responsivity that can be quantified through a coding system called Responsive Interactions for Learning. This measure uses a highly structured dyadic task to assess interaction behaviours of caregivers, and is efficient, while also being psychometrically sound and validated for use in primary care settings. The aims of this research were to a) determine whether a metric of maternal cognitive sensitivity could be derived from a semi-structured caregiver-child free play interaction, b) examine whether maternal depression was a predictor of the derived maternal cognitive sensitivity measure, and c) examine whether the maternal cognitive sensitivity measure during semi-structured free play interactions could predict the language outcomes of children. The results of this research support maternal cognitive sensitivity as a metric that can be derived from semi-structured caregiver-child free play interactions. This measure was found to be predictive of expressive language at 24 months after adjusting for maternal depression symptoms. It did not mediate the relationship between depression symptoms and language outcomes. Future research should look to compare the measure of maternal cognitive sensitivity derived during semi-structured free play interactions to a validated gold standard. Additionally, consideration should be given to the idea that the relationship between these variables may be that of a moderation model, whereby maternal cognitive sensitivity works to vary the relationship between depression symptoms and language outcomes.

Presenter: Shelby Davies

Title: Bilateral Salpingo-Oophorectomy and Sleep

Abstract: Sleep-disordered breathing (SDB) is a well-known risk factor for Alzheimer's disease (AD). In women, prevalence of SDB increases with the gradual loss of ovarian hormones over the menopause transition. Some evidence suggests that older women with surgical menopause, which is characterized by an abrupt loss of ovarian hormones, are more likely to self report SDB. However, there are a lack of objective sleep studies that

quantify SDB in middle-aged women with surgical menopause, a group that is high risk for later-life AD without estradiol therapy (ET). Thus, we wondered if middle-aged women with surgical menopause due to bilateral salpingo-oophorectomy (BSO; removal of the ovaries and fallopian tubes for cancer prevention), had sleep disordered breathing and nocturnal hypoxemia, and whether ET may be protective against respiratory disturbance. This study investigated sleep-disordered breathing in four groups of women; premenopausal (n=18), age-matched controls (n=18), women with BSO prior to spontaneous menopause (n=15), women with BSO on estradiol therapy (n=11). All women underwent at-home polysomnography (PSG) with pulse oximetry for up to 3 nights to record sleep. Recordings were scored manually for SDB events, following the American Academy of Sleep Medicine manual guidelines. There were no group differences in average apnea/hypopnea index, percentage of total sleep time spent in apnea/hypopnea, and counts of respiratory event-related arousals. However, women with BSO not taking hormone therapy had lower blood oxygenation during sleep and global Pittsburgh Sleep Quality Index scores that indicate sleep disruption. The results of this study were unable to show the adverse effects of BSO on sleep-disordered breathing using measures based on respiratory events, but showed subtle, early markers for sleep-disordered breathing using measures based on blood oxygenation. These preliminary results suggest that ovarian hormone loss due to BSO may drive poorer sleep quality and subtle declines in blood oxygenation during sleep, and ET does not fully protect against sleep disruption post-BSO. Future work is needed to assess other factors that may contribute to poorer sleep quality in women with BSO.

Presenter: Ryan Austin Jeevanayagam

Title: The Impact of the International Wildlife Trade When Creating Pandemic Prevention Legislation: A Review of Grey Literature

Abstract: Background: In response to the governance failures which have resulted in the reoccurrence of zoonotic outbreaks, a consensus vote by members of the World Health Organization (WHO) approved the creation of an internationally ratified pandemic prevention treaty known as The World Health Organization Accord on Pandemic Preparedness and Response. Due to the devastating impacts of zoonotically derived pandemics such as COVID-19, it is imperative that policymakers devise strategies which are focused on the eventual eradication of zoonoses (deep prevention) rather than just limiting their recurrence and severity. Purpose: One area of concern is the International Wildlife Trade sector, which has contributed to the emergence of zoonoses due to the rapid emergence illegal activities and their associated proxy institutions (i.e., wet markets). Aim: The goal of this study is to provide data from select grey-literature sources in order to support a scoping review which analyzes the different trade standards, regulations, and incentives that [1] govern wild animal markets and the importation of wild animals across international borders and [2] determine the roles of local, national, and global-level institutions in the prevention of zoonotic spillover within this sector. Grey literature sources describing illegal activities conducted within the International Wildlife trade sector that drives the occurrence of zoonoses were selected for review. Results: Political corruption, black market commerce, poverty, and policy fragmentation were identified as strong areas to consider when developing a pandemic treaty focusing on the deep prevention of zoonoses. Areas of immediate area of concern will be addressing existing research gaps stemming from a lack of data from surveillance tools and literature that maps crime networks and illegal activities within the International Wildlife

trade. Recommendations: The deep prevention of zoonotic pandemics via the WHO's pandemic accord will be determined by the availability of quality data to create a comprehensive policy.

Presenter: Liran Leidershnaider

Title: Adolescent Gender-Based Violence Amidst the Novel Coronavirus: A Scoping Review

Abstract: There is a widespread belief that the COVID-19 pandemic has increased gender-based violence. Gender-based violence (GBV) can be defined broadly to include intimate partner violence, domestic violence, and family violence that targets all genders of all ages. Studies conducted during the pandemic have shown that gender-based violence in females has increased, however a research gap exists in the systematic review of the adolescent population. This systematic review investigates how COVID impacted gender-based violence specifically in adolescents aged 12-18 years old. A comprehensive literature search was conducted across multiple electronic databases, and gray literature was searched via references of included articles and manual searching. Inclusion criteria was set for any full-text, English article discussing GBV or GBV-related topics during the pandemic in adolescents and any article which collected data after January 01, 2020. Articles were screened for eligibility via inclusion and exclusion criteria, assessed for bias using the ROBINS-I tool, and the findings were manually extracted. 20 peer-reviewed articles and 7 gray literature sources were determined eligible for use in the review (n = 27). Results showed that the COVID-19 pandemic has increased rates of gender-based violence, intimate partner violence, unplanned pregnancies, early marriage, domestic violence, and family violence in adolescents worldwide. Additionally, as a result of the pandemic, adolescents' access to safety services has drastically decreased. Risk factors of gender-based violence towards adolescents includes preventative measures (such as lockdowns), isolation with an abuser, and increase in family stress. The results prove similar to previous worldwide outbreaks, and should be carefully considered in order for the preparation of mental health services for the lasting impacts of this pandemic.

Presenter: Urtė Žakarytė

Title: GLAUCOMA SELF - CARE HABITS AND PSYCHOLOGICAL STATUS CHANGES DURING THE COVID-19 PANDEMIC: THE PATIENT'S PERSPECTIVE

Abstract: COVID-19 pandemic has made a major challenge for healthcare centers. Some studies verified the impact of lockdown on ophthalmology services and patients concerns about treatment due to changes in hospital work, delayed or non-contact consultations. We conducted a study to asses how personal glaucoma self - care habits and psychological status changed during the COVID-19 pandemic in Lithuania from the patient's point of view. The study was conducted using an original anonymous questionnaire to find out the data about patients glaucoma self-care and the psychological condition before and during the COVID-19 pandemic lockdown. Patients, diagnosed with glaucoma, were interviewed at the Center of Eye Diseases (Vilnius University hospital Santaros Clinics) in February - March 2021. 68 patients (64.7% females, 35.3% males; age from 49 to 90 years) were interviewed. 94.12% patients visited an ophthalmologist during the pandemic. The availability of prescribed glaucoma medications was the same as usual for 76.5% of respondents, 13.2%

got prescriptions from general practitioners more often, 5,9% had more trouble getting prescription medication. The majority of patients reported no change in their habits of buying and taking glaucoma medications (83.7% and 94.1%, respectively). Support from relatives in glaucoma care increased in 16% of patients. The psychological condition related to glaucoma had deteriorated for 45.6% of respondents, 13% of respondents felt tension over a failed visit to the doctor. 10% of respondents were not satisfied with the teleconsultation of the ophthalmologist. The routine and medication habits of the patients diagnosed with glaucoma did not change significantly during the COVID-19 pandemic. Anxiety due to glaucoma increased in nearly half of the patients.

Presenter: Uyen Nhi Nguyen

Title: Living with Family during COVID-19

Abstract: Adolescents who were living at home with their families during the COVID-19 pandemic have been experiencing increased stress and a lack of independence that impacted their wellbeing. While many current studies have reported increased mental health struggles and conflict with family, not a lot has focused on how existing family strength can be beneficial for young adults during this difficult time. Our study aims to examine the association between family relationships and COVID-19 related distress during their time living at home with their families. We hypothesized that young adults with higher relationship quality with family would have less COVID-19 related distress, and a higher familial relationship quality would moderate the relation between COVID-19 related distress and wellbeing. A survey consisting of family relationship scales, COVID-19 related distress scale, and wellbeing scales were distributed to participants recruited through the York Undergraduate Research Participant Pool (URPP). Our participants reported lower than average wellbeing measures, indicating the impact the pandemic has had on our students. For our hypotheses, even though we did not find that higher familial relationship quality is related to less COVID-19 related distress, all measures of conflict with family are related to more COVID-19 related distress. For the moderation analysis, we found that a stronger paternal relationship exacerbates the negative relation between COVID-19 related distress and wellbeing. Our study further supports that family relationship has an important role in adolescents' wellbeing, especially during extraordinary times like the current COVID-19 pandemic. It is important that research on family relationships continues to explore different aspects and functions, so we can understand better how to support and uplift each other during these times.

Presenter: Atiyyahbanu Ismail Master

Title: Knowledge and Practice of radiation protection among oral health science students at the University of the Witwatersrand.

Abstract: Radiographs are an indispensable diagnostic aid in dentistry and extensive exposure of x-rays is associated with significant health risks. Hence the practice of radiation protection is essential for dental students. The study therefore sought to assess the knowledge and practice of radiation protection among oral health science students and assess the difference between preclinical and clinical students at the University of the Witwatersrand.

Methods: This was a cross-sectional study design, and a convenient sampling strategy was utilised as all 130 Bachelor of Oral Health & Dental Science students trained in radiology were invited to participate. The questionnaire tool was adapted from Bali et al, 2018 and other literature. The self-administered questionnaire was then distributed via google forms.
Results: Of the 130 students, (n= 58) participated in the study, giving a response rate of 44.62%. Among the students 12.07% were oral hygiene students and 87.93% were dental students. In knowledge there was a statistically significant difference among the preclinical and clinical groups with all the clinical students having more awareness of the harmful effects of radiation versus 83% of pre-clinical students (p=0.02). In terms of practice more (97%) clinical students used the lead apron on their patients, however only 3% of them used it on themselves (p=0.03). Clinical students reported to have relied on the use of the distance rule as the availability of the lead apron was at times a problem.
Conclusion: Clinical students were found to have better awareness and practice of radiation protection. However, the use of lead aprons by students was a problem as they indicated a lack of its availability (44%) when needed.

Presenter: Hening Sun

Title: Evaluating the Impact of Student Demographics on Lecture Capture Viewing Habits of Second-Year Undergraduate Students

Abstract: The use of technology in higher education has become increasingly commonplace in recent years. Lecture recordings, also known as lecture capture, is often made available to students as a supplementary resource to in-person lecture attendance. The impact of lecture capture use on student learning remains up for debate in the literature. However, previous studies have predominantly evaluated the impact of lecture capture use on entire classes. It is possible that different demographic groups within one class (e.g., students with accessibility challenges, mature students, students for whom English is a second language) may use and/or benefit from lecture capture differently. The purpose of this study is to examine whether demographic factors affect lecture capture viewing habits of students in a second-year core kinesiology course. Students were invited to complete an online questionnaire containing questions related to demographics and lecture capture use. Student demographics (e.g., age, gender, year of study, English fluency, hours worked at a paid job, commute time to campus) will be correlated to variables describing lecture capture viewing behaviour, such as number of recordings watched, number of in-person lectures attended and factors that led to missing in-person lectures. The results of this study will have implications for lecture capture provision in higher-education teaching.

Presenter: Marley Leslie

Title: The Effect of Social Media Food Images on the Well-Being of Women at risk for and not at risk for an Eating Disorder

Abstract: Social media use has skyrocketed over the past decade, with ever-younger, more easily influenced audiences using these platforms. A link has been clearly established between the use of social media and disordered eating as well as negative mood, one seen most often among female users. The current study examined the relationship between exposure to social media food images, mood, and women at risk of, and not at risk of, an

eating disorder, as no previous research has investigated this interaction. Female undergraduate students (N = 99) were recruited using the Undergraduate Research Participant Pool through York University and were randomly assigned to one of three conditions, 1) healthy food images, 2) control (nature) images, and 3) unhealthy food images. Each participant filled out demographic information and the Eating Disorder Examination Questionnaire for Part 1 of the study. All participants filled out pre- and post-exposure measures of the State-Trait Anxiety Inventory and a Visual Analogue Scale for mood for Part 2 of the study. The results demonstrated that social media food images had no significant impact on the mood of women at risk for an eating disorder. Further, the results showed that women not at risk for having an eating disorder did have a change in mood after viewing the food images, which was not expected. However, although the study did not find any significant results, it does not mean there are none to be found, future studies should investigate this relationship with a larger sample size.

Presenter: Raiya Taha Thomure

Title: Gender-based violence against trans* individuals in sport: A look into the harm experienced by five trans and non-binary athletes in North America

Abstract: Trans* athletes are becoming an increasingly marginalized demographic within competitive and recreational sport. Despite growing research on policy and physiology of trans* athletes, there is little attention given to the experiences of these athletes regarding harm, discrimination, and violence. The present study aimed to uncover the experiences of gender-based violence that exist for trans* folks across the gender spectrum in sport. This research incorporated both an intersectional approach, as well as a grounding in queer theory to understand the relationships between the gendered/raced/disabled/sexual identities, and the gender-based violence faced. Each semi-structured interview consisted of a demographic sampling component, a general questioning period, as well as a period to discuss experiences of gender-based violence in sport. Thematic analysis was used to dissect the five semi-structured virtual interviews, and to formulate key takeaways from the data. There were a series of findings on multiple levels of interaction between the athletes and sport systems. Within these systems, the athletes expressed real and perceived harms from peers, as well as coaching and other staff in positions of power. Such harms exist on lines of identity invalidation, politics of passing, and an interconnectedness with other axes of oppression. Identities such as non-whiteness, disability, and fatness worsened, triggered, and made more frequent the experiences of gender-based violence. Outside of interpersonal violence, athletes also expressed harm within sport structures, including gendered sports team policies as well as the locker room as a site of perceived harm with the potential for real harm. The findings from this study expose a need to safeguard sport for trans* athletes on multiple fronts: interpersonally between athletes, interpersonally on different levels of power, within policy, and within the larger structure of a binary gender system in sport.

Presenter: Arti Anil Pote

Title: The Influence of Family factors on Juvenile delinquency: A review paper

Abstract: Juvenile delinquency is widespread throughout the world. It is a major issue and there may be several factors that shape a child into a delinquent. This paper aimed to

examine the influence of familial variables in the development of a delinquent adolescent. The study looked at psychological and social dimensions of the family to determine how it influenced individual development. It included 54 studies that covered a wide range of topics related to family and its impact on juvenile delinquency. The domains studied were: Punitive Parenting, Parental Monitoring, Family Conflict, Economic Status, Parental Morality, Parental Religion, Child Abuse, Domestic Violence, Family Criminality, Family Environment, Family Structure, Family Social Capital, Parental Control, Family size, Parental education, and Family attachment. After doing a systematic review we found that the parents who were - Punitive, Abusive, inadequately watched their children, had Family Disputes, had a positive criminal family history, had low economic position, and were less attached to their children - were more likely to raise juvenile delinquents. By offering a condensed report, this study will give a common subject for academics who seek to perform future research in juvenile delinquency and family. This research will aid psychologists in learning more about the elements that contribute to juvenile delinquency in order to develop therapies that address the source of the problem.

Presenter: Alaina Thomas

Title: How did Nunavummiut Youth Cope during the COVID-19 Pandemic?
A Qualitative Exploration of the Resilience of Inuit Youth Leaders involved in the I-SPARX Project

Abstract: This study investigated how COVID-19 has affected the wellness of a group of Inuit youth leaders in Nunavut in the context of their involvement with an ongoing mental health research initiative, the Making I-SPARX Fly in Nunavut [I-SPARX] project. The study had three goals: (1) to understand how the pandemic has affected I-SPARX youth leaders' perceived involvement in the I-SPARX Project; (2) to build knowledge around how the pandemic has impacted the daily life and wellbeing of youth in Nunavummiut communities; and (3) to acquire a culturally-specific understanding of their coping mechanisms and resilience strategies through the lens of Inuit Qaujimajatuqangit (IQ). Nine Inuit youth were interviewed virtually. They were asked ten questions surrounding their participation in I-SPARX, their life and mental health during the pandemic, and their coping strategies. Their comments were analysed using inductive thematic analysis. Pandemic challenges, the utility of I-SPARX teachings and participation, and culturally- and community-embedded pathways to resilience were discussed. The implications of COVID-19 on Inuit youth in remote communities are not fully understood. The current study illuminates their experiences of the pandemic as well as their coping strategies to inform future research with respect to ways in which Inuit youth might be supported in situations, such as a global pandemic, that restrict their traditional resilience-enhancing activities and create social isolation.

Presenter: Raghdah Zakariya

Title: Trauma-and-Violence-Informed-Sport for Development (TVISFD) approach within the work of practitioners and scholars in the sport-for-development (SFD) field.

Abstract: Background: This study explores the concept of Trauma-and-Violence-Informed-Sport for Development (TVISFD) approach within the work of practitioners and scholars in the sport-for-development (SFD) field. Combining results

from a literature review with insight from intersectional feminism and expertise from practioners and scholars, the study reflects upon key benefits and challenges drawn from applying a Trauma-and-Violence-Informed (TVI) approach to sport for development programming. Purpose: The goal of this paper is to use a TVI approach to: (1) investigate how practitioners and scholars understand and prevent GBV experiences in and through their programming; (2) examine how the critical issues identified in the sport for development literature potentially inform gender-based violence prevention; (3) better understand the potential interconnections and synergies between trauma-and-violence informed (TVI) physical activity and sport for development (SFD); and (4) contextualize the impact(s) of the COVID-19 pandemic on practitioners/scholars that adopt a TVISFD approach. Methodology: The study used qualitative research, including nine semi-structured interviews: three with SFD practitioners and six with researchers who have a focus on the SFD field. All study participants work with and/or study the experiences of individuals that have potentially experienced or are currently experiencing gender-based violence (GBV). Interviews were transcribed verbatim, and thematic analysis was used to identify common themes and patterns across data. Initial findings suggest that: 1); 2); 3). Further research is needed to advance understandings of TVI in the field of SFD. ** Please note that the study is still in progress with a deadline to complete by May 2022**

Presenter: Shahrzad Khajehzadehshoushtar

Title: Epithelial Ovarian Cancer Causes Muscle-Specific Fibrosis In A Murine Mouse Model

Abstract: Cancer cachexia is characterized by muscle wasting due to tumour burden, that is often accompanied by wasting adipose tissue and cannot be reversed with nutritional support. Ovarian cancer (OC) cachexia is associated with increased mortality, poor response to treatment and the inability to accomplish activities of daily living. Although OC cachexia negatively affects prognosis, the condition is under-studied due to limited animal models. This study aims to remedy this gap by quantifying the degree of fibrosis, a hallmark of cachexia, in muscles during epithelial ovarian cancer (EOC) progression in a mouse model. Transformed murine ovarian surface epithelial cells from C57BL/6 mice were injected under the ovarian bursa of murine mice, and the diaphragm, soleus, and extensor digitorum longus (EDL) muscles were collected and frozen 45-, 75- and 90-days (endpoint) post-injection. Control mice were similarly injected with PBS, and muscles were collected 75 days post-injection. Muscles were sectioned, stained with picrosirius red, and analyzed using the software ImageJ to identify collagen content. The average collagen content of the soleus muscle remained relatively constant with levels of 0.81, 1.36, 1.54 and 1.85% being observed for control, 45 days, 75 days and 90 days endpoint groups, respectively. Collagen content of the EDL muscle also did not change, with the average level being 2.27, 2.36, 2.38 and 2.70% for the control, 45 days, 75 days and 90 days endpoint groups. Fibrosis was evident at 90 days in the diaphragm with the average collagen content being significantly higher at 90 days (3.16%) compared to control (0.42%), 45 days (0.81%), and 75 days (0.80%). Ongoing studies into the relationship between fibrosis and OC progression will elucidate the mechanism by which OC causes diaphragmatic fibrosis.

Presenter: McMaster Synthetic Biology Research Team

Title: Genetically Modified Bacteria for Targeted Elimination of Adherent-invasive Escherichia coli in Inflammatory Bowel Disease

Abstract: Inflammatory bowel disease (IBD) is a group of immune-related diseases, characterized by chronic inflammation and severe tissue damages in the human gastrointestinal tract. Therapeutics developed using synthetic biology methods showed some efficacy in laboratory studies but failed to produce clinically relevant results. In this project, we performed a comprehensive literature review of recent advancements in the field and we proposed the use of bacteriocin to target the pathogenic bacteria adherent-invasive Escherichia coli (AIEC), which are closely involved in the development of IBD. We constructed a genetic circuit that can simultaneously detect the inflammation marker nitric oxide, and a pathogen-specific quorum sensing factor named autoinducer-3. Upon activation, the genetic circuit expresses colicin E1 and E9, two bacteriocins that can selectively eliminate the AIEC. We designed detailed experimental workflows for circuit construction through Gibson assembly and for functional verification. A mathematical model was also established to predict the outcomes of our design.

Presenter: Yvonne Ping

Title: Developing Ex-Vivo Culture System of Mouse Uterus

Abstract: The study of embryo implantation and development in vivo is hindered by significant barriers. Non-invasive longitudinal imaging can provide insight into fetal development and health. However, high-resolution imaging methods require removing the embryo/fetus from the uterus. Isolation and growth of post-implantation fetuses have proven difficult, and dissection with in vitro culture negates studying fetal-placenta-uterus interactions. An ex-vivo culture method that maintains a uterus for an extended timeline would greatly aid in studying embryonic development. This project involves developing an ex-vivo perfusion system to maintain a mouse uterus for three weeks (average gestation time). Additionally, it involves determining the ideal growth conditions and culture medium for a mouse uterus. For this, the uterus is isolated, and the abdominal aorta is cannulated and connected to a bioreactor previously developed by the Rogers Lab for the kidney, pancreas, and lung. The culture media will be STEEN solution which has successfully been used in other organ cultures. To meet the metabolic needs of the uterus, hemoglobin and nutritional supplements will be added. Essential amino acids, a stable glutamate-GlutaMax, and low-density lipoproteins will be supplemented to aid with organ survival. The performance of ex-vivo cultured uteri will be studied by measuring oxygen consumption using PresensTM oxygen sensors at the aorta and vena cava. Preliminary results show that aortic cannulation leads to successful perfusion of the uterus and ovaries. Attempts to fully isolate and transfer the uterus, ovaries, and associated vasculature to the growth chamber have been successful. The longest culture period to date is 3 days and experiments are underway to extend this period. This ex-vivo system will support the growth of the whole uterus throughout pregnancy, enabling the study of fetal-placenta-uterus interactions and development in real-time which are currently inaccessible both in situ and in vitro.

Presenter: Concetta Barranca

Title: Oral contraceptive use and menstrual cycle influence acute cerebrovascular response to standing

Abstract: Background: Women are more likely to experience orthostatic hypotension compared to men. Assessing menstrual cycle and oral contraceptive effects during acute orthostatic stress could be clinically relevant to the diagnosis of initial orthostatic hypotension among women. Research Objective: This secondary analysis of Abidi et al. (2017) investigates the influence of female sex hormones on cardiovascular and cerebrovascular responses within the first 30 seconds of standing. Methods: Young, healthy women were recruited, consisting of oral contraceptive users (n=12) and non-users (n=9). Women were tested during the low hormone (placebo pills; days 2-5 of the natural cycle) and high hormone (high dose pill; days 18-24 of the natural cycle) phases. Within the first 30 seconds of standing, changes in mean arterial pressure, cardiac output, heart rate, the 30:15 heart rate ratio and several cerebrovascular resistance indices were examined. Results: There were no effects of oral contraceptives or the menstrual cycle on hemodynamic responses, nor any effects on the 30:15 heart rate ratio during standing. In the low hormone phase, oral contraceptive users had a greater drop in diastolic middle cerebral artery blood velocity compared to all other phases/groups, perhaps indicating impaired cerebral autoregulation. Interestingly 8 out of 21 women had drops in systolic/diastolic blood pressure meeting the criteria for initial orthostatic hypotension, and 7 of those 8 women displayed this drop in a single phase of the menstrual cycle. Conclusion: Oral contraceptive users had a greater drop in diastolic brain blood flow velocity in the low hormone phase. Further, our results could be relevant for the timing of diagnostic testing for women with orthostatic intolerance.

Presenter: Vicente Joaquín Agüero López

Title: Pharmacological predictions of capsaicin analogs and their selectivity in TRPV1 channel

Abstract: Pain is an unsatisfactory experience and cause of suffering and disability in the dental office. Given the high demand for analgesics targeting the peripheral nervous system, the pharmacology of nociceptive sensory systems is a topic of broad general interest. The main aim of this study is to find a set of chemical compounds of the family known as capsaicinoids that have similar properties to capsaicin and have pharmacological use to modulate the pain receptor TRPV1 channel. We believe that our analytical approach using economic and straightforward bioinformatics contributes to the preliminary pharmacological design and testing stages. Specifically, we are interested in pharmacotechnical properties, drug potency, binding affinity, significant water solubility, and oral bioavailability. These are of interest in the TRPV1 (V stands for vanilloid) subfamily, in which capsaicin-binding receptors are the canonical ligands. The main objective of this study is to search for derivatives of capsaicin that can be further used to control pain in dentistry. First, the geometric properties of capsaicin and its derivatives will be considered according to the binding site. Since the properties of the capsaicin head have an essential role in the modulation of potency and affinity, we will explore the effects produced by introducing chemical modifications in the capsaicin head region. All this will allow us to make quite extensive pharmacological predictions about its application in the human body.

Presenter: Sara Sugin

Title: Mitochondrial phenotypes caused by HUWE1 deletion in oocytes

Abstract: Since oocyte maturation has high energy requirements, functional mitochondria are crucial for its normal progression. The protein product of the Huwe1 gene, located on the X chromosome, is a HECT-domain E3 ubiquitin ligase that regulates the stability and activity of numerous proteins involved in mitochondrial function. Among these, are proteins that regulate cell death via apoptosis, mitophagy-related proteins, and proteins related to mitochondrial dynamics. Mutations in the Huwe1 gene in both mouse models and humans have resulted in infertility and various other detrimental effects. Despite its key role, the functions of HUWE1 remain elusive. Our aim in this study was to gain a better understanding of the role of HUWE1 in proper oocyte development, we looked at how its conditional knockout in mouse oocytes affected mitochondrial activity. Our results have shown that at different stages of maturation, namely the germinal vesicle (GV) stage and metaphase II (MII) stage, there were significant differences in total mitochondria, active mitochondria, mitochondrial membrane potential, and heat production between knockout and wildtype oocytes. We identified three potential molecular players that could be responsible for these differences, Mitofusin-2, Opa1, and creatine kinase, based on their involvement in mitochondrial dynamics. Future experiments should focus on identifying the cellular roles of these molecules as well as identifying other targets of HUWE1.

Presenter: Leong Tung Ong

Title: Aetiology of Severe Adult Bacterial Community-Acquired Pneumonia Requiring Intensive Care Unit Admission at the University of Malaya Medical Centre, Kuala Lumpur, Malaysia: A 4-Year Retrospective Observational Study (2017-2020)

Abstract: Severe bacterial community-acquired pneumonia (CAP) is a major cause of morbidity and mortality in adults globally. Our aim in this study is to determine the most common aetiological agents of this infection and their antibiotic susceptibility patterns. A retrospective observational study was conducted on all adult patients aged ≥ 18 years old with bacterial CAP requiring admission to the intensive care unit at the University of Malaya Medical Centre, the largest tertiary teaching hospital in Malaysia, from 1 January 2017 to 31 December 2020. Patients were identified from the microbiology laboratory database and electronic medical records. Only patients with microbiologically confirmed and monomicrobial bacterial CAP were included. Data were collected using a standardised data collection form. A total of 97 patients were identified, the majority of whom were males (n = 76; 78.4%). Slightly more than half of the patients were < 65 years of age (n = 51; 52.6%). Seventy five percent (n = 73) of the patients had underlying comorbidities and 40.2% (n = 39) were immunocompromised. Diabetes mellitus was the most common comorbidity (n = 42; 57.5%). Gram-negative bacilli bacteria accounted for a significant proportion of the cases (n = 70; 72.2%). The most common aetiological agent was Klebsiella pneumoniae (n = 27; 27.8%), out of which 26.0% (n = 7) were extended-spectrum beta-lactamase (ESBL)-producers. None of the K. pneumoniae isolates were resistant to carbapenems. The second most common aetiological agent was Staphylococcus aureus (n = 22; 22.7%), of which 31.8% (n = 7) were resistant to methicillin. None of the S. aureus isolates were resistant to vancomycin. It is important that empirical antibiotics that have coverage for both

K. pneumoniae and S. aureus are given to adult patients who present with suspected bacterial CAP requiring ICU admission before culture results are available.

Presenter: Alita Gideon

Title: Validating a biomarker and new potential therapy target in chronic lymphocytic leukemia and multiple myeloma

Abstract: In many instances of B cell cancers, certain membrane receptors become constitutively activated. This constitutive activation can lead to the recruitment of Tumor necrosis factor receptor associated factor proteins (TRAFs), to promote the survival and proliferation of B cells. TRAF1 is the only member of this family that can be phosphorylated by Protein kinase 1 (PKN1). Phosphorylated TRAF1 (pTRAF1) and PKN1 kinase activity are required for the stability of TRAF1 protein. TRAF1 is of specific interest as it is over-expressed in 48% of B cell malignancies, such as chronic lymphocytic leukemia (CLL). Furthermore, TRAF1 expression and downstream signaling are also upregulated in multiple myeloma (MM) patients and cell lines. Thus, we hypothesize: (1) Levels of pTRAF1 will be elevated in CLL and MM patient samples and cell lines. (2) Pharmacological, or genetic reduction of PKN1 levels in CLL or MM samples will reduce pTRAF1 expression. (3) Reduced pTRAF1 expression will in turn lower downstream survival signaling and increase cell death. Our study aims: (1) Validate elevated expression of pTRAF1 in CLL and MM patient samples and cell lines. Currently, there is no method to confirm the direct phosphorylation of TRAF1, due to the lack of a phospho-specific antibodies. Thus, we will test the efficacy of pTRAF1 monoclonal antibodies that have been developed for us by Abcam. (2) Validate whether reducing PKN1 expression leads to reduced pTRAF1 expression and downstream cell survival signaling in CLL and MM patient samples and cell lines. Preliminary results: (1) Crispr/Cas9 knock in mutations for TRAF1 have been successfully generated. This model will be used to address Aim #1. (2) We have successfully established a lentiviral knockdown and Crispr/Cas9 knockout models for PKN1. These models will be used to assess Aim #2.

Presenter: Reagan Alexander Reid

Title: Identifying the presence and development of muscle degradation and regeneration in a mouse model of ovarian cancer

Abstract: A healthy human body will maintain a consistent pattern of muscle synthesis and degradation in order to maintain homeostasis. However, in some diseases, this balance can be disrupted such that muscle protein degradation is increased relative to synthesis - resulting in net muscle loss. This phenomenon is termed "cachexia" and is seen in several cancer patients depending on the type and stage of cancer. Muscle weakness and wasting are defining features of cancer cachexia and are associated with decreased survival. Key hallmarks for muscle degradation include necrosis (index of cell death), while hallmarks of regeneration include centralized nuclei (index of cell proliferation). Little is known about the homeostasis of muscle degradation and regeneration in cancer cachectic muscle, especially in ovarian cancer. The purpose of this thesis is to identify the extent of cell death and regeneration of several muscles in a rodent model of ovarian cancer to better understand the muscle profile within this disease. Transformed murine ovarian surface epithelial cells from

C57BL/6 mice were injected under the ovarian bursa of murine mice. Ovarian cancer devolved for 45-, 75- and 90-days (endpoint) post-injection while control mice were injected with PBS and developed for 75 days. At each time point, diaphragm, soleus and extensor digitorum longus (EDL) were collected and frozen for histology. Muscles were sectioned, stained with hematoxylin and eosin, and will be analyzed using the software ImageJ to identify areas of necrosis and centralized nuclei. This project will help identify the development of muscle degradation/regeneration throughout ovarian cancer and potentially discover muscle-specific responses to cancer development.

Presenter: Yiyue (January) Jiang

Title: Understanding microglial off-target contamination in Patch-seq datasets of human and mouse neurons

Abstract: Patch-seq is an emerging method that combines single-cell RNA-sequencing (scRNA-seq) and patch-clamp electrophysiology. This method allows for the acquisition of a neuron's transcriptomic, electrophysiological, and morphological features. Previous research reported the contamination of Patch-seq-derived expression profiles with transcripts from non-neuronal subtypes, including microglia, even after filtering the cells. Using unsupervised clustering and gene expression profiling, we investigated the off-target sampling of microglial transcripts within human and mouse Patch-seq datasets, with the goal of understanding their transcriptomic and functional profile. Our analysis suggests that microglial contamination in both human and mouse Patch-seq neurons were able to drive unbiased clustering. By computing a contamination score, we were also able to show that these clusters of Patch-seq neurons are highly enriched for microglia-specific genes. For the human dataset, the microglia contamination score is largely dependent upon the random effect of donor identity. The electrophysiological properties of these cells suggest a "leakier" phenotype, with lower input resistance, higher AP trough, etc. The overall microglia contamination is also higher in human samples compared to mouse samples. Next, by comparing the highly contaminated Patch-seq neurons to purified microglia from single-cell RNA-sequencing (scRNA-seq) and single-nucleus RNA-sequencing (snRNA-seq) datasets, we found several genes unique to Patch-seq neurons with high microglial contamination. These genes reflect a neuroinflammatory state that is distinct from purified microglia, suggesting the presence of a subgroup of activated microglia in the samples. In summary, our analysis confirms the off-target sampling of microglia in Patch-seq datasets and makes steps towards characterizing their unique activation state.

Presenter: Kian Yousefi Kousha

Title: Perceived Agency of Audiovisual Stimuli Does Not Affect Sensitivity to Synchronization During the Synchrony Judgment Paradigm

Abstract: Multimodal integration of auditory and visual cues necessarily involves synchronizing across modalities. Synchrony perception of audiovisual stimuli is experience- and stimulus-dependent. The action observation network (AON), which is also involved in auditory beat perception, has a greater response to actions that are 'like me', performed by humans or agents that behave like or resemble a human. Therefore, we investigated the influence of perceived stimulus agency (i.e., how much it resembles a human) on sensitivity

to audiovisual synchrony. Using motion capture data, we generated point-light figures (PLFs) of a human actor performing jumping jacks or side twist motions. We applied four levels of scrambling to the PLFs to gradually decrease the stimuli's perceived agency. Auditory rhythms then accompanied the PLFs, and we made different temporal shifts between the videos and the audio. Participants judged synchrony between the auditory rhythms and the PLFs of varying degrees of agency. We found stimulus agency to significantly affect participants' point of subjective simultaneity but not their sensitivity to synchronization. In other words, the ecological relevance of audiovisual stimuli influenced the choice of spatiotemporal cues used to judge synchrony. Nevertheless, this did not affect tolerance to audiovisual asynchrony. We also analyzed covariates of sensitivity to synchronization. Social personality traits did not result in differential treatment of agency when judging synchrony. As well, whereas participants with prior music experience were more sensitive to synchrony, experience with video gaming did not affect sensitivity to synchronization. The present study contributes to the vast body of literature on the topic of audiovisual synchronization. A greater understanding of sensitivity to synchronization can eventually optimize the interventional strategies used for patients with autism spectrum disorder or Parkinson's disease.

Acknowledgements