



UNIVERSITY OF TORONTO
FACULTY OF KINESIOLOGY & PHYSICAL EDUCATION



Re-Thinking Research in a Post-Pandemic World

Conference – May 10, 2023 – [BOK2023 Web](#)



About the Conference

BOK is a conference run by graduate students, for graduate students, covering a broad spectrum of inter and multi-disciplinary issues related to health, sport, and physical activity. All subject areas are encouraged to submit an abstract. BoK's purpose is to provide early career researchers an opportunity to share research and engage in important conversations relevant to the field of kinesiology, sport, and physical education.

The theme of Bodies of Knowledge 2023 is **Re-thinking Research in a Post-Pandemic World**. Given the restrictions imposed by the pandemic, numerous hospitals, clinics, and research settings were forced to shut down which adversely impacted many stakeholders including researchers, scientists, academics, and students. As such, many were forced to change and adapt their approach to research. Alongside such monumental changes to the world of research came growing distrust of the institution. The spread of misinformation amongst numerous media outlets in the age of COVID-19 and the rise in vaccine hesitancy justify the importance of knowledge translation: the practice of moving research from the laboratory and research journals into the hands of people and organization who can put it into practical use.

To accomplish this objective and foster reflexive awareness, the conference features keynote speakers and student panelists specializing in knowledge translation and implementation sciences.

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General Information

Location

The conference will be held at the Blue & White Lounge (299 Bloor St W, Toronto, ON M5S 1W2)

Acknowledgement

This conference reflects not only the mission and vision of the University of Toronto Faculty of Kinesiology and Physical Education, but the dedicated efforts of students and professionals within the field of kinesiology, sport, and physical education towards the evolving nature of research in the post-pandemic world.

Thank you to the Faculty of Kinesiology and Physical Education and the Kinesiology and Physical Education Graduate Society for your continued support with the annual Bodies of Knowledge Conference. We also extend our warmest thanks to our keynote speaker, Dr. Kate Einarson, our student panelists, and student presenters for your enthusiastic involvement.

This conference would not exist without the collective efforts put forth by the Bodies of Knowledge Conference Committee. Thank you for each of your roles in making this conference possible.

Registration and Abstract Committee	➤ Jasmine Lew ➤ Cooper Sharpe ➤ Daniel Sibley
Logistics Committee	➤ Amin Mostofinejad ➤ Golnaz Ghazinour ➤ Jordan Clancy
Volunteer Committee	➤ Hadi Mostofinejad ➤ Delaney Thibodeau
Marketing and Outreach Committee	➤ Samira Sunderji ➤ Roxy O'Rourke ➤ Shalom Brown
Budget and Finance Committee	➤ Alessia Capone

We extend a special thank you to Saidur Rahman, our Equity Diversity and Inclusion Advisor for her exceptional support, counsel, and guidance with delivering this conference.

With thanks,

Rozhan Momen & Elia Rishis

Conference at a Glance

MORNING SESSIONS		
TIME	ITEM	DETAILS
8:30 – 9:00 AM	Refreshments & attendees arrive	
9:00 – 9:15 AM	Welcome Remarks	Vice-Dean Ashley Stirling, Faculty of Kinesiology and Physical Education, University of Toronto
9:15 – 10:30 AM	Presentations Session 1	Session 1 – Behavioural Studies A
10:30 – 10:45 AM	Break	
10:45 AM – 12:00 PM	Presentations Session 2	Session 2 – Behavioural Studies B
12:00 – 1:00 PM	Lunch Break	

AFTERNOON SESSIONS		
TIME	ITEM	DETAILS
1:00 – 1:45 PM	Keynote Dr. Kate Einarson	Presentation of work related to knowledge translation
1:45 – 2:45 PM	Presentations Session 3	Session 3 – Physical Cultural Studies
2:45 – 3:00 PM	Break	
3:00 – 4:45 PM	Presentations Session 4	Session 4 – Biophysical Studies
4:45 – 5:00 PM	Closing Remarks	
6:00 – 9:00 PM	Student Social	Join us in-person at Duke of York 39 Prince Arthur Ave, Toronto, ON M5R 1B2

Detailed Conference Schedule

WELCOME REMARKS		
TIME	ITEM	
9:00 – 9:15 AM	Welcome Remarks from Vice-Dean Ashley Stirling, Faculty of Kinesiology and Physical Education, University of Toronto	
PRESENTATIONS SESSION 1		
1 – BEHAVIOURAL STUDIES A		
TIME	PRESENTATION	PRESENTER
9:15 AM	The Effects of Sex on Sport Media Implicit and Explicit Biases	Edina Bijvoet
9:30 AM	Exploring the Effect of Social Support from Sport Medicine Staff on Injured Female Athletes' Well-Being During Rehabilitation	Kirsten Hutt
9:45 AM	Understanding the Intersection of Adolescent Girls' Mental Health and Body Image in the Context of Physical Activity	Sarah Ryan
10:00 AM	The Moderating Effect of Weight Dissatisfaction on the Association Between Mental Fatigue and Physical Activity Behaviours in University Students.	Samira Sunderji
10:15 AM	Exploring Body Image and Self-Sabotage in Athletes	Sabrina Malouka
10:30 AM	Break	
PRESENTATIONS SESSION 2		
2 – BEHAVIOURAL STUDIES B		
TIME	PRESENTATION	PRESENTER
10:45 AM	User-Related Factors and Online Health Information-Seeking Behaviour: An Eye-Tracking Study	Bradley Crocker
11:00 AM	Diabetes diagnosis is not associated with lifestyle behaviors in peri- and post-menopausal women	Stephanie Small
11:15 AM	Athletic Therapists' Exposure and Response to Psychological Challenges Associated with Athlete Injury Recovery	Francesca Principe
11:30 AM	Inclusive Tennis Program Evaluation	Zac Scanlan

11:45 AM	Understanding Physical Activity Identity in Cancer Survivors	Golnaz Ghazinour
12:00 - 1:00 PM	Lunch Break	
KEYNOTE		
TIME	KEYNOTE	PRESENTER
1:00 - 1:45 PM	Knowledge Translation	Dr. Kate Einarson
PRESENTATIONS SESSION 3		
3 – PHYSICAL CULTURAL STUDIES		
TIME	PRESENTATION	PRESENTER
1:45 PM	Unleashing Your Inner ‘Auntie’: Racialized, Queer Men Preparing for Pride in Gym Spaces.	Daniel Uy
2:00 PM	The lived experiences of Persian women medical doctor immigrants in Ontario: A case study	Tanaz Fouladirad
2:15 PM	Identity, belonging, transnational adoptees and the role of sport	Bliss Wong
2:30 PM	The Anti-sweatshop Movement and Ethical Procurement within the 2026 Men's World Cup	Yazan Al Horoub
2:45 PM	Break	
PRESENTATIONS SESSION 4		
4 – BIOPHYSICAL STUDIES		
TIME	PRESENTATION	PRESENTER
3:00 PM	The Effect of a Semi-Upright Body Position on Oxygen Consumption Kinetics During Submaximal Cycling	Jacob Schwartz
3:15 PM	Should lumbar spine motion be constrained while stretching the hip?	Kyle Farwell
3:30 PM	Gait and dynamic postural stability during obstacle crossing in the individuals with early-stage Parkinson’s disease	Nok-Yeung Law
3:45 PM	The influence of sex on skeletal muscle fiber-specific characteristics linked to aerobic energy metabolism.	Celine Bailleul
4:00 PM	Sex-specific Electromyographic, Performance, and Symptomatic Differences between Sitting and Cycling Computer Workstations	Malak Selim

4:15 PM	Failure is Not Always the Enemy: a Markerless MOCAP Contrasting the Barbell Back Squat Kinematics with Two Loads Performed to Failure	Gael Chaubet
4:30 PM	Joint Motion Control Considerations in the Evaluation of Physical Performance Testing	Anthony Belza
CLOSING CEREMONIES		
TIME	ITEM	
4:45 - 5:00 PM	Closing Remarks from the Bodies of Knowledge Committee	
6:00 - 9:00 PM	Student Social Event	

Keynote Details

Dr. Kate Einarson is a behavioural scientist and interdisciplinary scholar in Toronto, Canada who currently works as a Knowledge Translation (KT) Specialist in the Bloorview Research Institute at Holland Bloorview Kids Rehabilitation Hospital. Dr. Einarson is also co-director of IRSTE, an international group of researchers and pedagogues that studies evidence-informed music education and hosts a biennial meeting bringing together scientists, teachers, and community members.



Dr. Einarson's research is interested in human development, particularly as it relates to auditory, motor, and social perception and cognition. Dr. Einarson's research uses music as a means to examine auditory and motor development in infants and children, and to investigate how musical experiences influence individual behaviour and interpersonal interactions.

BOK 2023 Abstracts

Session: Behavioural A (9:15am – 10:30am)

Edina Bijvoet (Edina Bijvoet, Ross Murray, Catherine M. Sabiston) - University of Toronto

The Effects of Sex on Sport Media Implicit and Explicit Biases

Males and females may have different implicit and explicit reactions to sport media. Given the well-documented impact that sports media has on sport participation, and the lower rates of sport participation across the lifespan for females compared to males, this information may be pertinent for physical activity campaigns aimed at increasing participation rates. The purpose of this study was to explore sex differences on implicit and explicit perceptions of sport related media. Participants (N = 184; 46% female; 33 years of age on average) completed an implicit association task and an online survey (explicit perceptions). All image content was from the Canadian Women and Sport “She’s Got It All” gender equity social campaign. Controlling for current sport participation, differences in implicit and explicit perceptions of sport for males and females were examined in separate ANCOVA models. When viewing sport photos, females reported significantly more favourable explicit attitudes ($p = .001$) compared to males. There were no significant differences on implicit perceptions of sport. Given that the image content was centered on female athletes, it is encouraging that there was no implicit bias for males and females. The difference in favourable explicit perceptions might be due to a conscious and deliberate approval of the feminocentric media in the campaign and the potential support for sex-specific role models in sport. This finding supports continued efforts for a more diverse and equitable representation of females in sport media. Future research should be focused on the ways sport participation is impacted following specific media campaigns aimed at gender equity activities.

Kirsten Hutt - University of Toronto

Exploring the Effect of Social Support from Sport Medicine Staff on Injured Female Athletes' Well-Being During Rehabilitation

Sport injury is a prevalent setback experienced by athletes, and is often associated with decreased psychological well-being and loss of confidence (Mosewich, Crocker, & Kowalski, 2014; Samuel et al., 2015). Following injury, athletes are required to spend more time in physiotherapy, and interact more often with sport medicine practitioners

(Mosewich et al., 2014). This can often be a very isolating experience for athletes, as they are often removed completely from sport participation (Mosewich et al., 2014). Within the existing literature, physiotherapists have been identified as an important source of support for athletes; however, they may be lacking knowledge of how to help athletes psychologically navigate this difficult time (Piussi et al., 2021). Female athletes represent an understudied population in the present literature, which emphasizes the need to conduct research with this demographic (Cnen, Chiu, & Hsu, 2021). The purpose of this research was to explore the experiences of female athletes and their interactions with physiotherapists as they navigated the rehabilitation process. Eleven athletes participated in this study; all of which are competitive athletes over the age of 18 that have sustained a musculoskeletal injury removing them from sport participation. Data was collected through two semi-structured interviews and six audio diary entries over a six-week period. Preliminary findings demonstrate that female athletes reported feeling supported by the sport medicine staff when clear information about rehabilitation was presented, and when the sport medicine staff were perceived as competent. Female athletes also reported that they preferred informational support from sport medicine staff, and emotional support from other members of their support network. Results of this study will contribute to knowledge surrounding how athletes experience injury rehabilitation, and the role that sport medicine staff play in supporting female athletes through this process.

Sarah Ryan (S Ryan, M Marashi, K Lucibello, M Dejonge, C Sabiston) - University of Toronto

Understanding the intersection of adolescent girls' mental health and body image in the context of physical activity

Background: Physical activity may be an opportunity to promote mental well-being and body image; however, most adolescent girls are not involved in physical activity. Furthermore, it is not well-understood if different physical activity contexts offer quality experiences for mental health and body image. **Purpose:** The purpose of this study was to explore adolescent girls' mental health and body image in the context of physical activity experiences to better understand how these constructs are navigated and negotiated. **Methods:** Five adolescent girls (ages 15-17 years) have participated in a single virtual semi- structured interview. Using a qualitative description approach, data were analyzed using reflexive thematic analysis. **Results and Discussion:** Participants shared their experiences in a variety of physical activities, including girls-only and mixed-gender sports teams, and individual sports. Based on the preliminary findings, four overarching themes were identified: (1) body image is impossible to separate from mental health, (2) type and context of physical activity can be both protective and threatening to body

image and mental health, (3) social comparisons are unavoidable, and (4) peers are essential for navigating body image and mental health. Conclusions: Overall, girls discussed organized sport as being isolating and discouraging while identifying physical activity as essential to mental well-being. However, it was noted that physical activity was difficult to maintain when experiencing negative self-thoughts especially towards one's body's appearance and function. Strategies to reduce negative experiences and promote physical activity adherence may require a multifaceted approach, prioritizing social and emotional well-being, management of body image concerns, and promotion of self-confidence. These findings help to advance the conceptualizations of body image and mental health and further the understanding of the interplay between these constructs in the context of adolescent girls' physical activity.

Samira Sunderji (S Sunderji, ML deJonge, CM Sabiston) - University of Toronto

The Moderating Effect of Weight Dissatisfaction on the Association Between Mental Fatigue and Physical Activity Behaviours in University Students.

Mental fatigue (MF) is a broad yet complex phenomenon that is characterized by feelings of exhaustion, tiredness, and a lack of energy. MF can alter physical activity (PA) self-efficacy and outcome expectancies, elevating the costs of engaging in PA behaviour and influences decision-making. Drawing on objectification processes, attention on the body (e.g., body surveillance) may potentiate the effects of MF on PA behaviour. This study explored the association between MF and PA behaviours (aerobic moderate and vigorous intensity, and resistance training) with weight dissatisfaction as a moderator. University students (N = 3145, 70.2% female; M age = 20.6±3.1 years) completed the National College Health Assessment 2019 survey to assess their health habits, behaviours, and perceptions. Data were analyzed using cluster analysis techniques (to explore groups of students based on MF indicators) and a MANOVA model with follow-up univariate effects to explore group differences in MF on PA behaviours. Weight dissatisfaction served as a proxy for body surveillance and tested as a moderator. The model accounted for sex and gender. Two clusters were identified for MF [interpreted as high (49%) and low (51%)]. These clusters differed significantly ($p < .05$) in days of vigorous PA (M High = 1.01±1.54; M low = 1.18±1.54) and strength training (M High = 1.90±1.50; M low = 2.18±1.70), and not on days spent in moderate-intensity PA (M High = 3.17±2.12; M low = 3.26±2.06). Weight dissatisfaction did not significantly moderate the relationship between MF and PA behaviour ($p = .06$, $\eta^2 = .001$). University students experience high levels of MF and low levels of PA, which have negative implications on academic performance, social functioning, and overall wellbeing. Results support the need for future research to explore the intolerance and intensity of MF, as well as

cognitive and emotional domains of MF, to provide strategies that can increase PA participation within this population.

Sabrina Malouka (S. Malouka, D.M. Brown, C.M. Sabiston) - University of Toronto

Exploring Body Image and Self-Sabotage in Athletes

Body image has received significant attention as a potential barrier to participation in sport and physical activity, and there is research to suggest a strong relationship between body image and global shame. Self-sabotage, referring broadly to the thought processes and behaviours individuals engage in that ultimately prevent them from achieving their goals, is also strongly linked to shame. However, little is known about whether body image relates to self-sabotage, and how self-sabotage is perceived and experienced in the context of sport and exercise. With this said, the purpose of the current study was to explore (1) how body image develops in athletes over the course of their careers and into retirement (if applicable), (2) how self-sabotage in the context of sport and exercise is perceived and experienced, and (3) how body image and self-sabotage are related within this context. Using a qualitative description approach, 8 athletes (aged 18+ years) participated in semi-structured interviews. Framed within a social constructivist paradigm, data were analyzed using inductive thematic analysis. Based on preliminary findings, three main themes emerged, including negative body image, influence of social agents on body image, and self-sabotage. Negative body image included subthemes of disordered eating, appearance preoccupation, low self-esteem, negative self-talk, and self-presentation. Influence of social agents on body image included coach influence, parent influence, and peer influence. Lastly, self-sabotage included fear of failure, fear of success, low self-efficacy, avoidance coping, low self-esteem, negative self-talk, and self-presentation. There was overlap in subthemes between the concepts of body image and self-sabotage (subthemes of low self-esteem, negative self-talk, and self-presentation). These findings highlight how body image and self-sabotage are related, and experienced in the context of sport and exercise, providing foundational information for future studies seeking to improve participation in sport and exercise despite barriers relating to body image and self-sabotage.

Session: Behavioural B (10:45am – 12pm)

Bradley Crocker (Bradley Crocker, Emily V. Pike, Lindsay R. Duncan) - McGill University

User-Related Factors and Online Health Information-Seeking Behaviour: An Eye-Tracking Study

Individuals form beliefs, make decisions, and enact behaviour based on what they perceive to be high- quality and relevant information. When seeking to learn about health-related topics, most people turn to the internet as their first source of information (Gualtieri, 2009). Although the internet can provide accessible and up-to-date health information, users' searches are often clouded with misleading, inaccurate, or unsubstantiated claims (Kitchens et al., 2014). In order to benefit, users must be able to identify relevant and trustworthy sources of health information online. The purpose of this study was to observe how the user-related factors of perceived eHealth literacy, trust in science, and personality traits influence online health information-seeking behaviour. In this mixed methods comparative analysis study, 60 young adults searched for information related to "immune boosting" while being monitored with screen recording and eye-tracking technology. After 15 minutes of searching, participants engaged in retrospective think-aloud interviews while watching their own eye-tracking data to explain their thoughts and reasoning while searching. Qualitative interview data, overlaid atop eye- tracking data, was deductively coded by two researchers to assess participants' behaviour across four information-seeking categories (query formulation, source selection, content navigation, and verification). Quantitative data, such as the number of sources considered per search results page, time spent evaluating source previews, and time spent on each website were collected from screen recording and eye-tracking outputs. Regression analyses were conducted to examine relationships between user- related factors and information-seeking behaviour. Preliminary findings indicate user-related factors have a small but significant relationship with time spent on source selection and information verification. When results are complete, findings will improve our understanding of how user-related factors may help us predict how people obtain health information online, and will inform interventions to help people improve their ability to locate useful and trustworthy health information on the internet.

Stephanie Small (Stephanie Small, Rebecca A.G. Christensen, Elia Rishis, Alexandra Dojutrek, Olivia Lee, Alexa Govette, Sasha High, Catherine Sabiston, Sarah Neil-Sztramiko, Jenna B Gillen, Amy A Kirkham) - University of Toronto

Diabetes diagnosis is not associated with lifestyle behaviors in peri- and post-menopausal women

Purpose: There is an increasing prevalence of pre- and type 2 diabetes mellitus (DM) diagnoses in Canada and globally. In addition, DM is a major risk factor for cardiovascular disease (CVD), the most common cause of mortality in those with DM. Improving lifestyle behaviors (e.g., physical activity, diet, weight management) is a key component of DM management and CVD- risk reduction. However, a lack of time, support, and additional burdens are cited as common barriers to healthy lifestyle behaviors among women. This study aimed to examine the association between DM diagnosis and healthy lifestyle behaviours in older women compared to older women without DM. Methods: Peri- and post-menopausal women ≥ 50 years without CVD were recruited across Ontario, Canada. Pre- and type 2 DM diagnoses were self-reported and combined in the DM group. Waist circumference and body weight were measured virtually with mailed tools, and daily fruit/vegetable intake was determined from a food frequency questionnaire (FFQ). Moderate-to-vigorous physical activity (MVPA), step count and sedentary time were measured by physical activity watches worn continuously for 4-7 days. Multivariable linear regression was used to examine the association of DM status and lifestyle variables. Models were adjusted for ethnicity, income, body mass index and calorie intake. Results: To date, 78 women have enrolled, 46 with DM (age 60 ± 5.8 y, BMI $31.87.4$ kg/m²), and 32 without DM (age 61 ± 6.0 y, BMI $33.88.4$ kg/m²). Overall, both groups had moderate MVPA but otherwise poor lifestyle behaviors on average (DM: 167 min MVPA/wk, 12.4 h sedentary time/day, 6798 steps/day, 1.9 times/day fruit/vegetable intake, 100 cm waist circumference; without DM: 166 min MVPA/wk, 12.8 h sedentary time/day, 7084 steps/day, 1.5 times/day fruit/vegetable intake, 105 cm waist circumference). In the adjusted model, DM diagnosis was not associated with waist circumference, fruit/vegetable intake, MVPA, sedentary time, or step count ($P > 0.05$). Conclusion: A pre- or type 2 DM diagnosis in older women did not appear to impact healthy lifestyle behaviours compared to women without a DM diagnosis. There is a need for novel and feasible methods of improving healthy lifestyle behaviours to support women pre- and post-DM diagnosis that consider barriers to uptake.

Francesca Principe (F.M. Principe, G. Kerr) - University of Toronto

Athletic Therapists' Exposure and Response to Psychological Challenges Associated with Athlete Injury Recovery

Athletes face difficulties in understanding psychological challenges associated with sport injury and seeking help for them, which affects their injury outcomes and return-to-play (RTP). Currently, there is no standardized care approach to attending to the psychological recovery of sport injuries and RTP, and sport therapists, the ones that work most closely with injured athletes, often need to provide psychological care. The purposes of this study were to understand athletic therapists' perspectives on the psychological challenges that athletes experience during injury recovery and assess their perceived level of preparedness in addressing these psychological challenges. A total of 49 certified athletic therapists from across Canada completed a 14-item, online survey that included questions about demographics, their exposure to psychological aspects of injury, and how equipped they perceive they are to address the psychological issues that athletes present during recovery. Results indicate that athletic therapists are aware of the psychological and social challenges facing injured athletes and believe they play a role in assisting injured athletes in their psychological recovery, but do not feel equipped to do so. Also, very few athletic therapists had extensive exposure to psychological aspects of injury in their education, which they shared was very disappointing. The most commonly used skills by athletic therapists included listening and providing empathy, while teaching psychological skills and providing advice were the least utilized. These findings point to a significant gap in theory and practice: while athletic therapists are aware of the various psychological challenges facing athletes and know they play a role in helping athletes' psychological recovery, they do not necessarily have the skills to do so. Future research could further investigate athletic therapists' perspectives regarding the psychological components of their education and examine the coverage of psychological aspects of injury in athletic therapy programs across different countries.

Zac Scanlan (Scanlan, Z., Arbour-Nicitopoulos, K.P., Saka, G.B., Tamminen, K.A) - University of Toronto

Inclusive Tennis Program Evaluation

Background: Disabled children and youth often experience poor health outcomes, restricted participation, and poor education attainment. There is an urgent need to develop, evaluate and implement programs that can enhance health and developmental outcomes for children and youth with disabilities. Such programs should be structured to

support one or more of the quality participation (QP) building blocks (i.e., autonomy, belonging, challenge, engagement, mastery, meaning) to foster quality experiences during sessions. Purpose: To examine the participation experiences of coaches and parents in a tennis program designed to enhance sports experiences for autistic children and youth. Procedures: Five child-parent dyads and three coaches agreed to participate in the study. Observations of an 8-week tennis program were conducted between January 2023 and March of 2023 by one of the research team members. Formal audio-recorded semi-structured interviews were held with the three coaches involved with the program as well as five of the parents of children and youth in the program. Informal conversations were conducted with the five children and youth participating in the program. Preliminary Findings: Based on data collected during weekly observations and interviews with parents, there was evidence of the program's curriculum supporting the development of mental, social, and physical skills within participants, with a large emphasis on tennis skills. Parents prioritized the belonging and autonomy building blocks of QP but perceived the program as providing enhanced support in the mastery building block. Parents mentioned the need to further the education of coaches regarding teaching strategies for autistic children and youth and to increase the time spent putting tennis skills to practice within a game format.

Golnaz Ghazinour (G Ghazinour, A Tabaczynski, N Cuda, L Trinh) - University of Toronto

Understanding Physical Activity Identity in Cancer Survivors

Background: Physical activity (PA) is recognized as an essential component of supportive care for cancer survivors mitigating the effects of cancer treatment. However, many cancer survivors do not meet PA guidelines (≥ 150 minutes/week of moderate-to-vigorous PA [MVPA]). PA identity is an important predictor of PA maintenance as it helps to buffer against environmental and self-regulation challenges. Nevertheless, little is known about the contributors to strong PA identity in cancer survivors. Accordingly, the purpose of this study was to understand the demographic, medical, and social cognitive correlates of PA identity in cancer survivors. Methods: An online, cross-sectional survey was administered to cancer survivors worldwide. Questionnaires were used to assess demographic and medical information; PA using a modified version of Godin Leisure-Time Exercise Questionnaire; and M-PAC processes for instrumental attitudes, affective judgements, perceived capability and opportunity, self-regulation, habit, and identity. Using four identity statements scaled 1 (strongly disagree) – 5 (strongly agree) cancer survivors were classified as having 'high PA identity' (score > 12)

or 'low PA identity' (score <12). Binary logistic regression analysis was used to examine demographic, medical, and social cognitive correlates of PA identity across high and low PA identity classifications while controlling for MVPA participation. Results: Cancer survivors (N=318; M age = 48.90 ± 15.92 years) were mainly female (69.2%), White (89.9%), had some higher education (82.7%), and completed treatment (79.9%). Higher PA identity was significantly associated with higher positive affective judgement (OR=1.13, 95% CI=1.02-1.25, p=0.03), higher PA intention (OR=1.49, 95% CI=1.19-1.87, p<0.001), better self-regulation (OR=1.08, 95% CI= 1.02-1.15, p=0.009), and greater PA habit (OR=1.28, 95% CI=1.17-1.40, p<0.001). Conclusion: Social cognitive processes (i.e., affective judgment), self-regulation (e.g., planning), PA intention, and habit were significant predictors of higher PA identity. Future research is needed to investigate the reflexive and regulatory mechanisms through which PA identity contributes to PA maintenance in cancer survivors.

Session: Physical Cultural (1:45pm – 2:45pm)

Daniel Uy - York University

Unleashing Your Inner 'Auntie': Racialized, Queer Men Preparing for Pride in Gym Spaces.

This research examines the social inclusion and participation of queer, racialized men within Pride environments in Toronto and Montreal. It examines how racialized queer men who weightlift negotiate and reconcile conflicts around inclusion, masculinity, fetishization, racism, tokenism, and acceptance. This was done by examining what happens leading up to and at Pride. Why do queer, racialized men workout and lift heavy weights? What, if any, challenges emerge from interactions between sexual and, cultural/racialized identity within homonormative (i.e., white, middle-class, cis-male) culture? Do these men want to fit in or distance themselves from homonormative culture or other normativities (i.e., normative Black, or Asian masculinities)? Focusing on queer racialized men's development of physique for Pride requires recognition of multiple bodily ideals or norms, which has been neglected by Canadian gay culture. My research is currently indicating that working out within a racialized queer body strengthens one mental resolve and mental health which makes the challenges of navigating within white body spaces easier to mentally manage. While this could apply to a variety of groups, de-centering this from whiteness, this sometimes harsher but loving voice is akin to an inner 'Auntie' which is something tangible within these racialized groups and understandable.

Tanaz Fouladirad - York University

The lived experiences of Persian women medical doctor immigrants in Ontario: A case study

Persian migrants immigrate to Canada often in search of an improved quality of life, despite already holding certifications of higher education from Iran. This improved quality of life includes having constitutionally protected rights such as freedom of speech, thought, and behavior, including dressing and acting in a manner that individuals deem appropriate (Ganji, 2022; Mojarad, 2016; Rahnema, 2011). Despite the relatively large population of Persian immigrants living in Canada, there is limited research about Persian immigrants' settlement. Of the few studies available for review, most of the research focuses on settlement and gender dynamics, such as couples negotiating new gender roles and expectations like balancing domestic labour responsibilities (Sadeghi, 2008). In contrast, there is limited research on Persian women immigrants' and work outside the home, and thus, their experiences in the workforce remain untold. For this particular study, I will focus on Persian women medical doctors (MDs) and their lived experiences of immigrating to and settling in Canada, paying attention to their labour, professional status, and their gendered and racialized identities. Drawing on post-colonial feminist theory, this study recognizes the intersections of gender and race, and the implications of settling in a white settler society, discourses of multiculturalism, and the 'good' immigrant narrative for navigating immigration, settlement, work, and identity formation. The proposed research entails a case study, where data will be collected through (1) semi-structured interviews with Persian women MDs and (2) textual analysis of Canada's Immigration and Citizenship website and documents pertaining to professional accreditation and credentialing from the College of Physicians and Surgeons of Ontario.

Bliss Wong - York University

Identity, belonging, transnational adoptees and the role of sport

“Transnational adoption is the process where parents in one country adopt a child born in another” (Brocius, 2017, p.321). As a result, the development of identity and sense of belonging of transnational adoptees is particularly complex, dynamic, and contextual. Indeed, transnationally adopted children have been found to operate within a middle space between their associated racialized society and white society (Wills, 2012),

whereby they may feel a lack of belonging to either group (Tuan, 1998 as cited by Goss, 2010; Park Nelson, 2010). This isolation could be reduced via participation in sport, which has been shown to increase a sense of belonging (Nakamura, 2019). The focus of the proposed study is to examine how sport participation could influence transnational adoptees' formation sense of identity and sense of belonging. This study is informed by Bourdieu (1986) understanding of social capital, because membership in a sport is strongly associated with social capital as well as inspiring feelings of belonging and solidarity (Claridge, 2020). This research will employ bibliographical narrative methodology. The stories that emerge may offer insights into how the context of sport influences and constructs transnational adoptees' experience of belonging and their sense of identity. The technique of snowball sampling will be utilized to contact potential research participants. Semi structured interviews will be conducted, and data will be thematically analyzed (Braun & Clarke, 2006). The research will be beneficial in understanding how sport could shape the sense of belonging of transnational adoptees and provide insight into how they navigate the middle space of their identities (Twine, 2001 as cited in Goss, 2010).

Yazan Al Horoub - York University

The Anti-sweatshop Movement and Ethical Procurement within the 2026 Men's World Cup

The anti-sweatshop movement has long committed – through labour action, legislative change, protests, and other forms of advocacy – to abolishing sweatshop labour and ensuring liveable wages, safety standards, and workers' rights for all. There is an established body of literature in the socio-cultural study on sport and the anti-sweatshop movement, especially on the roles played by a range of state, government, and non-governmental actors/organizations in relation to mega-sporting events which have routinely been plagued with continued abuses of workers' lives and rights in the name of sport spectacles. This proposed study aims to add to this area of scholarship by examining how one municipality (the City of Toronto) will address the use of sweatshop labour as part of its bid and preparations for the co-hosting of the 2026 FIFA men's World Cup. By 2008, the City of Toronto had passed an anti-sweatshop procurement policy and formally committed to combatting sweatshop procurement. Employing qualitative research methods, this proposed study will examine if and how the City has attended to ethical procurement (defined as managing all processes obtaining needed materials and services from a set of suppliers in an ethical and socially responsible manner) as part of its bid to be a host city; how it intends to address ethical procurement as it prepares for the 2026 FIFA men's World Cup; and how other key actors –

specifically Canada Soccer and a Toronto-based anti-sweatshop organization (the Maquila Solidarity Network) – influence the intent and actions of the City.

Session: Biophysical (3pm-4:45pm)

Jacob Schwartz (JL Schwartz, AN Di Salvo, JB Bernal, DC Basile, RF Bentley) - University of Toronto

The Effect of a Semi-Upright Body Position on Oxygen Consumption Kinetics During Submaximal Cycling

BACKGROUND: Assessments of cardiac function, including stress echocardiography and exercise right heart catheterization, are typically completed in a semi-upright (SU) cycling position. This position poses a unique hemodynamic challenge and while oxygen uptake (VO₂) kinetics during upright (UR) cycling are well known, how exercising in a SU position may influence VO₂ kinetics during exercise is poorly understood.

PURPOSE: To compare the time required to reach 63% of steady state (tau) between an UR and SU body position during submaximal cycling exercise. **METHODS:** Twenty healthy individuals (22±3 yr, 50% male) completed alternating sequential five-minute bouts of submaximal UR and SU (40° incline) cycling at 50W and 100W on electronically braked ergometers. Starting body position was randomly assigned and counterbalanced (n=10 UR; n=10 SU). To explore the rest to exercise transition, the first 50W stage was used for this analysis. Tau and overall gain were assessed along with constituents of VO₂ during the final 30 sec of exercise. Data are Δ from seated rest and reported as mean ± SD. **RESULTS:** UR and SU groups did not differ with respect to sex, age, weight, height, and BMI (all p>0.476). Individuals cycling in a SU position had a lower VO₂ gain compared to individuals cycling in an UR position (9.5 ± 2.2 vs. 12.7 ± 1.2 ml/kg/min, p=0.001). This was due to a reduced increase in minute ventilation (16 ± 3 vs. 22 ± 4 L/min, p=0.001) and a blunted decrease in the end tidal fraction of expired oxygen concentration (-0.48 ± 0.95 vs. -1.29 ± 0.56 %, p=0.031). Tau was not different between SU and UR body positions (49 ± 23 vs. 48 ± 23 sec, p=0.917). **CONCLUSION:** The overall gain in VO₂ was lower in the SU cycling position; however, tau was similar between body positions. Supported by NSERC Discovery Grant.

Kyle Farwell (KJ Farwell, DM Frost) - University of Toronto

Does constraining lumbar spine motion while stretching the hip lead to greater hip flexion ROM used in subsequent squatting and lifting exercises?

Athletes' inability to adopt or maintain a neutral spine posture, perhaps because they lack sufficient active or passive hip flexion mobility, could lead to excessive spine flexion and an elevated risk of disc injury [1]. Accordingly, many advocate for neutral spine postures and hip- dominant movement strategies while performing bilateral training exercises like squats and deadlifts [2]. However, to achieve this, large hip flexion ranges of motion (ROM) are needed. Hip flexion mobility training has been used to facilitate changes in passive hip flexion, although even substantial changes in ROM are not consistently reflected in functional tasks [3]. One reason may be the lack of adjacent joint (lumbar spine) control while attempting to increase hip flexion mobility. A randomized, cross-over within-subject study design. Approximately 20 participants will be recruited to participate in two collections, each of which include hip flexion ROM testing and two 8-rep sets of squats and deadlifts (transfer tests) prior to and following one of two 15-minute hip flexion mobility interventions: (1) a supine straight leg raise with spine motion constrained; or (2) a seated sit and reach without spine motion constrained. Hip flexion ROM and hip and spine kinematics during two transfer tests will be measured and compared at baseline, immediately post-intervention, and 10-minutes post-intervention. An acute bout of hip flexion mobility training with spine motion constrained is expected to increase the hip flexion ROM used during subsequent squatting and lifting exercises (i.e., positive transfer). This influence is expected to persist following 10 minutes of passive rest. However, the residual spine kinematic effects unclear. Examining athletes' spine curvature while performing transfer squatting and lifting exercises will yield insight into the acute influence of constraining lumbar spine motion during hip flexion mobility training, and thus, help guide the design and implementation of exercise, warm-up and recovery protocols.

Nok-Yeung Law (NY Law, JX Li) - University of Ottawa

Gait and dynamic postural stability during obstacle crossing in the individuals with early-stage Parkinson's disease

Obstacle crossing is a challenge task for people with Parkinson's disease (PD) due to a higher propensity for falls. [1], [2] Changes in gait and postural stability affect their ability to perform this task safely. [3], [4] Limited understanding to dynamic postural stability exists in this population and findings from past studies were of PD participants with big variations in the condition's severity (mild-to-moderate to severe) and small sample size. The purpose of this study was to examine the gait and dynamic postural stability differences between PD (n = 16, Hoehn & Yahr stages 1 to 2) and age-matched healthy older adults (HOA) (n = 16). The participants' obstacle (20 cm height) crossing

motion was captured using a 10-camera Vicon motion system. Gait parameters, toe and heel clearance distance, pre- and post horizontal distance, displacement and velocity of center of mass (COM), COM-center of pressure (COP) separation distance were analyzed along with the timed up-and-go test, single leg stance (SLS). Individuals with PD spent a significantly shorter time in SLS with eyes open or closed compared to the controls ($p < 0.05$). During obstacle crossing, they walked slower, with significantly smaller hip flexion angle (48° vs. 52° , $p = 0.024$) and larger knee adduction angles of the trailing limb (29° vs. 39° , $p = 0.028$), larger mediolateral COM displacement and COM-COP separation distance compared to the HOA. The altered postural stability suggests more attention should be paid to avoid injury or fall in this population. Keywords: fall, movement disorder, kinematics, joint angles, range of motion.

Celine Bailleul (C Bailleul, N Hodson, S Abou Sawan, DA Kumbhare, DR Moore, JB Gillen) - University of Toronto

The influence of sex on skeletal muscle fiber-specific characteristics linked to aerobic energy metabolism.

INTRODUCTION: Sex differences in skeletal muscle characteristics may contribute to the increased fat oxidation reported during moderate-intensity endurance exercise in females compared to males. For example, females have been demonstrated to have increased skeletal muscle mitochondrial content and capillarization at a whole-muscle level, which may be explained by a higher proportionate area of slow-oxidative type I muscle fibers in female skeletal muscle. However, it is possible that oxidative capacity of type I and type II muscle fibers is elevated in females versus males, but this has not been explored. The purpose of this study was to investigate the influence of sex on fiber-specific indices of mitochondrial content and capillarization in human skeletal muscle.

METHODS: Resting skeletal muscle biopsy samples from the vastus lateralis were collected from untrained females ($n=14$; 23 ± 5 yr, 23.3 ± 3.2 kg/m²) and males ($n=13$; 23 ± 4 yr, 23.1 ± 2.4 kg/m²). Type I, IIa and IIx fiber distribution and cross-sectional area were determined via immunofluorescent analyses. Type I and II fiber-specific mitochondrial content and capillary density were quantified via COX IV pixel intensity and number of CD31-labelled capillaries per fiber square millimeter, respectively.

RESULTS: Compared to males, females had increased proportionate area of type I fibers ($42\pm 12\%$ vs $29\pm 10\%$, $p=0.01$) and decreased proportionate area of type IIa fibers ($39\pm 6\%$ vs $49\pm 13\%$, $p=0.02$). Males, but not females, had increased capillary density of type I vs. type II fibers (364 ± 88 vs. 280 ± 66 capillaries/mm², $p<0.05$), owing to a 15% larger cross-sectional area of type IIa vs. type I fibers in males only. However, there were no

differences between sexes in the mitochondrial content or capillary density of type I or type II fibers ($p>0.05$). **CONCLUSION:** Our findings demonstrate that while muscle fiber composition and size differs between sexes, oxidative potential of type I and type II muscle fibers is largely similar between males and females.

Malak Selim (Malak Selim, Erika Renda, SangHoon (Andrew) Yoon, Samuel Lamanuzzi, Julie N. Côté) - McGill University

Sex-specific Electromyographic, Performance, and Symptomatic Differences between Sitting and Cycling Computer Workstations

Previous studies have suggested that increased daily physical activity can reduce risk factors associated with the development of work-related musculoskeletal disorders (WMSDs). In addition, the sex-specific etiology of WMSDs is not well understood and may be caused by biological sex differences. Active computer workstations have been proposed to reduce sedentarism and avoid WMSDs; however, the extent to which they may equally benefit men and women is limited by a lack of mechanistic studies. Therefore, the purpose of this study was to compare upper limb muscle activity, typing performance, and symptom characteristics between a cycling computer workstation and a seated computer workstation, as well as to uncover sex differences in the above-mentioned outcomes. Twenty-six computer users ($n = 14$ females) underwent two 60-minute typing tasks, either sitting on a sit-stand stool or cycling at their own pace within their target heart rate (i.e., an estimate of 25% training intensity using the Karvonen formula). Muscle activation amplitude, eye, and musculoskeletal discomfort, as well as performance outcomes, were analyzed for main and interaction effects of Sex, Time, and Condition. Males' performance was negatively affected by cycling, with fewer words per minute, whereas females' performance was the same in both conditions. Cycling led to a smaller increase in neck/shoulder discomfort with time, especially in females. Moreover, with time, neck/shoulder muscle activation increased during sitting but conversely, decreased with time during cycling, especially in females. Lastly, low back muscle activity was higher and varied more with time during cycling, especially in females, even though there was no difference in seat discomfort between sitting and cycling. Results suggest that women, especially, could benefit from using active computer workstations, from a whole-body perspective, and should advocate for access to more active workstations as a way to prevent sedentarism.

Gael Chaubet (G Chaubet, K Farwell, D Frost) - University of Toronto

Failure is Not Always the Enemy: a Markerless MOCAP Contrasting the Barbell Back Squat Kinematics with Two Loads Performed to Failure

Background: How a task is executed can influence the intended benefits of the task. For example, shifting from bending the hips more to bending more at the knees during a barbell back squat can change the distribution of tissue loads, which can lead to different training adaptations. Factors such as fatigue and load can influence the joint positions adopted at end range, but the extent of their influence is not clear. Purpose: Evaluate sagittal plane kinematics of lower extremities and trunk at the bottom of a barbell back squat to volitional failure with 55% and 85% 3RM load. Methods: Twenty-six varsity athletes executed thighs parallel barbell back squat to volitional failure with two randomly assigned loads without cadence control. A camera captured sagittal plane kinematics using openpose, a markerless motion capture system. Mean ankle dorsiflexion angle, knee flexion angle, and trunk flexion angle were computed for the first and last three repetitions of each condition. The effect of time (first and last three repetitions) and load (55% and 85% 3RM) were examined with a two factor repeated measures analysis of variance. Results: Time had a significant effect on hip flexion angle ($F(1,21) = 7.863$, $p = 0.011$) and trunk flexion angle ($F(1,21) = 15.761$, $p = 0.0007$). There was a significant interaction of load and time for hip flexion angle ($F(1,21) = 5.936$, $p = 0.024$). Load had a significant effect on the change in hip flexion ($F(1,20) = 5.542$, $p = 0.029$). Conclusion: Although statistically significant, changes in joint angles were less than three degrees at each joint measured. Exercise practitioners could implement the barbell back squat to volitional failure when the goal is to minimize movement-related changes. Future research should study joint position during upper body exercises and in tasks involving higher movement speed.

Anthony Belza (Belza, A., Frost, D., Lightowler, A., Hirsch, S. & Bell, R.) - University of Toronto

Joint Motion Control Considerations in the Evaluation of Physical Performance Testing

Background: There may be a direct link between one's ability to access certain joint positions and control joint motion across varying contexts that are not seemingly relevant to tasks upon which training emphasis is directly placed. Superficially, it may be difficult to establish a link if not evaluated in a manner that makes comparisons between performance on a given task in relation to how joint motion control is expressed across a

range of different tasks and demands. This study sought to examine the relationship between joint control across a range tasks, and performance on the Broad Jump (BRDJ)

Methods: Ninety male varsity athletes from a variety of sports volunteered to perform the Physical Literacy Screen (PLS). The PLS includes a series of fifteen physical tasks that are to be completed with control of the knee, low back, and shoulder. Shoulder data was not used for the purpose of this study. The BRDJ was carried out as part of pre- season fitness evaluations.

Results: A one-way ANOVA revealed that joint motion control of the knee and low back were significantly related to broad jump performance. Large and moderate effect sizes were found for low back control, and large effect sizes were found for. ($p < 0.05$).

Conclusions: The results from the current study show that the inclusion of multiple tasks of varying demands in conjunction with performance testing, could offer additional insight and change the interpretation of a performer's capacity, risk or otherwise. The results imply the novel possibility that a higher degree of coordination consistent across a range of patterns and demands may reveal the performer's ability to perform well on the given task.