

## Program Overview

| Thursday, October 2 <sup>nd</sup>  |  |   |
|--|--|---|
| 1:00 PM - 8:00 PM  | Registration Open (Atrium)   |   |
| Pre-Conference Workshops   |  |   |
| 2:00/2:30 PM – 4:00 PM   | <p><b>Pre-Conference Workshop #1</b><br/><b>Aspen Room</b><br/><b>**2:30 PM Start time**</b><br/>Dr. Luc Tremblay, Dr. Erin Cressman, &amp; Dr. Maxime Trempe</p> <p><i>Building consensus towards definitions of motor learning terms and classification frameworks</i></p> | <p><b>Pre-Conference Workshop #2</b><br/><b>Cedar Room</b><br/><b>**2:00 PM Start time**</b><br/>Dr. Paul Gorczynski</p> <p><i>Understanding the importance of equity, diversity, and inclusion in our work</i></p> |
| Welcome & Franklin Henry Young Scientist Award Presentations (Malpeque Room) |  |   |
| 5:00 PM - 5:30 PM  | Welcome & Opening Remarks  |   |
| 5:30 PM - 6:00 PM  | <p><b>YSA Award Recipient: Exercise Psychology</b></p> <p>Maryam Marashi (University of Toronto)</p> <p><i>Resistance training as a context for body image development in women: An integrated theoretical and empirical perspective</i></p>                                 |   |
| 6:00 PM - 6:30 PM  | <p><b>YSA Award Recipient: Motor Learning and Control</b></p> <p>Carrie Peters (University of British Columbia)</p> <p><i>Testing observation-induced contagions in motor control and learning</i></p>   |   |
| 6:30 PM - 7:00 PM  | <p><b>YSA Award Recipient: Sport Psychology</b></p> <p>Cailie McGuire (University of British Columbia)</p> <p><i>Disentangling the complexities of trust in sport: Insights from an emerging line of inquiry</i></p>   |   |
| 7:15 PM - 8:15 PM  | Poster Session #1 (Hillsborough Room)  |   |
| 7:30 PM - 10:00 PM   | Opening Reception (Hillsborough & Atrium)  |   |



| Friday, October 3 <sup>rd</sup>  |  |  |  |
|----------------------------------|--|--|--|
| 7:00 AM - 5:00 PM                | Registration Open  |  |  |
| Breakout rooms:                  | Ash  | Aspen  | Cedar  |
| 8:00 AM - 9:15 AM                | <b><u>Session 1A</u></b><br>Exercise, Disability,<br>& Chronic Disease   | <b><u>Session 1B</u></b><br>Group Dynamics   | <b><u>Session 1C</u></b><br><i>MLC Symposium</i><br>Honoring the Legacy<br>of Dr. Eric Roy |
| 9:15 AM - 9:30 AM                | Coffee Break   |  |  |
| 9:30 AM - 10:30 AM<br>(Malpeque) | <b>Motor Learning and Control Keynote</b><br><br>Dr. Gail Eskes (Dalhousie University)<br><br><i>Mechanisms of visuomotor learning with prism adaptation to treat<br/>spatial neglect post-stroke</i>                |  |  |
| 10:35 AM - 11:50 AM              | <b><u>Session 2A</u></b><br>Exercise, Body, &<br>Mind  | <b><u>Session 2B</u></b><br><i>SEP Symposium</i><br>Pratfalls and Pitfalls:<br>The Infodemic and<br>Misinformation in<br>Sport Science | <b><u>Session 2C</u></b><br>Neural & Sensory<br>Basis of Motor<br>Control                  |
| 11:50 AM - 1:30 PM               | Lunch & Annual General Meeting (Rustico-Tracadie Room)   |  |  |
| 1:30 PM - 2:30 PM<br>(Malpeque)  | <b>Sport and Exercise Psychology Keynote</b><br><br>Dr. Maria Kavussanu (University of Birmingham)<br><br><i>Toward a happier, healthier, and more ethical sport: Contributions<br/>from sport morality research</i> |  |  |
| 2:30 PM - 2:45 PM                | Break (beverages and snacks)   |  |  |
| 2:45 PM - 3:45 PM                | Poster Session #2 (Hillsborough Room)  |  |  |
| 3:45 PM - 5:15 PM                | <b><u>Session 3A</u></b><br>Well-Being During<br>Sport & Exercise  | <b><u>Session 3B</u></b><br>Coaching, Teaching,<br>& Leadership  | <b><u>Session 3C</u></b><br>Cognition & Joint<br>Action                                    |
| 5:15 PM - 7:30 PM                | Break on your own  |  |  |
| 5:30 PM - 7:00 PM                | <b>BIPOC Student and Faculty meet up</b><br>Meet in Hotel lobby  |  |  |
| 7:30 PM                          | <b><u>Student Social</u></b><br><i>PonyBoat Social Club</i><br>Students gather at 7:15 in lobby  |  | <b><u>Faculty Social</u></b><br><i>Location: TBD</i>                                       |



| Saturday, October 4 <sup>th</sup> |   |  |   |
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| 7:00 AM - 5:00 PM                 | Registration Open   |  |   |
| 7:15 AM                           | Fun run led by Dr. Sebastian Harenberg (Director, Sport & Exercise Psychology) & Dr. Matt Vierimaa (Organizing Committee)   |  |   |
| Breakout rooms:                   | Ash   | Aspen  | Cedar   |
| 8:30 AM - 9:45 AM                 | <b><u>Session 4A</u></b><br><i>SEP/MLC Symposium</i><br>Rebuilding Bridges:<br>Bringing Sport<br>Psychology and Motor<br>Learning and Control<br>Back Together  | <b><u>Session 4B</u></b><br>Athletic<br>Performance:<br>Menstruation,<br>Eating Disorders &<br>Injury Recovery | <b><u>Session 4C</u></b><br>Motor Control in<br>Clinical/Special<br>Populations |
| 9:45 AM - 10:00 AM                | Coffee Break  |  |   |
| 10:00 AM - 11:00 AM<br>(Malpeque) | <b>Multidisciplinary Keynote</b><br><br>Sara-Lynne Knockwood<br><br><i>Indigenous Sport: A Mi'kmaw experience</i>   |  |   |
| 11:15 - 12:15                     | Combined Discipline Rapid Oral Presentations (Malpeque Room)  |  |   |
| 12:15 - 1:30 PM                   | Lunch on your own   |  |   |
| 1:30 - 3:00 PM<br>(Malpeque)      | <b>Wilberg &amp; Carron Distinguished Lectures</b><br><br>Dr. Brian Maraj (University of Alberta)<br><i>There's no place like home</i><br><br>Dr. Joseph Baker (University of Toronto)<br><i>Nature, nurture, noise and nonsense: Unlocking the puzzle of<br/>exceptional achievement</i> |  |   |
| 3:00 - 3:15 PM                    | Break (beverages and snacks)  |  |   |
| 3:15 - 4:15 PM                    | <b><u>Session 5A</u></b><br>Practical Considerations<br>for Exercise<br>Interventions I   | <b><u>Session 5B</u></b><br>Self-Compassion in<br>Sport  | <b><u>Session 5C</u></b><br>Motor Planning in<br>Applied Skills                 |
| 4:20 PM - 5:20 PM                 | <b><u>Session 6A</u></b><br>Practical Considerations<br>for Exercise<br>Interventions II  | <b><u>Session 6B</u></b><br>Athlete<br>Perceptions &<br>Emotions   | <b><u>Session 6C</u></b><br>Reaching &<br>Decisions                             |
| 6:30 PM - 1:00 AM                 | Banquet Dinner (Rustico-Tracadie Room)  |  |   |



## Thanks to our SCAPPS 2025 Sponsors





### Detailed Presentation Schedule

THURSDAY October 2<sup>nd</sup>

| <b>Thursday October 2<sup>nd</sup> 7:15 – 8:15 PM</b><br><b>POSTER SESSION # 1</b><br><b>Location: Hillsborough</b> |  |
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| 1   | <b>Understanding concussion knowledge and experiences among Special Olympics Canada athletes and coaches</b><br><i>William Dauphinee, Acadia University; Christina Ippolito, University of Toronto; Nick Reed, University of Toronto; Kelly Arbour-Nicitopoulos, University of Toronto; Emily Bremer, Acadia University</i>                            |
| 2   | <b>Building a Strong Base: Examining the Efficacy of LEGO as a Visuomotor Learning Tool</b><br><i>Nolan Dereski, Wilfrid Laurier University; Pamela Bryden, Wilfrid Laurier University</i>   |
| 3   | <b>Mouthful Misjudgements: How Exercise Alters Internal Volume Estimation</b><br><i>Cassie Chan, University of Toronto; Luc Tremblay, University of Toronto; April Karlinsky, California State University San Bernardino; Merryn Constable, Northumbria University; Catherine M. Sabiston, University of Toronto; Tim Welsh, University of Toronto</i> |
| 4   | <b>Influence of Sex and Body Fat on Motor Thresholds During Transcutaneous Spinal Stimulation</b><br><i>Jermyl Allen Acuzar, Queen's University; Zoe Horlick, Queen's University; Gerome Manson, Queen's University</i>  |
| 5   | <b>A Single Bout of Low "Density" Exercise Optimizes a Post-exercise Executive Function Benefit</b><br><i>Antonio Mendes, Western University; Grace Gall, Western University; Jianchun Yin, Shanghai Normal University; Matthew Heath, Western University</i>  |
| 6   | <b>Deltoid Muscle Activity Adaptations to an Elastic Perturbation during Treadmill Walking</b><br><i>Michael MacLellan, University of Prince Edward Island; Tara Campbell, Memorial University of Newfoundland; Brian Horslen, University of Waterloo</i>  |
| 7   | <b>The effectiveness of temporally patterned breaks on motor performance of a rhythmic task</b><br><i>Alexander Walker, Washington State University; Tristan Loria, Washington State University; Shikha Prashad, University of Texas at Arlington; Gracie Stockert, Washington State University; Gianna Bratcher, Washington State</i>                 |

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|    | <i>University; Jalen Hang, Washington State University; Gabriel McNichols, Washington State University; Samuel Song, Washington State University; Emma Ames, Washington State University; Chitnoop Sangera, Washington State University</i>  |
| 8  | <b>Pre-movement suppression of corticospinal excitability is time locked to an expected go-signal rather than movement initiation during a simple reaction time task</b><br><i>Meaghan Lapierre, University of Ottawa; Dana Maslovat, University of Ottawa; Anthony N. Carlsen, University of Ottawa</i>         |
| 9  | <b>Facilitatory Effects of Predictive Symbolic Cues Under Temporal Constraint in a Go-Before-You-Know Task</b><br><i>Kylie Cole, Dalhousie University; Brett Feltmate, Dalhousie University; Jennifer Swansburg, Dalhousie University; Heather F. Neyedli, Dalhousie University</i>                              |
| 10 | <b>Bimanual End-State Comfort in Children: Contributions of Hand and Object Constraints</b><br><i>Danielle Salters, University of Windsor; Sara Scharoun Benson, University of Windsor</i>   |
| 11 | <b>Tactile suppression is absent when a planned response is inhibited</b><br><i>Lana Khaddaj, University of Ottawa; Dana Maslovat, University of Ottawa; Anthony Carlsen, University of Ottawa</i>   |
| 12 | <b>Investigating the association between motor experience and neurophysiological markers of motor imagery ability</b><br><i>Sofia Knopf, The University of British Columbia; Anja-Xiaoxing Cui, The University of Vienna; Sarah Kraeutner, The University of British Columbia</i>                                |
| 13 | <b>Sound Matters: Motor-Memory Coupling in Handwriting Across Auditory Conditions</b><br><i>Igor Serafini, Queen's University; Obaida Al-Naib, Queen's University; Gerome Manson, Queen's University</i>   |
| 14 | <b>Changes in sensory precision with visuomotor adaptation</b><br><i>Emma Peters, University of Ottawa; Erin K. Cressman, University of Ottawa</i>   |
| 15 | <b>Investigating implicit sensorimotor adaptation in patients with multiple sclerosis</b><br><i>Eva Brison, Université de Sherbrooke; Pierre-Michel Bernier, Université de Sherbrooke</i>  |
| 16 | <b>Reality check: How coaches perceive the effectiveness of virtual reality training</b><br><i>Maxime Trempe, Bishop's University; François Rodrigue, Université du Québec en Outaouais; Tavis Smith, Bishop's University; Arianna Koutrias, Bishop's University; Émilie Roy, Excellence Sportive Sherbrooke</i> |

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| 17 | <b>Differences in gaze behavior between immersive 360° video and traditional fixed-screen video modalities</b><br><i>Maxime Trempe, Bishop's University; Eve Charbonneau, Université de la Réunion; Virginie Lévesque, Bishop's University; Anna Ba, Bishop's University; Thomas Romeas, Université de Montréal, York University</i>   |
| 18 | <b>Parental bias in youth sport: The effects of implicit and explicit gender associations on support and pressure</b><br><i>Corliss Bean, Brock University; Ross Murray, University of Toronto; Shannon Kerwin, Brock University; Michele Donnelly, Brock University</i>   |
| 19 | <b>The Effect of Net Size Manipulation on The Self-Efficacy &amp; Performance of University Students Performing a Penalty Kick</b><br><i>Johnathan Sherrard, University of New Brunswick</i>   |
| 20 | <b>Promoting physical activity in young adults living with and beyond cancer: Primary results from the 'physicAl aCtivity Counselling for young adult canCEr Survivors' (ACCESS) pilot trial</b><br><i>Jennifer Brunet, University of Ottawa; Jenson Price, Queens University; Sitara Sharma, University of Ottawa; Monica Taljaard, Ottawa Hospital Research Institute; Amirrtha Srikanthan, The Ottawa Hospital; Fiona Gillison, University of Bath; Martyn Standage, University of Bath; Mark R. Beauchamp, The University of British Columbia; Jennifer Reed, University of Ottawa Heart Institute; Yutong Chen, Ottawa Hospital Research Institute; Elham Sabri, Ottawa Hospital Research Institute</i> |
| 21 | <b>The effects of a mindfulness-based intervention on mindful awareness, anxiety, stress, flow, and well-being among Canadian university athletes</b><br><i>Ève LeBlanc, University of New Brunswick; Ryan Hamilton, University of New Brunswick</i>   |
| 22 | <b>Sign In, Stretch, Breathe, Sign Out: Pregnant Women and Prenatal Yoga Teachers' Perspectives of Online Prenatal Yoga</b><br><i>Kirina Angrish-Dandora, Brock University; Kimberley L. Gammage, Brock University, Brock Functional Inclusive Training (Bfit) Centre</i>  |
| 23 | <b>From Competition to Continuity: Transition to Physical Activity After High-Performance Sport Retirement</b><br><i>Kayla Krasnor, Dalhousie University; Lori Dithurbide, Dalhousie University</i>  |
| 24 | <b>Evaluating Group Physical Activity Resources for Older Pakistani Women</b><br><i>Mahrukh Tanweer, University of Calgary; Meghan McDonough, University of Calgary</i>  |
| 25 | <b>Closing the Education Gap: The Impact of a Sport Psychology Education Workshop on Athletic Therapists' Perceived Effectiveness and Use of Psychological Skills</b><br><i>Melissa Pare, University of Windsor; Krista Munroe-Chandler, University of Windsor</i>   |

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| 26 | <b>The history of women's hockey on Cape Breton Island: Psychosocial considerations</b><br><i>Jennifer MacInnis-Moore, Cape Breton University; Bettina Callary, Cape Breton University</i>  |
| 27 | <b>Fringe versus Mainstream Athletes: A Comparison of Developmental Training Histories</b><br><i>Jason Mergler, University of Manitoba; Benjamin Schellenberg, University of Manitoba; Leisha Strachan, University of Manitoba</i>  |
| 28 | <b>Evaluating a 12-Week Yoga Intervention for Gynecologic Cancer Survivors Using Hierarchical Linear Modeling</b><br><i>Jenson Price, Trent University; Soulene Sabir, Western University; Brooklyn Westlake, University of Ottawa; Jennifer Brunet, University of Ottawa</i>   |
| 29 | <b>Transformational leadership and positive development: Assessing the cascade effect in university sport</b><br><i>Justine Cotnoir, University of Lethbridge; Olivia Hawkins, University of Lethbridge; Scott Rathwell, University of Lethbridge</i>   |
| 30 | <b>Play to Lead: Coaches' support in developing female athletes' holistic leadership skills</b><br><i>Bettina Callary, Cape Breton University; Lindsey MacIntosh, Cape Breton University; Julia Callary, Riverview High School; Fallyn MacIntosh, Riverview High School; Morgan Rogers, University of Calgary</i>                             |
| 31 | <b>Perceptions of group dynamics in competitive and recreational adult athletes</b><br><i>Zakry Walsh, Wilfrid Laurier University; Seth Papineau, Wilfrid Laurier University; Mark Eys, Wilfrid Laurier University</i>  |
| 32 | <b>Perceptions of Body Image Among Women Sport Officials</b><br><i>David J. Hancock, Memorial University of Newfoundland; Tori B. Carter, Memorial University of Newfoundland; Allyson Schweitzer, The University of British Columbia; Catherine M. Sabiston, University of Toronto; Erica V. Bennett, The University of British Columbia</i> |
| 33 | <b>Exploring the state of Canadian sport-based mentorship initiatives for girl-identifying youth</b><br><i>Caroline Hummell, Brock University; Corliss Bean, Brock University</i>   |
| 34 | <b>The Effects of Psychosocial Stress on Athletic Performance</b><br><i>Cassidy L. Brooks, Nipissing University; Vanessa E. Byrne, Nipissing University; Dr. Justin M. Carré, Nipissing University</i>  |



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| 35 | <p><b>Positive body image maintenance in adolescent girls and young women competitive athletes: An ongoing, active process</b></p> <p><i>Taylor Unger, The University of British Columbia; Erica V. Bennett, The University of British Columbia; Desmond McEwan, The University of British Columbia; Katherine A. Tamminen, University of Toronto</i></p>             |
| 36 | <p><b>Parenting healthy children: The relationship between parenting styles, child self-regulation, and health behaviours</b></p> <p><i>Sheldon Fetter-Yearley, University of Windsor; Sarah J. Woodruff, University of Windsor</i></p>   |
| 37 | <p><b>The SHINE (Supporting Her In Navigating Exercise) Program: Examining Peer Support as an Exercise Promotion Tool Among Undergraduate Initiates Through a Self-Determination Theory Lens</b></p> <p><i>Madeline Fabiano, Lakehead University; Aislin Mushquash, Lakehead University; John Gotwals, Lakehead University; Erin Pearson, Lakehead University</i></p> |
| 38 | <p><b>How special is specializing in Taekwondo? An investigation into elite athletes' lifelong sport participation experiences</b></p> <p><i>Ceili Peterson, University of Toronto; Kathryn Johnston, University of Toronto; Antonia Cattle, University of Toronto; Joseph Baker, University of Toronto</i></p>   |
| 39 | <p><b>The Relationship between Mental Skills and Pain Experiences in Individuals with Persistent Low Back Pain</b></p> <p><i>Mahan Shahrooie, University of Manitoba; Melanie Gregg, University of Winnipeg; Shaelyn Stratchan, University of Manitoba</i></p>  |
| 40 | <p><b>A qualitative exploration of emotions and emotion regulation among athletes with high levels of alexithymia</b></p> <p><i>Kirsten Hutt, University of Toronto; Katherine Tamminen, University of Toronto</i></p>  |
| 41 | <p><b>Conceptualizations of the Coach-Athlete Relationship: A Scoping Review</b></p> <p><i>Madeline Schmidt, Queen's University; Stuart Wilson, Queen's University; Jean Côté, Queen's University</i></p>   |
| 42 | <p><b>Exploring Unexpected Demands in Weekly Physical Activity Goal Pursuit</b></p> <p><i>Mackenzie G. Marchant, University of Saskatchewan; Leah J. Ferguson, University of Saskatchewan; Laurie-Ann M. Hellsten, University of Winnipeg; Kent C. Kowalski, University of Saskatchewan</i></p>   |
| 43 | <p><b>"We can do whatever inspires us": Girls' perceptions of belonging, connection, and empowerment within one women-led girls-only baseball organization</b></p> <p><i>Mikayla McEwan, Brock University; Corliss Bean, Brock University</i></p>   |

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| 44 | <b>Youth sport coaching as social contribution: Exploring developmental pathways to community service</b><br><i>Erin Teschuk, University of Ottawa; Karl Erickson, York University; David Hancock, Memorial University of Newfoundland; Matt Vierimaa, Acadia University</i>   |
| 45 | <b>Beyond center ice: A scoping review on long-term psychosocial player development in ice hockey</b><br><i>Hannah Rabinovitch, University of Toronto; Kathryn Johnston, University of Toronto; Alia Mazhar, University of Toronto; Joseph Baker, University of Toronto</i>  |
| 46 | <b>Development of a Concussion Surveillance Tool for Special Olympics Canada using the Nominal Group Technique</b><br><i>Kelly Arbour-Nicitopoulos, University of Toronto; Christina Ippolito, University of Toronto; Megan Wong, University of Toronto; Emma Irwin, University of Toronto; Giulia Peck, University of Toronto; Nikoleta Odorico, University of Toronto; Emily Bremer, Acadia University; Nick Reed, University of Toronto</i> |
| 47 | <b>Factors influencing young adults use of public fitness facilities</b><br><i>Alyssa Hughes, University of Lethbridge; Alex Engel, University of Lethbridge; Alexa Fowler, University of Lethbridge; Scott Rathwell, University of Lethbridge; Paige Pope, University of Lethbridge</i>   |
| 48 | <b>Learning from Olympic Athletes about their Goals: A Longitudinal Qualitative Study</b><br><i>Patti C. Parker, Thompson Rivers University; Amber D. Mosewich, University of Alberta; Lia M. Daniels, University of Alberta</i>   |
| 49 | <b>Measuring Sport Performance: Psychometric Development and Evaluation of The Sport Performance Perceptions Scale - Training (SPPS-T) and - Competition (SPPS-C)</b><br><i>Margo E. K. Adam, University of Alberta; Danielle D. L. Cormier, University of Alberta; Amber D. Mosewich, University of Alberta; Rachel L. Duckham, The Royal Melbourne Hospital, Deakin University; Leah J. Ferguson, University of Saskatchewan</i>             |
| 50 | <b>Toward evidence-based guidance: Reviewing resources for parents on youth body image</b><br><i>Madison F. Vani, University of Toronto; Alishba Mansoor, University of Toronto; Landyn Meadows, University of Toronto; Elise Christopoulos, University of Toronto; Fengyue Xu, University of Toronto; Catherine M. Sabiston, University of Toronto</i>  |
| 51 | <b>Understanding of how safety and risk are negotiated and leveraged in rugby policies</b>   |

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|    | <i>Samantha Burelle, York University; Parissa Safai, York University; Karl Erickson, York University</i>   |
| 52 | <b>Black steps, strong steps: Are Black adults living with type 2 diabetes meeting the Canadian 24-Hour Movement Guidelines?</b><br><i>Kevin Mageto, University of Saskatchewan; Heather J. A. Foulds, University of Saskatchewan; Nancy C. Gyurcsik, University of Saskatchewan; Leah J. Ferguson, University of Saskatchewan</i>                                   |
| 53 | <b>Mapping non-accidental violence toward sport officials through a scoping review</b><br><i>Maria Luisa Pereira Vargas, Memorial University of Newfoundland; Tom Webb, Coventry University; Paul Gorczynski, University of Greenwich; Laura O’Keefe, Memorial University of Newfoundland; David Hancock, Memorial University of Newfoundland</i>                    |
| 54 | <b>Externally valid verbal and non-verbal encouragement: A mixed-method study</b><br><i>Edda van Meurs, University of Münster; Margaret Nieto, St. Francis Xavier University; Bernd Strauss, University of Münster; Sebastian Harenberg, St. Francis Xavier University</i>   |
| 55 | <b>Promoting Fundamental Movement Skills Through Game-Based Intervention Design</b><br><i>Danielle Salters, University of Windsor; Emily Chauvin, University of Windsor; Sarah Woodruff, University of Windsor; Sara Scharoun Benson, University of Windsor</i>  |
| 56 | <b>Internalized Body Size Stigma Hinders Adaptation of a Different Body in Virtual Reality</b><br><i>Xiaoye Michael Wang, University of Toronto; Delaney E. Thibodeau, University of Toronto; Ali Mazalek, Toronto Metropolitan University; Catherine M. Sabiston, University of Toronto; Timothy N. Welsh, University of Toronto</i>                                |
| 57 | <b>Using the capability, opportunity, and motivation (COM-B) model to understand the readiness of recreational physical activity (PA) professionals to teach wheelchair skills training</b><br><i>Jenna Smith, University of Toronto; Kelly Arbour-Nicitopoulos, University of Toronto; Krista L. Best, Université Laval; Ashley Stirling, University of Toronto</i> |
| 58 | <b>Gathering initial content and substantive validity evidence for a scale to measure negativity bias in sport: Leveraging expert review and cognitive interviews</b><br><i>Benjamin J. Sereda, University of Alberta; Amber D. Mosewich, University of Alberta; Margo E. K. Adam, University of Alberta; GERALYN R. Ruissen, University of Alberta</i>              |

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| 59 | <b>A critical realist exploration of athletic identity in middle-aged adult athletes</b><br><i>Derrik Motz, University of Ottawa; Scott Rathwell, University of Lethbridge; Bradley W. Young, University of Ottawa</i>  |
| 60 | <b>Operating under pressure: A scoping review on stress and coping among sports officials</b><br><i>Maria Luisa Pereira Vargas, Memorial University of Newfoundland; Ian Cunningham, Edinburgh Napier University; Duncan Mascarenhas, Edinburgh Napier University; Philip Sullivan, Brock University; Megan Holden, Memorial University of Newfoundland; David Hancock, Memorial University of Newfoundland</i>                           |
| 61 | <b>Beyond the Scale: Exploring Women Athletes' Weight Perceptions and Well-being</b><br><i>Grace Spilchak, University of Alberta; Amy Alex, University of Alberta; Margo E. K. Adam, University of Alberta; Leah J. Ferguson, University of Saskatchewan</i>  |
| 62 | <b>How Athletes' Self-Construal Shapes Perceptions of Cohesion</b><br><i>Mackenna Schiavo, University of Windsor; Todd M. Loughhead, University of Windsor; Krista J. Munroe-Chandler, University of Windsor</i>  |
| 63 | <b>"The Ultimate Girl's Day Out"?: An exploration of consumerism, womanhood, physical activity, and health as communicated through the National Women's Show – Montreal</b><br><i>Lindsay Duncan, McGill University; Olivia Feng, McGill University; Katelyn Forner, McGill University; Jade Bailey, McGill University; Alexa Tiramola-Pugh, McGill University; Erika Spagnuolo, McGill University; Chelsea Murray, McGill University</i> |
| 64 | <b>Who Keeps Playing? A Retrospective of Sport Participation in Childhood to Predict Participation in Adulthood</b><br><i>Melanie Gregg, University of Winnipeg; Sarah Teetzel, University of Manitoba</i>  |
| 65 | <b>"You can just be in your body how it is": Queer embodiment and resistance in physical activity</b><br><i>Jade Alexandra Bailey, McGill University; Erika Spagnuolo, McGill University; Lindsay Duncan, McGill University</i>   |
| 66 | <b>The Fine Line Between Trust and Trauma: Athlete Perspectives on Coach Abuse in Canadian University Sport</b><br><i>Sophia Milner, Nipissing University; Tracey Curwen, Nipissing University</i>  |
| 67 | <b>Mindfulness, Self-Compassion and Grit: Canadian Student-Athlete Perspectives on their Path to Success</b>  |



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|  | <i>Cedric Ralph, Saint Mary's University; Quinn MacDonald, Saint Mary's University; Marc Patry, Saint Mary's University</i> |
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### Detailed Presentation Schedule

FRIDAY October 3<sup>rd</sup>

| <b>Friday October 3<sup>rd</sup> 8:00 – 9:15 AM</b><br><b>Session 1A: Exercise, Disability, &amp; Chronic Disease</b><br><b>Location: Ash</b><br><b>Moderator: Lindsay Duncan</b> |  |
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| 8:00 – 8:15   | <b>Reallocating daily movement behaviours and psychological distress: Disproportionate impacts for university students with disabilities</b><br><i>Roxy H. O'Rourke, University of Toronto; Jenna D. Smith, University of Toronto; Ross M. Murray, University of Toronto; Catherine M. Sabiston, University of Toronto</i>   |
| 8:15 – 8:30   | <b>Investigating The Interaction between Physical Fitness and Executive Function among Children and Youth with Developmental Disabilities</b><br><i>Mikayla Bottomley, Acadia University; Emily Bremer, Acadia University</i>  |
| 8:30 – 8:45   | <b>Movement Behaviours of Post-Secondary Students Experiencing Disabilities</b><br><i>Marley A. R. S. Mullan, Queen's University; Ian Janssen, Queen's University; Shane N. Sweet, McGill University; Amy E. Latimer-Cheung, Queen's University; Jennifer R. Tomasone, Queen's University</i>  |
| 8:45 – 9:00   | <b>Nature in Motion – Physical activity levels of children with disabilities at an outdoor childcare center.</b><br><i>Alessia Capone, University of Toronto; Maeghan E. James, Children's Hospital of Eastern Ontario Research Institute; Louise de Lannoy, Canadian Centre for Outdoor Play; Paula ter Huurne, Canadian Centre for Outdoor Play; Amy Jo Smith, Canadian Centre for Outdoor Play; Kelly P. Arbour-Nicitopoulos, University of Toronto</i> |
| 9:00 – 9:15   | <b>"Good for my body. Good for my soul.": Exploring Older Adults Living with Chronic Disease(s) Experiences with Community Based Exercise Programming</b><br><i>Alia Mazhar, University of Toronto; Micheline Senia, University of Windsor; Sean Horton, University of Windsor; Joe Baker, University of Toronto</i>   |



| <b>Friday October 2<sup>nd</sup> 8:00 – 9:15 AM</b><br><b>Session 1B: Group Dynamics</b><br><b>Location: Aspen</b><br><b>Moderator: Colin McLaren</b> |   |
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| 8:00 – 8:15   | <b>Leader humility and group cohesion in interdependent sport teams</b><br><i>Anthony Griffo, Wilfrid Laurier University; Mark Eys, Wilfrid Laurier University</i>  |
| 8:15 – 8:30   | <b>The relationship between positional competition and social identity in Canadian student-athletes: Differences between starters and non-starters</b><br><i>Sebastian Harenberg, St Francis Xavier University; Chaslynn MacLeod, St Francis Xavier University</i>                                      |
| 8:30 – 8:45   | <b>The intersection of coach- and parent-initiated motivational climates toward cohesion in youth sport</b><br><i>Taylor Coleman, Wilfrid Laurier University; Mark Eys, Wilfrid Laurier University</i>  |
| 8:45 – 9:00   | <b>Exploring Sense of Community Characteristics Among Canadian Masters Swimmers: An Interpretative Phenomenological Analysis</b><br><i>Catalina Belalcazar, University of Ottawa; Bettina Callary, Cape Breton University; Bradley W. Young, University of Ottawa</i>                                   |
| 9:00 – 9:15   | <b>Come to consensus even on the small things: First results of an instrumental case study into group decision-making in elite mountaineering</b><br><i>Svenja A. Wolf, Florida State University; Anna E. Bergauer, Technical University of Munich; V. Vanessa Wergin, The University of Queensland</i> |

| <b>Friday October 2<sup>nd</sup> 8:00 – 9:15 AM</b><br><b>Session 1C: Honoring the Legacy of Dr. Eric Roy (Symposium)</b><br><b>Location: Cedar</b><br><b>Moderator: Pamela Bryden</b> |  |
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| Lead Presentation  | <b>Honoring the Legacy of Dr. Eric Roy</b><br><i>Pamela Bryden, Wilfrid Laurier University; Digby Elliott, McMaster University; Dave Westwood, Dalhousie University; Sara Scharoun, University of Windsor; Geneviève Desmarais, Mount Allison University; James Tung, University of Waterloo; Linda Rohr, University of Windsor; Dave Gonzalez, Dalhousie University</i> |



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| Presentation #1 | <b>Eric Roy's academic legacy: The early years</b><br><i>Digby Elliott, McMaster University</i>  |
| Presentation #2 | <b>Celebrating Eric Roy's research advances in understanding the performance differences of the two hands: the preferential reaching task.</b><br><i>Pamela Bryden, Wilfrid Laurier University</i> |
| Presentation #3 | <b>Celebrating Eric Roy's research advances in apraxia: uncovering pathways to action and apraxia typologies.</b><br><i>Matthew Heath, University of Western Ontario</i>                           |
| Presentation #4 | <b>The pioneering work of Dr. Eric Roy: Blending clinical and research approaches</b><br><i>Dave Gonzalez, Dalhousie University</i>  |

**Friday October 3<sup>rd</sup> 9:30 – 10:30 AM**

**Session: Motor Learning and Control Keynote**

**Location: Malpeque**

**Moderator: Heather Neyedli**

Gail Eskes, Dalhousie University

*Mechanisms of visuomotor learning with prism adaptation  
to treat spatial neglect post-stroke*

**Friday October 3<sup>rd</sup> 10:35 – 11:50 AM**

**Session 2A: Exercise, Body, & Mind**

**Location: Ash**

**Moderator: Luisa Pereira Vargas**

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| 10:35 – 10:50 | <b>"It's something that I can be proud of": A narrative analysis of body-related pride and physical activity</b><br><i>Sarah E. Ryan, University of Toronto; Catherine M. Sabiston, University of Toronto; Diane E. Mack, Brock University; Kelly P. Arbour-Nicitopoulos, University of Toronto</i>  |
| 10:50 – 11:05 | <b>Adolescent appearance and fitness self-conscious emotions are associated with physical activity in young adulthood</b><br><i>Kristen Lucibello, Western University; Ross Murray, University of Toronto; Eva Pila, Western University; Catherine Sabiston, University of Toronto</i>   |
| 11:05 – 11:20 | <b>From intimidation to empowerment: A critical realist analysis of women's resistance training and body image</b><br><i>Maryam Marashi, University of Toronto; Catherine M. Sabiston, University of Toronto; Avery Hinchcliffe, University of Toronto; Kelly P. Arbour-Nicitopoulos, University of Toronto; Diane E. Mack, Brock University</i> |





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| 11:20 – 11:35 | <b>“Everything that is done is out of joy and not obligation”: A scoping review of qualitative research on self-compassion and physical activity</b><br><i>Sasha Kullman, University of Manitoba; Hannah Vonck, University of Manitoba; Vianney Vega, University of Manitoba; Shaelyn Strachan, University of Manitoba</i>   |
| 11:35 – 11:50 | <b>“It wasn’t like my body wasn’t working....I had to be active to do all the housework, I didn’t have a choice”: Understanding Canadian South Asian Immigrant Women’s Perspectives on Postpartum Physical Activity</b><br><i>Mandisa Lau, Brock University; Iris Lesser, University of the Fraser Valley; Harleen Sangha, University of the Fraser Valley; Corliss Bean, Brock University</i> |

**Friday October 3<sup>rd</sup> 10:35 – 11:50 AM**

**Session 2B: Pratfalls and pitfalls: The infodemic and misinformation in sport science (Symposium)**

**Location: Aspen**

**Moderator: Nick Wattie**

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| Lead Presentation | <b>Pratfalls and pitfalls: The infodemic and misinformation in sport science</b><br><i>Nick Wattie, Ontario Tech University</i>  |
| Presentation #1   | <b>Sources and channels of (mis)information on mental performance in sport: A pilot study of Instagram content</b><br><i>Bryan McLaughlin, Ontario Tech University</i>   |
| Presentation #2   | <b>Trained on what? A case study on the misapplication of machine learning in women’s ice hockey</b><br><i>Ben Csiernik, Ontario Tech University; Nick Wattie, Ontario Tech University</i>   |
| Presentation #3   | <b>AI Won’t Save You: Limits to the Use of Machine and Deep Learning in Athlete Development Research</b><br><i>Joseph Baker, University of Toronto; Antonia Cattle, University of Toronto; Kathryn Johnston, University of Toronto</i> |

**Friday October 3<sup>rd</sup> 10:35 – 11:50 AM**

**Session 2C: Neural & Sensory Basis of Motor Control**

**Location: Cedar**

**Moderator: Tony Carlsen**

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| 10:35 – 10:50 | <b>Increased preparatory excitability suggests a compensatory neuromotor response to cognitive fatigue</b> |
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|               | <i>Kathleen J. Peters, University of Ottawa; Anthony N. Carlsen, University of Ottawa</i>   |
| 10:50 – 11:05 | <b>Hemispheric Asymmetry for Visual Information Processing in 3D Space</b><br><i>Noah Britt, McMaster University; Jim Lyons, McMaster University; Hong-jin Sun, McMaster University</i>   |
| 11:05 – 11:20 | <b>Vestibular and Visual Contributions for Movements to Somatosensory Targets</b><br><i>Jonathan Pitino, Queen's University; Haddie Oakes, Queen's University; Sadiya Abdulrabba, Queen's University; Gerome Manson, Queen's University</i> |
| 11:20 – 11:35 | <b>Mental fatigue differentially impacts implicit and explicit contributions to visuomotor adaptation</b><br><i>Emma Peters, University of Ottawa; Erin K. Cressman, University of Ottawa</i>   |
| 11:35 – 11:50 | <b>Linking beta desynchronization to feedback gain modulation in human reaching</b><br><i>Dominique Delisle-Godin, Université de Sherbrooke; Alain Delisle, Université de Sherbrooke; Pierre-Michel Bernier, Université de Sherbrooke</i>   |

**Friday October 3<sup>rd</sup> 1:30 – 2:30 PM**

**Session: Sport and Exercise Psychology Keynote**

**Location: Malpeque**

**Moderator: Dany MacDonald**

*Maria Kavussanu, University of Birmingham*

*Toward a happier, healthier, and more ethical sport: Contributions from sport morality research*

**Friday October 3<sup>rd</sup> 2:45 – 3:45 PM**

**POSTER SESSION # 2**

**Location: Hillsborough**

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| 1 | <b>Reward and punishment feedback lead to similar implicit visuomotor adaptation</b><br><i>Jacob Godard, University of Ottawa; Melissa Chik, University of Ottawa; Emma Peters, University of Ottawa; Erin K. Cressman, University of Ottawa</i>    |
| 2 | <b>The Impact of Technology on Training and Performance in Golf: An Experimental Design</b><br><i>Conrad Von Pallese, Dalhousie University; Ashton Sheaves, Dalhousie University; Heather Neyedli, Dalhousie University; Malcom Muir, Dalhousie</i> |

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|    | <i>University; Lori Dithurbide, Dalhousie University; Brett Feltmate, Dalhousie University</i>  |
| 3  | <b>Direction matters: Training in a 2-D racing skill acquisition task improves speed, accuracy, and path efficiency but depends on movement direction</b><br><i>Raphael Gastrock, York University; Setayesh Nezakatiolfati, York University; Andrew King, York University; Denise Henriques, York University</i>  |
| 4  | <b>Preferences for costly cooperation are shaped by social pressure</b><br><i>Mikayla Lalli, McMaster University; Nour Al Afif, McMaster University; Shiv Peshwa, McMaster University; Scott Rathwell, University of Lethbridge; Joshua G. A. Cashaback, University of Delaware; Michael J. Carter, McMaster University</i>   |
| 5  | <b>Look to reach: Exploring gaze and reach behaviour during explicit motor sequence learning</b><br><i>Elena M. Broeckelmann, University of Manitoba; Hailey J. Witko, University of Manitoba; Cheryl M. Glazebrook, University of Manitoba</i>   |
| 6  | <b>Investigating the Role of Visual and Kinesthetic Information in Memory Recognition During Active and Passive Movement</b><br><i>Obaida Al-Naib, Queen's University; William Steedman, Queen's University; Gerome Manson, Queen's University; Anisa Hassan, Queen's University; Matthew Pan, Queen's University; Tasha Ignatius, Queen's University; Jeffrey Wammes, Queen's University</i> |
| 7  | <b>The Influence of Error Magnitude, Signal Type, and Timing on Early Implicit Contributions in Visuomotor Adaptation</b><br><i>Zacchary Nabaee-Tabriz, York University; Parmin Rahimpour-Marnani, York University; Alina Khan, York University; Kimer Bassi, York University; Bernard Marius 't Hart, York University; Denise Henriques, York University</i>                                 |
| 8  | <b>Investigating the effects of cortico-cortico paired associative stimulation on motor control</b><br><i>Faith Adams, McMaster University; Nour Al Afif, McMaster University; Mikayla Lalli, McMaster University; Michael J. Carter, McMaster University; Aimee J. Nelson, McMaster University</i>   |
| 9  | <b>Reevaluating Strategy Development as a Discrete Step Process in Visuomotor Adaptation</b><br><i>Elysa Eliopoulos, York University; Bernard Marius 't Hart, York University; Denise Henriques, York University</i>  |
| 10 | <b>Linking Action to Cognition: Short-Term Motor Training Improves Mental Rotation Ability</b><br><i>Daniela E. Aguilar Ramirez, University of Lethbridge; MaKenna Corson, University of Lethbridge; Claudia L. R. Gonzalez, University of Lethbridge</i>   |
| 11 | <b>When Practice Pays Off: How Practice Schedule and Learning Context Shape Motor Performance in Golf Putting</b>   |

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|    | <i>Sara A. Thompson, University of Toronto; Martina Kacan, University of Toronto; Xiaoye Michael Wang, University of Toronto; Luc Tremblay, University of Toronto; Nicola J. Hodges, The University of British Columbia; April Karlinsky, California State University San Bernadino; Matthew W. Scott, The University of British Columbia; Judith Bek, University of Toronto; Ross Murray, University of Toronto; Timothy N. Welsh, University of Toronto</i>    |
| 12 | <b>Enhancing Movement Initiation Through Sensory Cue–Feedback Pairings in Sequential Reaching Tasks</b><br><i>Peyton R. Clark, University of Manitoba; Saba Mohammadalinezhad Kolahdouz, University of Manitoba; Cheryl M. Glazebrook, University of Manitoba</i>  |
| 13 | <b>A weak prepulse stimulus decreases the incidence of startle but reaction time facilitation by startle is preserved</b><br><i>Leo Dolenko, University of Ottawa; Dana Maslovat, University of Ottawa; Anthony N Carlsen, University of Ottawa</i>  |
| 14 | <b>Modulating Sequential Reaching in Younger Adults: The Role of Task Complexity, Vibrotactile and Auditory Feedback</b><br><i>Saba Mohammadalinezhad Kolahdouz, University of Manitoba; Quinn Malone, The University of British Columbia; Steven R. Passmore, University of Manitoba; Jonathan J. Marotta, University of Manitoba; Cheryl M. Glazebrook, University of Manitoba</i>   |
| 15 | <b>Distributing practice via short breaks during acquisition facilitates performance of a rhythmic key-press task</b><br><i>Alexander Walker, Washington State University; Tristan Loria, Washington State University; Shikha Prashad, University of Texas at Arlington; Gracie Stockert, Washington State University; Gianna Bratcher, Washington State University; Jalen Hang, Washington State University; Gabriel McNichols, Washington State University</i> |
| 16 | <b>Probing the influence of future reaches on present ones.</b><br><i>Brett Feltmate, Dalhousie University; Lindsay Noiles, Dalhousie University; Heather Neyedli, Dalhousie University</i>  |
| 17 | <b>Motor Adaptation and Generalization in a Virtual Throwing Task Under Simulated Environmental Perturbation</b><br><i>Jacob Boulrice, York University; Andrew King, York University; Bernard Marius t' Hart, York University; Denise Henriques, York University</i>   |
| 18 | <b>Investigating Task-Dependent Improvements of Motor Imagery Training on Force Steadiness After Stroke</b><br><i>Marlo Spence, University of British Columbia; Justine Magnuson, University of British Columbia; Jennifer Jakobi, University of British Columbia; Sarah Kraeutner, University of British Columbia</i>   |

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| 19 | <p><b>Vibrotactile feedback for postural adjustment during fine sensorimotor tasks: Two studies investigating optimal algorithms and stimulus parameters</b></p> <p><i>Alice Elizabeth Atkin, York University; William Bonin, Queen's University; Samuel Brost, Queen's University; Bernard Marius 't Hart, York University; Sebastian Tomescu, Sunnybrook Health Sciences Centre; Bradley Strauss, Sunnybrook Health Sciences Centre; Cari Whyne, Sunnybrook Health Sciences Centre; Qingguo Li, Queen's University; Denise Henriques, York University</i></p>   |
| 20 | <p><b>Sedentary Time and Physical Activity in Cardiac Rehabilitation Patients and Their Partners Extends Beyond Their Neighborhoods</b></p> <p><i>Jodi Langley, Dalhousie University; Chloe Cyr, Dalhousie University; Nick Giacomantonio, Nova Scotia Health; Wanda Firth, Nova Scotia Health; Scott Grandy, Dalhousie University; Melanie Keats, Dalhousie University; Laurene Rehman, Dalhousie University; Daniel Rainham, Dalhousie University; Olga Theou, Dalhousie University; Robin Urquhart, Dalhousie University; Ryan Rhodes, University of Victoria; Chris Blanchard, Dalhousie University</i></p> |
| 21 | <p><b>Help-seeking among Canadian student athletes: Do those who need mental health support know where to find it?</b></p> <p><i>Isabella L. Tremonte, University of Toronto; Michael P. Jorgensen, University of Toronto; Danika A. Quesnel, University of Toronto; Catherine M. Sabiston, University of Toronto</i></p>   |
| 22 | <p><b>When Satisfaction and Frustration Coexist: Effects on Mental Health and Accelerometer-Assessed Exercise</b></p> <p><i>Katie Gunnell, Carleton University; Marina Milyavskaya, Carleton University; Rachel Burns, Carleton University; Tyler Thorne, Carleton University; Ahmed Al-Zehhawi, Carleton University; Benjamin Hives, University of British Columbia</i></p>  |
| 23 | <p><b>Meeting Families Where They Are: Lessons Learned from the Health On the Move for Equity (HOME) Program</b></p> <p><i>Erin Pearson, Lakehead University; Delaney Johnson, Lakehead University; Aislin Mushquash, Lakehead University; Rachel Globensky Bayes, Thunder Bay District Health Unit; Jackie Knough, Our Kids Count; Joanna Carastathis, Thunder Bay District Health Unit; Kim Begin, City of Thunder Bay</i></p>  |

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| 24 | <b>Young athletes' social goals during the children-to-youth sport transition: A latent profile and latent transition analysis</b><br><i>Thomas Mangor Jørgensen, Norwegian School of Sport Sciences; Siv Gjesdal, Norwegian School of Sport Sciences; Frank Eirik Abrahamsen, Norwegian School of Sport Sciences</i>  |
| 25 | <b>Using AI-generated Images to Minimize Researcher Bias and Enhance Participant Insight in Qualitative Interviews</b><br><i>Alexa Fowler, University of Lethbridge; Alex Engel, University of Lethbridge; J. Paige Pope, University of Lethbridge</i>   |
| 26 | <b>Leave no one behind: A rapid review for recruiting persons experiencing disabilities in research</b><br><i>Rayona Silverman, Queen's University; Michele Chittenden, Queen's University; Mahadeo Sukhai, Accessibility Standards Canada; Alanna Shwed, University of British Columbia; Heather L. Gainforth, University of British Columbia; Amy Latimer-Cheung, Queen's University; Jennifer R. Tomasone, Queen's University</i> |
| 27 | <b>More Ready than Willing: Leadership Self-Efficacy as a Key Predictor of Athlete Leadership Behaviours</b><br><i>Mason Sheppard, University of Windsor; Todd Loughhead, University of Windsor; Nathan Clark, University of Windsor</i>   |
| 28 | <b>Physical activity and physical activity adequacy as possible predictors of generalized anxiety disorder in female university students</b><br><i>Bailey Gitzel, University of Saskatchewan; Darren Nickel, University of Saskatchewan; Kevin S. Spink, University of Saskatchewan</i>  |
| 29 | <b>Unpacking the relative age effect in action sports: Methodological challenges and novel insights</b><br><i>Christopher J. Coady, University of Windsor; Krista J. Munroe-Chandler, University of Windsor</i>  |
| 30 | <b>Behind the Scenes of Supporting Women Coaches' Reflection and Storytelling through Narrative Research Approaches</b><br><i>Sara Kramers, University of British Columbia; Corliss Bean, Brock University; Thierry Middleton, University of Portsmouth; Andrea Bundon, University of British Columbia</i>   |
| 31 | <b>The Co-Development of Indigenous Health Certificate for Students in Health &amp; Exercise Sciences</b><br><i>Tanya Forneris, University of British Columbia; April Coulson, University of British Columbia; Meagan MacNutt, University of British Columbia; Mary Jung, University of British Columbia</i>   |

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| 32 | <p><b>One-on-one and group-based physical activity intervention compared to a wait-list control for post-secondary student mental health and social well-being: A 3-arm parallel randomized controlled</b></p> <p><i>M. L. deJonge, University of Toronto; D. E. Thibodeau, University of Toronto; D. A. Quesnel, University of Toronto; S. Yuen, University of Toronto; C. M. Sabiston, University of Toronto</i></p>   |
| 33 | <p><b>“We Understood Each Other Better”: Evaluating the Together for Us (T4Us) Intervention in Competitive Youth Soccer Teams</b></p> <p><i>Mark Bruner, Nipissing University; Meredith Schertzing, Nipissing University; Colin McLaren, Cape Breton University; Sophia Milner, Nipissing University; Cassidy Brooks, Nipissing University; Ian Boardley, University of Birmingham; Luc Martin, Queen’s University; Stewart Vella, University of Wollongong; Richard Slatcher, University of Georgia; Rebecca Misiaz, Nipissing University; Justin Carré, Nipissing University; Katrien Fransen, KU Leuven</i></p> |
| 34 | <p><b>Sex differences in the impact of concussion on complex visuomotor skill performance in working-aged adults with persisting post-concussion symptoms.</b></p> <p><i>Madison Reiter, York University; Tooba Shahzad, York University; Kiran Bumra, York University; Miracle Ozzoude, York University; Nicole Smeha, York University; Sara Weinberg, York University; Lauren Sergio, York University</i></p>  |
| 35 | <p><b>Examining Motivational Climates and Developmental Experiences in Adolescent Girls’ High-Performance Soccer in Canada</b></p> <p><i>Valentina Nivicki, York University; Jessica Fraser-Thomas, York University</i></p>  |
| 36 | <p><b>Perceived Coaching Style of Youth Basketball Coaches and Players’ Mental Toughness: A Comparison between Germany and Japan</b></p> <p><i>Maike Tietjens, University Münster; Eleni Koutsouki, University Münster; Souchi Ichimura</i></p>  |
| 37 | <p><b>Examining social imaginaries of the “hockey parent” as represented in Canadian media</b></p> <p><i>Juliana LeBlanc, Acadia University; Marianne Clark, Acadia University; Christopher Shields, Acadia University</i></p>   |
| 38 | <p><b>Enhancing Quality Participation: The Adapted Bingocize® Leader Training for Autistic Children and Youth</b></p> <p><i>Sepehr Rassi, York University; Lauren Tristani, York University; Jason Crandall, Western Kentucky University; Jonathan Weiss, York University; Rebecca Bassett-Gunter, York University</i></p>   |



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| 39 | <p><b>The Relative Influence of Coaches' Interpersonal and Technical Skills on Perceptions of Team Dynamics and Performance in University Sport Teams</b></p> <p><i>Mitchell C. Profeit, Queen's University; Stuart G. Wilson, Queen's University; Cailie S. McGuire, University of British Columbia; Alex Murata, Queen's University; Jordan D. Herbison, Vancouver Island University; Jean Côté, Queen's University; Luc J. Martin, Queen's University</i></p>  |
| 40 | <p><b>Supporting Exercise Adherence and Mental Health: Baseline Trends from a University Buddy System Pilot</b></p> <p><i>Darcee J. Hall, University of Windsor; Melissa A. Paré, University of Windsor; Krista J. Munroe-Chandler, University of Windsor; Todd M. Loughhead, University of Windsor; Chad A. Sutherland, University of Windsor; Irene L. Muir, Penn State</i></p>   |
| 41 | <p><b>The Relative Age Effect in Elite Youth Lacrosse: A Bayesian Hierarchical Analysis of Selection Cascades in the USA Lacrosse National Team Development Program</b></p> <p><i>Yiru Wang, University of Toronto; Joseph Baker, University of Toronto; Jason D Vescovi, USA Lacrosse High Performance Department, USA Lacrosse Center for Sport Science &amp; Safety; Bailey Speight, USA Lacrosse Center for Sport Science &amp; Safety; Amy Markwort, USA Lacrosse National Teams Development Program</i></p> |
| 42 | <p><b>How mental performance consultants act on self-regulated sport practice: Extending survey scores to lean into metacognitive learning narratives</b></p> <p><i>Bradley W. Young, University of Ottawa; Sharleen Hoar, Canadian Sport Institute - Pacific; Lisa Bain, University of Ottawa; Joe Baker, University of Toronto</i></p>  |
| 43 | <p><b>Belonging Builds Strength: The Role of Social Identity in Youth Resilience and Well-being</b></p> <p><i>Colin McLaren, Cape Breton University; Meredith Schertzinger, Nipissing University; Rebecca Misiaz, Nipissing University; Brenda Bruner, Nipissing University; Barbi Law, Nipissing University; Marika Warner, MLSE LaunchPad; Jackie Robinson, MLSE LaunchPad; Ben Arhen, MLSE LaunchPad; Bruno da Costa, McGill University; Mark W. Bruner, Nipissing University</i></p>                          |
| 44 | <p><b>Social Support in Youth Sport: An Updated Systematic Review</b></p> <p><i>Shannon R. Pynn, Utah State University; Danielle L. Cormier, University of Alberta; Helene Jørgensen, University of Calgary</i></p>   |



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| 45 | <b>Exploring Women’s Experiences in a YMCA Health and Wellness Program for Mothers of Newborns</b><br><i>Abby Shimmerman, York University; Meghan Harlow, York University; Jessica Fraser-Thomas, York University</i>  |
| 46 | <b>Differences in body-related self-conscious emotions and compensatory behaviours across categories of self-rated mental health</b><br><i>Avery Hinchcliffe, University of Toronto; Catherine Sabiston, University of Toronto; Kristen Lucibello, Western University, Brock University; Erin O’Loughlin, CHUM Research Centre; Jennifer O’Loughlin, University of Montreal; Marie-Pierre Sylvestre, University of Montreal</i>  |
| 47 | <b>Examining the Influence of Coach Behaviour on Athlete Moral Behaviour Toward Officials in Youth Competitive Ice Hockey</b><br><i>Rebecca Misiasz, Nipissing University; Meredith Schertzing, Nipissing University; Colin D. McLaren, Cape Breton University; Jordan Sutcliffe, Royal Military College of Canada; Mark W. Bruner, Nipissing University</i>   |
| 48 | <b>Using trending norm messages to affect on-campus movement intentions: Examining mind-body beliefs as a moderator</b><br><i>Bailey Gitzel, University of Saskatchewan; Ami Klinger, University of Saskatchewan; Lauren Hinz, University of Saskatchewan; Kevin S. Spink, University of Saskatchewan</i>  |
| 49 | <b>Using Music to Facilitate Group Dynamics Among College Soccer Players</b><br><i>Tristan Loria, Washington State University; Sadie Chamberlain, Washington State University; Paul Kimbrough, Washington State University; Alex Gang, Washington State University</i>   |
| 50 | <b>A scoping review of athlete maltreatment in sport: Conceptualisations, methodologies, and research gaps</b><br><i>Michael P. Jorgensen, University of Toronto; David M. Brown, University of Toronto; Amy E. Nesbitt, University of Toronto; Isabella L. Tremonte, University of Toronto; El Zahraa Majed, University of Toronto; Sasha Gollish, University of Toronto; Tara-Leigh F. McHugh, University of Calgary; Catherine M. Sabiston, University of Toronto</i> |
| 51 | <b>“A stronger sense of community than most people think”: Exploring barriers and facilitators to physical activity and the role of acculturation among international students at a mid-sized university in Northwestern Ontario</b><br><i>Corrie Marin, Lakehead University; Shreya Pradhan, Lakehead University; Veronica Giancola, Lakehead University; Amanda Boustead, Lakehead University; Erin S. Pearson, Lakehead University</i>                                |

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| 52 | <p><b>The effect of age on self-compassion &amp; self-criticism in elite women athletes and the potential influence of these factors on perceived sport performance</b></p> <p><i>Margo Adam, University of Alberta; Alexandra Black, University of Alberta</i></p>  |
| 53 | <p><b>Colour and sport and body, oh my!: Using a modified Stroop task to explore body surveillance, body image, and attention bias among athletes</b></p> <p><i>Delaney Thibodeau, University of Toronto; Catherine Sabiston, University of Toronto; Michael Atkinson, University of Toronto</i></p>   |
| 54 | <p><b>Integrating Perspectives: Developing a Dance-Based Rehabilitation Approach for persons living with Acquired Brain Injury</b></p> <p><i>Abby M. Gooch, University of Manitoba; Jacqueline C. Ladwig, University of Manitoba; Sara Schur, University of Manitoba; Jennifer Salter, Riverview Health Centre, University of Manitoba; Cheryl M. Glazebrook, University of Manitoba</i></p>                     |
| 55 | <p><b>No One-Size-Fits-All: Exploring the Meaning of Body Diversity in Girls' Sports</b></p> <p><i>Chelsi Ricketts, University of Toronto; Vanessa Coulbeck, University of Toronto; Kristen M. Lucibello, Western University; Catherine M. Sabiston, University of Toronto</i></p>   |
| 56 | <p><b>Identifying the Conceptual Attributes of Physical Activity Maintenance Among Adults with Physical Disability: Preliminary 6-Month Results</b></p> <p><i>Tayah M. Liska, McGill University; Lauren Tozer, Ability New Brunswick; M. Blair Evans, Western University; Kathleen A. Martin Ginis, University of British Columbia; Jenna C. Gibbs, McGill University; Shane N. Sweet, McGill University</i></p> |
| 57 | <p><b>Body Image and Physical Activity in Older Adult Vietnamese Women</b></p> <p><i>Meghan McDonough, University of Calgary; Elisa Nguyen, University of Calgary</i></p>  |
| 58 | <p><b>Women's Futsal, Equity and Justice: Is Sport Equitable or Simply Reinforcing a Gendered Culture?</b></p> <p><i>Fernando Santos, Instituto Politécnico do Porto; Júlia Barreira, Universidade Estadual de Campinas; Marta Ferreira, Instituto Politécnico do Porto; Ana Carvalho, Instituto Politécnico do Porto; Keith Davids, Sheffield Hallam University</i></p>   |
| 59 | <p><b>Age-ordered shirt numbering in youth ice hockey: Mitigating relative age effects?</b></p> <p><i>Jess Dixon, University of Windsor; Abigail Scott, University of Windsor; Kristy Smith, University of Windsor; Sean Horton, University of Windsor;</i></p>  |

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|    | <i>Laura Chittle, University of Windsor; Joe Baker, University of Toronto; Nick Wattie, Ontario Tech University</i>  |
| 60 | <b>Goaltenders Under Pressure: Examining Sixth Shooter Outcomes in National Hockey League Shootouts</b><br><i>Cedric Ralph, Saint Mary's University; Ryan Hamilton, University of New Brunswick</i>  |
| 61 | <b>Exploring Physical Activity as a Moderator of Appearance-Related Emotions and Mental Health</b><br><i>Samira Sunderji, University of Toronto; Madison Vani, University of Toronto; Kristen Lucibello, Western University; Catherine Sabiston, University of Toronto</i>   |
| 62 | <b>Weight Stigma and Exercise Self-efficacy During Pregnancy: Experiences within Physical Activity Settings</b><br><i>Taranjot Dhillon, Brock University; Kirina Angrish Dandora, Brock University; Taniya Nagpal, University of Alberta</i>   |
| 63 | <b>Exploring parents' expectations of coaches in youth sport through the lens of concerted cultivation</b><br><i>Stephanie L. K. Fuller, Utah State University; Jordan A. Blazo, Louisiana Tech University; Travis E. Dorsch, Utah State University; Shannon R. Pynn, Utah State University</i>  |
| 64 | <b>Does Varsity Status and Campus Size Impact Mental Health Awareness and Perceived Institutional Support?</b><br><i>Quinten Carfagnini, Brock University</i>  |
| 65 | <b>Exploring athletes' experiences in a community-based high performance sport education program: What program features facilitate and challenge athletes' positive experiences and outcomes?</b><br><i>Nathan Ofori, York University; Joe Baker, University of Toronto; Nick Wattie, Ontario Tech University; Jennifer Leo, University of Alberta; Jessica Fraser-Thomas, York University</i> |
| 66 | <b>A Self-Compassion Intervention for Self-Identified Girls in Youth Sport: Preliminary Outcomes</b><br><i>Danielle Cormier, University of Alberta; Amber D. Mosewich, University of Alberta</i>   |
| 67 | <b>Cross-Lagged Associations Between Social Support and Physical Activity in Older Adults: Understanding Direction of Effects</b><br><i>Sarah Stephen, University of Calgary; Meghan McDonough, University of Calgary; Chantelle Zimmer, University of Calgary</i>   |



| <b>Friday October 3<sup>rd</sup> 3:45 – 5:15 PM</b><br><b>Session 3A: Well-Being During Sport &amp; Exercise</b><br><b>Location: Ash</b><br><b>Moderator: Kelly Arbour-Nicitopoulos</b> |   |
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| 3:45 – 4:00   | <b>Effects of the Together for Us (T4Us) Intervention on Team Identification, Moral Behaviour, and Mental Health in Youth Competitive Soccer Teams: A Cluster RCT</b><br><i>Meredith Schertzing, Nipissing University; Colin D. McLaren, Cape Breton University; Katrien Fransen, KU Leuven; Ian D. Boardley, University of Birmingham; Luc J. Martin, Queen's University; Stewart Vella, University of Wollongong; Richard B. Slatcher, University of Georgia; Rebecca Misiasz, Nipissing University; Cassidy Brooks, Nipissing University; Sophia Milner, Nipissing University; Justin M. Carré, Nipissing University; Mark W. Bruner, Nipissing University</i> |
| 4:00 – 4:15   | <b>Small Screens, Big Stages: (Re)storying Ballet Traditions on #BalletTok</b><br><i>Regan Sarah Irene Thompson, The University of British Columbia; Erica Valérie Bennett, The University of British Columbia; Moss Edward Norman, The University of British Columbia; Francesca Cavallerio, Anglia Ruskin University</i>  |
| 4:15 – 4:30   | <b>A Season Long Examination of Organizational Citizenship Behaviours, Well-Being, and Subjective Performance in Professional Women Football Players</b><br><i>Kaitlin N. Fortier, Queen's University; Jake D. Pavicic, Western University; Alex J. Benson, Western University; Manon Eluère, Université Grenoble Alpes; Jean-Philippe Heuzé, Université Grenoble Alpes; Stuart G. Wilson, Queen's University; Luc J. Martin, Queen's University</i>  |
| 4:30 – 4:45   | <b>Navigating Early Menarche: Experiences of Young Women in Competitive Dance</b><br><i>Alysha Ambrosio, University of Alberta; Margo Adam, University of Alberta</i>   |
| 4:45 – 5:00   | <b>"A Different Standard of Perfect": Racialized Athletes' Experiences of Perfectionism in Post-Secondary Sport</b><br><i>J'mi Worthen, University of Toronto; Katherine Tamminen, University of Toronto; Andrew Hill, York St. John University; Janelle Joseph, Brock University; Gretchen Kerr, University of Toronto</i>   |



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| 5:00 – 5:15 | <b>Clustering Suicidality in Canadian Student-Athletes: The Impact of Psychological Stress, Social Connection, and Identity</b><br><i>Burgandy Thiessen, Brock University; Philip Sullivan, Brock University</i> |
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| <b>Friday October 3<sup>rd</sup> 3:45 – 5:15 PM</b><br><b>Session 3B: Coaching, Teaching, &amp; Leadership</b><br><b>Location: Aspen</b><br><b>Moderator: Janet Lawson</b> |  |
| 3:45 – 4:00  | <b>Between the classroom and the court: A scoping review on the teacher-coach role conflict and its implications on teaching</b><br><i>Juliana LeBlanc, Acadia University; Maggie Neilson, Acadia University; Matthew Vierimaa, Acadia University</i>  |
| 4:00 – 4:15  | <b>Facing the Unknown: Coaches' Experiences of Uncertainty in Daily Practice</b><br><i>Isabelle Fortin-Delisle, Université du Québec en Outaouais; François Rodrigue, Université du Québec en Outaouais</i>  |
| 4:15 – 4:30  | <b>"The shit I had to take because I'm the first one": High-performance coaches experiences of pregnancy and parenting</b><br><i>Ariel J. Dimler, University of Calgary; Helene Jørgensen, University of Calgary; Margie H. Davenport, University of Alberta; David J. Hancock, Memorial University of Newfoundland; Katie Kavic, University of Alberta; Tara-Leigh F. McHugh, University of Calgary</i> |
| 4:30 – 4:45  | <b>Do men and women lead differently? Perspectives of sex and gender differences in sport leadership, within high-performance women's ice hockey</b><br><i>Daniel Church, York University; Jessica Fraser-Thomas, York University</i>  |
| 4:45 – 5:00  | <b>Implementing Their Coaching Philosophies: Youth Sport Coaches' Orchestrating Processes</b><br><i>Manal Beydoun, York University; Manal Beydoun, York University; Jessica Fraser-Thomas, York University</i>   |
| 5:00 – 5:15  | <b>Teaching Towards Meaningful Physical Education: An Autoethnography</b><br><i>Autumn Nesdoly, University of Calgary; Douglas Gleddie, University of Alberta; Tim Fletcher, Brock University; Tara-Leigh McHugh, University of Calgary</i>  |



| <b>Friday October 3<sup>rd</sup> 3:45 – 5:15 PM</b><br><b>Session 3C: Cognition &amp; Joint Action</b><br><b>Location: Cedar</b><br><b>Moderator: Michael Wang</b> |  |
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| 3:45 – 4:00  | <b>Pick, Plan, Attend: Cognitive contributions to visuomotor adaptation</b><br><i>Darrin O. Wijeyaratnam, University of Ottawa; Erin K. Cressman, University of Ottawa</i>   |
| 4:00 – 4:15  | <b>When Memory Fights Back: Implicit Interference Persists Despite Temporal Spacing</b><br><i>Aarohi Pathak, University of Toronto; Aarohi Pathak, University of Toronto; Tim Welsh, University of Toronto</i>   |
| 4:15 – 4:30  | <b>Involuntary Feedback Responses Reflect a Representation of a Partner During Jointly Coordinated Actions</b><br><i>Seth Sullivan, University of Delaware; John H. Buggeln, University of Delaware; Jan A. Calalo, University of Delaware; Truc T. Ngo, University of Delaware; Jennifer Semrau, University of Delaware; Michael J. Carter, McMaster University; Joshua G. A. Cashaback, University of Delaware</i> |
| 4:30 – 4:45  | <b>Interference effects in a dual-task paradigm reveal that imagining joint action is more cognitively demanding than imagining individual action</b><br><i>Molly Brillinger, University of Toronto; Timothy N. Welsh, University of Toronto</i>   |
| 4:45 – 5:00  | <b>Effects of Response Effector and Body Posture on Attention in 3D Space</b><br><i>Noah Britt, McMaster University; Jim Lyons, McMaster University; Hong-jin Sun, McMaster University</i>   |
| 5:00 – 5:15  | <b>The Effects of Music Listening on Motor Skill Learning</b><br><i>Anthonia O. Aina, University of Toronto; Joyce L. Chen, University of Toronto</i>  |



**SATURDAY October 4<sup>th</sup>**

**Saturday October 4<sup>th</sup> 8:30 – 9:45 AM**

**Session 4A: Rebuilding Bridges: Bringing Sport Psychology and Motor Learning and Control Back Together (Symposium)**

**Location: Ash**

**Moderator: Lori Dithurbide**

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| Lead Presentation | <b>Rebuilding Bridges: Bringing Sport Psychology and Motor Learning and Control Back Together</b><br><i>Lori Dithurbide, Dalhousie University; Heather Neyedli, Dalhousie University; Bradley Young, University of Ottawa; Joseph Baker, University of Toronto; Nicole Robak, University of Manitoba</i> |
| Presentation #1   | <b>Design Dilemmas: Examples from Coaching with Technology Research</b><br><i>Heather Neyedli, Dalhousie University; Bradley Young, University of Ottawa; Lori Dithurbide, Dalhousie University</i>  |
| Presentation #2   | <b>Advancing Ecological Validity in Sport Science: Insights from Curling and Olympic Weightlifting</b><br><i>Nicole Robak, University of Manitoba; Steven Passmore, University of Manitoba</i>   |
| Presentation #3   | <b>Science at the speed of sport: Improving the quality of applied research with elite sport systems</b><br><i>Joseph Baker, University of Toronto; Kathryn Johnston, University of Toronto; Nick Wattie, Ontario Tech University; Sam Robertson, Track Consulting Group</i>                             |

**Saturday October 4<sup>th</sup> 8:30 – 9:45 AM**

**Session 4B: Athletic Performance: Menstruation Eating Disorders & Injury Recovery**

**Location: Aspen**

**Moderator: Tara-Leigh McHugh**

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| 8:30 – 8:45 | <b>A Grounded Theory of Eating Disorder Recovery Among Athletes: Developing a Framework of Key People and Actions Involved in Athletes' Recovery and Reintegration into Sports</b><br><i>Olivia Feng, McGill University; Chelsea Murray, McGill University; Lindsay R. Duncan, McGill University</i> |
| 8:45 – 9:00 | <b>Coming of Age in Sport: Exploring Women Athletes' Early Menstrual Experiences</b><br><i>Grace Martina Spilchak, University of Alberta; Jimena Lopez Lamas, University of Alberta; Margo E.K. Adam, University of Alberta</i>  |





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| 9:00 – 9:15 | <b>“Oh boy, this is gonna be a roller coaster”: Parents’ stories of communication around menstruation and menarche in sport</b><br><i>Rylan Curtis, University of Toronto; Katherine Tamminen, University of Toronto; Miquel Torregrossa, Universitat Autònoma de Barcelona</i>   |
| 9:15 – 9:30 | <b>A scoping review of athlete menstruation</b><br><i>Margo Adam, University of Alberta; Danielle Cormier, University of Alberta</i>  |
| 9:30 – 9:45 | <b>Demographic and sport-related predictors of concussion history among Special Olympics athletes in Canada</b><br><i>Nikoleta Odorico, University of Toronto; Christina Ippolito, University of Toronto; Emily Bremer, Acadia University; Nick Reed, University of Toronto; Kelly Arbour-Nicitopoulos, University of Toronto</i> |

**Saturday October 4<sup>th</sup> 8:30 – 9:45 AM**

**Session 4C: Motor Control in Clinical/Special Populations**

**Location: Cedar**

**Moderator: Tristan Loria**

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| 8:30 – 8:45 | <b>“To Bind or Not to Bind”: Investigating Sense of Agency in Parkinson’s Disease Through Intentional Binding (Preliminary Findings)</b><br><i>Markus Lenizky, University of Toronto; Judith Bek, University College Dublin; Tim Welsh, University of Toronto</i>   |
| 8:45 – 9:00 | <b>Acute cannabis intoxication negatively impacts human reaching: A double-blinded, placebo-controlled crossover study on <math>\Delta 9</math>-tetrahydrocannabinol and cannabidiol</b><br><i>Quinn Malone, University of British Columbia; Paige V. Copeland, University of British Columbia; Hailey E. Tutt, University of British Columbia; Miyah K. Kailey, University of British Columbia; Brian H. Dalton, University of British Columbia; Chris J. McNeil, University of British Columbia</i> |
| 9:00 – 9:15 | <b>An oscillatory investigation of imagined action sequences in Parkinson’s Disease: Evidence for impairment and compensation</b><br><i>Kathryn J. M. Lambert, University of Alberta; Yvonne Y. Chen, University of Pennsylvania; Ada W. S. Leung, University of Alberta; Anthony Singhal, University of Alberta</i>  |
| 9:15 – 9:30 | <b>Vibrotactile Feedback Enhances Planning and Execution in Sequential Reaching Tasks Among Older Adults</b>  |





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|             | <i>Saba Mohammadlinezhad Kolahdouz, University of Manitoba; Quinn Malone, University of British Columbia; Steven R. Passmore, University of Manitoba; Jonathan J. Marotta, University of Manitoba; Cheryl M. Glazebrook, University of Manitoba</i> |
| 9:30 – 9:45 | <b>Investigating Individual Variability in the Brain's Response to Aerobic Exercise</b><br><i>Jess Gibson, Dalhousie University; Allison Murphy, Dalhousie University; Shaun Boe, Dalhousie University, University of Western Ontario</i>           |

**Saturday October 4<sup>th</sup> 10:00 – 11:00 AM**

**Session: Multidisciplinary Keynote**

**Location: Malpeque**

**Moderator: Lori Dithurbide**

Sara-Lynne Knockwood  
*Indigenous Sport: A Mi'kmaw experience*

**Saturday October 4<sup>th</sup> 11:15 – 12:05 PM**

**Combined Discipline Rapid Oral Presentations**

**Location: Malpeque**

**Moderator: Krista Munroe-Chandler**

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| 11:15 – 11:20 | <b>Not just a round of golf: The lived experiences of social and recreational inclusion for individuals with dementia</b><br><i>Kaitlyn Riddell, University of Calgary; Meghan H. McDonough, University of Calgary; Pamela Roach, University of Calgary; Chantelle Zimmer, University of Calgary; Cindy Barha, University of Calgary; Dallas Seitz, University of Calgary</i> |
| 11:20 – 11:25 | <b>Don't believe everything you see: Piloting the FLICC misinformation framework with fitness inspiration Instagram posts</b><br><i>Elaine M. Ori, Mount Royal University; Sean Locke, Brock University; Rafaelle Peñas, Mount Royal University; Skyla Dungey, Mount Royal University</i>   |
| 11:25 – 11:30 | <b>Developing a fNIRS-Neurofeedback Intervention for SMA Activation: A Proof-of-Concept Study</b><br><i>Christine Ausman, Dalhousie University; Diane MacKenzie, Dalhousie University; David Westwood, Dalhousie University; Shaun Boe, Western University; Tim Bardouille, Dalhousie University; Sarah Moore, Dalhousie University; Chelsey Hall,</i>                        |



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|               | <i>Acadia University; Cory Munroe, Dalhousie University; Heather Neyedli, Dalhousie University</i>   |
| 11:30 – 11:35 | <b>Peer Mentorship to Promote Physical Activity and Mental Health: A Systematic Literature Review</b><br><i>Johdeth Dela Cruz, York University; Larkin Lamarche, York University; Karl Erickson, York University; Rebecca Bassett-Gunter, York University</i>  |
| 11:35 – 11:40 | <b>Precrastination scales with task difficulty in a random dot motion task</b><br><i>Nour Al Afif, McMaster University; Mikayla Lalli, McMaster University; Michael Croteau, McMaster University; Kaylen Rathwell, McMaster University; Joshua G. A. Cashaback, University of Delaware; Michael J. Carter, McMaster University</i> |
| 11:40 – 11:45 | <b>Suicide Literacy in Canadian University Student-Athletes: Implementing the Talk Today Program</b><br><i>Joshua Celebre, Brock University; Philip Sullivan, Brock University</i>   |
| 11:45 – 11:50 | <b>How is Leadership Shared? SNA Insights into Athlete Leadership Distribution in Sport</b><br><i>Ashley Flemington, University of Windsor; Todd M. Loughhead, University of Windsor; Krista J. Munroe-Chandler, University of Windsor</i>   |
| 11:50 – 11:55 | <b>Examining Publicly Available Physical Activity Apps: Do The MARS and ABACUS Measure Up?</b><br><i>Elaine M. Ori, Mount Royal University; Courtney Baay, Alberta Health Services; Manuel Ester, University of Calgary</i>  |
| 11:55 – 12:00 | <b>Comparative Analysis of Postural Stability in Competitive Cross-Country Skiers and Non-Skiers</b><br><i>Melissa Chik, University of Ottawa; Lucas Michaud, University of Ottawa; Yves Lajoie, University of Ottawa</i>  |
| 12:00 – 12:15 | <b>Combined question period</b>  |

**Saturday October 4<sup>th</sup> 1:30 – 3:00 PM**

**Session: CARRON & WILBERG Distinguished Lectures**

**Location: Malpeque**

**Moderator: Dany MacDonald**

Brian Maraj, University of Alberta

*There's no place like home*

Joseph Baker, University of Toronto

*Nature, nurture, noise and nonsense: Unlocking the puzzle of exceptional achievement*



| <b>Saturday October 4<sup>th</sup> 3:15 – 4:15 PM</b><br><b>Session 5A: Practical Considerations for Exercise Interventions I</b><br><b>Location: Ash</b><br><b>Moderator: Elaine Ori</b> |   |
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| 3:15 – 3:30   | <b>Adolescent Voices in Physical Literacy: A Participatory Qualitative Study on Co-Designing Relevant Messaging</b><br><i>Charlotte Grace Grant, University of Victoria; Jean Buckler, University of Victoria; Braeden McKenzie, University of Victoria</i>   |
| 3:30 – 3:45   | <b>Enhancing instructor practice: Exploring fitness professionals' use of social support strategies following a training program</b><br><i>Khadija Ahmad, University of Calgary; Vanessa Paglione, University of Calgary; Kaitlyn Riddell, University of Calgary; Bobbie-Ann Craig, University of Calgary; Meghan H. McDonough, University of Calgary; Chloé Drapeau, Université de Montréal; Kristen M. Lucibello, University of Toronto; Corentin Montiel, Université de Montréal; Regan Thompson, The University of British Columbia; Samira Sunderji, University of Toronto; Erica Bennett, The University of British Columbia; Isabelle Doré, Université de Montréal; Catherine M. Sabiston, University of Toronto; S. Nicole Culos-Reed, University of Calgary; Cari Din, University of Calgary</i> |
| 3:45 – 4:00   | <b>Beyond the Binary: Reimagining 2SLGBTQI+ Inclusion in Postsecondary Physical Activity Programming</b><br><i>Carmen Golnaraghi, University of British Columbia; Naomi Maldonado-Rodriguez, The University of British Columbia; Benjamin A. Hives, The University of British Columbia; Kay Anderson, The University of British Columbia; Eli Puterman, The University of British Columbia; Erica Bennett, The University of British Columbia</i>   |
| 4:00 – 4:15   | <b>The timing and consistency of physical activity during adolescence predict positive mental health in early adulthood</b><br><i>Pierre Philippe Wilson Registe, Université de Sherbrooke; Salma Jemaa, Université de Sherbrooke; Said Mekari, Université de Sherbrooke; Mathieu Bélanger, Université de Sherbrooke</i>  |



| <b>Saturday October 4<sup>th</sup> 3:15 – 4:15 PM</b><br><b>Session 5B: Self-Compassion in Sport</b><br><b>Location: Aspen</b><br><b>Moderator: Leah Ferguson</b> |  |
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| 3:15 – 3:30   | <b>Exploring the self-compassion intervention preferences of athletes with intersecting and unfolding identities: Considering sport context</b><br><i>Lucie Blackburn, University of Saskatchewan; Kirstyn Robertson, University of Saskatchewan; Kianna Cadman, University of Saskatchewan; Paige Willems, University of Saskatchewan; Kent Kowalski, University of Saskatchewan</i>  |
| 3:30 – 3:45   | <b>Compassion in Motion: A Pilot Study of an Embodied Self-Compassion Intervention in a Movement-Based Learning Environment</b><br><i>Jimena Elena Lopez Lamas, University of Alberta; Paula Mazur, University of Alberta; Danielle Cormier, University of Alberta; Emily Noton, University of Alberta; Amber Mosewich, University of Alberta</i>  |
| 3:45 – 4:00   | <b>Fierce self-compassion: An exploration of athlete perceptions</b><br><i>Abimbola Eke, University of Toronto; Danielle C. Cormier, University of Alberta; Karissa J. Johnson, University of Saskatchewan; Jimena E. Lopez Lamas, University of Alberta; Ben J. Sereda, University of Alberta; Paula M. Mazur, University of Alberta; Ryan G. Beatson, University of Saskatchewan; Craig Hordal, University of Alberta; Brea McLaughlin, University of Alberta; Tarun Thamilselvan, University of Alberta; Grace Spilchak, University of Alberta; Margo E. K. Adam, University of Alberta; Kent C. Kowalski, University of Saskatchewan; Amber D. Mosewich, University of Alberta; Leah J. Ferguson, University of Saskatchewan</i> |
| 4:00 – 4:15   | <b>“My Toughest Opponent Was Myself”: Exploring Personality and Self-Compassion in Coping with Athlete Performance Slumps</b><br><i>Katelyn Forner, McGill University; Lindsay R. Duncan, McGill University</i>  |



| <b>Saturday October 4<sup>th</sup> 3:15 – 4:15 PM</b><br><b>Session 5C: Motor Planning in Applied Skills</b><br><b>Location: Cedar</b><br><b>Moderator: Maxime Trempe</b> |  |
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| 3:15 – 3:30   | <b>The Influence of Experience on the Sensory Contributions Needed for Piano Learning</b><br><i>Kate Moses, Queen's University; Liam Morassut, Queen's University; Sadiya Abdulrabba, Queen's University; Gerome Manson, Queen's University</i>  |
| 3:30 – 3:45   | <b>Effect of Batting Practice in Virtual Reality on Swinging Decision in Baseball Players</b><br><i>Fabian Alberto Romero Clavijo, Bishop's University, INS Québec; Thomas Romeas, Institut national du sport du Québec, Université de Montréal, York University.; Zachary Besler, Langara College; Maxime Trempe, Bishop's University</i>   |
| 3:45 – 4:00   | <b>Fore-getting the Risk: Golfers do not select an optimal shot endpoint when hazards are present</b><br><i>Sophie Inkoen, Dalhousie University; Ashton Sheeves, Dalhousie University; Conrad Von Palleske, Dalhousie University; Stephan Zahno, Universität Bern; Bradley Young, University of Ottawa; Lori Dithurbide, Dalhousie University; Heather Neyedli, Dalhousie University</i> |
| 4:00 – 4:15   | <b>Reduced Muscle Activity and Co-Contraction in Cross-Country Skiers Compared to Non-Skiers During a Challenging Postural Task</b><br><i>Lucas Michaud, University of Ottawa; Melissa Chik, University of Ottawa; Yves Lajoie, University of Ottawa</i>   |



| <b>Saturday October 4<sup>th</sup> 4:20 – 5:20 PM</b><br><b>Session 6A: Practical Considerations for Exercise Interventions II</b><br><b>Location: Ash</b><br><b>Moderator: Meghan McDonough</b> |  |
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| 4:20 – 4:35  | <b>Implementation of social support in physical activity: Observations of social support strategy use by fitness professionals</b><br><i>Bobbie-Ann P. Craig, University of Calgary; Ella C. Blanke, University of Calgary; Vanessa Paglione, University of Calgary; Kaitlyn Riddell, University of Calgary; Meghan McDonough, University of Calgary; Isabelle Doré, Université de Montréal; Catherine Sabiston, University of Toronto; Erica Bennett, University of British Columbia; S. Nicole Culos-Reed, University of Calgary; Cari Din, University of Calgary; Jennifer Hewson, University of Calgary; Sarah J. Kenny, University of Calgary; Stephanie Won, Recreation and Social Programs, City of Calgary; Chantelle Zimmer, University of Calgary; Ann Toohey, University of Calgary; Krista White, University Heights Dance Program; Amanda Wurz, University of the Fraser Valley</i> |
| 4:35 – 4:50  | <b>Equity Considerations in the Implementation of Active Transportation Interventions Across Canada</b><br><i>Owen Juan, Queen's University; Sofia Georgopoulos, Queen's University; Kaitlyn Kauffeldt, Queen's University; Martine Shareck, Université de Sherbrooke; Scott Bell, University of Saskatchewan; Patricia Collins, Queen's University; Ehab Diab, University of Saskatchewan; Ugo Lachapelle, Université du Québec à Montréal; Kevin Manaugh, McGill University; Marie-Ève Couture-Ménard, Université de Sherbrooke; Meghan Winters, Simon Fraser University; Daniel Fuller, University of Saskatchewan; Marie-Soleil Cloutier, Institut national de la recherche scientifique, Centre Urbanisation Culture Société; Karen Laberee, Simon Fraser University; Jennifer R. Tomasone, Queen's University</i>  |
| 4:50 – 5:05  | <b>Identifying contextual factors and mechanisms of effective physical activity interventions for children and youth with disabilities: A realist review</b><br><i>Katerina Disimino, York University; LaMarsh Centre for Child and Youth Research; Canadian Disability Participation Project; Amanda Doherty-Kirby, Canadian Disability Participation Project; Maeghan E. James, Children's Hospital of Eastern Ontario Research Institute; Canadian Disability Participation Project; Rebecca L. Bassett-Gunter, York University; LaMarsh Centre for Child and Youth Research; Canadian Disability Participation Project; Suzanne Deliscar, Canadian Disability Participation Project; Kelly P. Arbour-Nicitopoulos, University of Toronto;</i>  |



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|             | <i>Canadian Disability Participation Project; The Family Engagement Research Tea; Canadian Disability Participation Project</i>   |
| 5:05 – 5:20 | <b>Developing an evidence- and expert-informed disability-specific competency-based framework for qualified exercise professionals: Lessons learned from working in partnership</b><br><i>Alexandra J. Walters, The University of British Columbia; Jennifer R. Tomasone, Queen's University; Amy E. Latimer-Cheung, Queen's University</i> |

**Saturday October 4<sup>th</sup> 4:20 – 5:20 PM**

**Session 6B: Athlete Perceptions & Emotions**

**Location: Aspen**

**Moderator: Sebastian Harenberg**

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| 4:20 – 4:35 | <b>The power and limits of youth sport to motivate the athlete to official transition</b><br><i>Maria Luisa Pereira Vargas, Memorial University of Newfoundland; Erin Teschuk, University of Ottawa; Matthew Vierimaa, Acadia University; Karl Erickson, York University; David Hancock, Memorial University of Newfoundland</i> |
| 4:35 – 4:50 | <b>"It was family, religion, and then it was sports": The role of family emotional climate on collegiate athletes' emotional experiences in sport</b><br><i>Shannon R. Pynn, Utah State University; Jared Vance, Utah State University; Daisy Owens, Utah State University</i>   |
| 4:50 – 5:05 | <b>Why do athletes avoid savouring milestones in sport? Evidence for the reminiscing-is-debilitating belief</b><br><i>Ben Schellenberg, University of Manitoba; Jérémie Verner-Filion, Université du Québec en Outaouais; Patrick Gaudreau, University of Ottawa</i>   |
| 5:05 – 5:20 | <b>Something bigger than yourself: The influence of sport on body-image perceptions and identity among U-Sports football linemen</b><br><i>Tristan Murray, University of Manitoba; Chris Shields, Acadia University</i>  |



| <b>Saturday October 4<sup>th</sup> 4:20 – 5:20 PM</b><br><b>Session 6C: Reaching &amp; Decisions</b><br><b>Location: Cedar</b><br><b>Moderator: Heather Neyedli</b> |   |
|---|---|
| 4:20 – 4:35   | <b>Grasping Under Target Uncertainty</b><br><i>Kevin LeBlanc, Dalhousie University; Anne Lacroix, Dalhousie University; Jada Benwell, Dalhousie University; Brett Feltmate, Dalhousie University; Heather Neyedli, Dalhousie University</i>   |
| 4:35 – 4:50   | <b>“Blink and You’ll Miss It”: Visual Hand Feedback Reveals When the Vergence-Accommodation Conflict Disrupts Aiming in VR</b><br><i>Timothy Welsh, University of Toronto; Xiaoye Michael Wang, University of Toronto; Luc Tremblay, University of Toronto; Gavin Lawrence, Bangor University; Catherine Sabiston, University of Toronto; Damian Manzone, University of Toronto</i> |
| 4:50 – 5:05   | <b>Does self-declared handedness apply to online limb-target regulation processes?</b><br><i>Gabriela Oancea, University of Toronto; Sara A. Thompson, University of Toronto; Luc Tremblay, University of Toronto</i>   |
| 5:05 – 5:20   | <b>A new theory of decision deliberation as a controllable process</b><br><i>Jan Calalo, University of Delaware; Seth Sullivan, University of Delaware; Truc Ngo, University of Delaware; John Buggeln, University of Delaware; Michael J Carter, McMaster University; Isaac Kurtzer, New York Institute of Technology; Joshua G. A. Cashaback, University of Delaware</i>          |





### Detailed Abstracts

Thursday October 2<sup>nd</sup>

#### Poster Session #1 (Oct 2<sup>nd</sup>, 7:15-8:15 PM)

##### **1. Understanding concussion knowledge and experiences among Special Olympics Canada athletes and coaches**

*William Dauphinee, Acadia University; Christina Ippolito, University of Toronto; Nick Reed, University of Toronto; Kelly Arbour-Nicitopoulos, University of Toronto; Emily Bremer, Acadia University*

Background: Assessing and managing concussions for athletes with intellectual and developmental disabilities (IDs) is complex. These athletes often have higher rates of unreported concussions, poor concussion management and misdiagnosis. These errors are often attributed to the difficulties presented in the management of concussions among athletes with IDs due to varying baseline cognitive abilities. Purpose: Explore the lived concussion experience of Special Olympic Canada (SOC) athletes and coaches to understand the gaps and inform concussion practices for SOC athletes. Methods: Four focus groups (two with coaches, two with athletes) were held (three virtual, one in-person) to understand participants' concussion knowledge, access to information, and concussion experience. Focus group transcripts underwent inductive thematic analysis. Results: This study included 18 athletes and 11 coaches representing 21 sports from across 8 provinces/territories. Three main themes were identified and included: 1) Current State of Concussion Knowledge: Coaches and athletes demonstrated inconsistent baseline knowledge of concussion symptoms and management; 2) Concussion Injury Experiences of SOC Athletes: Falls were identified as the most common mechanism of injury and the symptoms reported were similar to those experienced by neurotypical athletes; and, 3) Concussion Management Practices: There was no consistent return-to-sport protocol used, and symptoms were often neglected by both coaches and athletes. Discussion: This research highlights the need for investment into better concussion education and awareness for athletes and coaches participating in SOC to narrow the concussion gaps.

##### **2. Building a Strong Base: Examining the Efficacy of LEGO as a Visuomotor Learning Tool**

*Nolan Dereski, MSc Kinesiology, Wilfrid Laurier University - Dr. Pamela Bryden; Pamela Bryden, Professor, PhD, Present Chair of Kinesiology Dept. Wilfrid Laurier University*

Neurodevelopmental disorders (NDDs) are conditions that can alter an individual's autonomy and quality of life. A study by De Bruin et al. (2016) used LEGO as a measurement tool assessing spatial visualization and mental rotation by measuring the time and accuracy in replicating a LEGO model. As youth with NDDs struggle with visuomotor integration (Carames et al., (2022), the purpose of the current research was to determine whether LEGO building blocks can serve as a visuomotor learning tool in neurodivergent populations to improve fine motor coordination and integration of visual and motor skills. Seven neurodivergent youth



between the ages of 7-to-14 were recruited and sent home with a novel LEGO set each week for approximately eight weeks. A timed building task, Beery VMI test, and the TGMD-3 were performed pre- and post-LEGO to determine improvement. Results showed that there was only notable improvement in the timed building task, being closely related to LEGO itself. There were mixed results with the Beery VMI test while the TGMD-3 appeared to have little relation to the LEGO intervention. In the future, a larger sample size as well as a neurotypical comparison should be implemented. Questionnaire data points to a few confounding factors and trends including symptom severity and diagnoses, as well as developmental stage (age), all of which will be discussed.

### **3.Mouthful Misjudgements: How Exercise Alters Internal Volume Estimation**

*Cassie Chan, University of Toronto; Luc Tremblay, University of Toronto; April Karlinsky, California State University San Bernardino; Merryn Constable, Northumbria University; Catherine M. Sabiston, University of Toronto; Tim Welsh, University of Toronto*

An individual's perceived ability to act is mediated by internal body-related and environmental factors. During tasks where relevant body parts are not visible, individuals mainly rely on subjective self-perceptions influenced by anthropometric factors and energy states such as fatigue that has shown to alter perceived affordances (e.g., distance or hill slope). This study builds on evidence that physical fatigue affects perception in body-related tasks by manipulating energy states on individuals' ability to estimate their oral volume capacity. Participants (N=21) were divided between two experimental groups who completed a 10-minute stationary cycling task at a High or Low rate. The High-fatigue group biked at the equivalent of 85% of their maximal heart rate (i.e., 220-age), while the Low-fatigue group biked at 50%. The Borg Rating of Perceived Exertion (RPE) Scale, ranging from 6-20, was used to determine participants' subjective effort levels. To assess the impact of exercise-induced fatigue on perceived oral cavity volume, participants poured into a cup the amount of water they believed they could maximally hold in their mouth. Findings indicate that the High group had a significant increase ( $p < .05$ ) in their estimations of oral volume from before to after exercise, whereas the Low group showed no significant change ( $p > .05$ ). As estimates were already inflated before exercising, the High group further exaggerated perceived mouth volumes afterward. These results suggest that bouts of physical exertion can distort internal capacity judgements, possibly due to increased thirst or reduced accuracy in sensing internal bodily limits.

### **4.Influence of Sex and Body Fat on Motor Thresholds During Transcutaneous Spinal Stimulation**

*Jermyl Allen Acuzar, Queen's University; Zoe Horlick, Queen's University; Gerome Manson, Queen's University*

Transcutaneous spinal stimulation (TSS) is a non-invasive neuromodulation technique that activates spinal and supraspinal sensorimotor pathways, supporting functional recovery from motor impairments. Although TSS has tremendous clinical potential, the influence of anatomical and physiological differences, such as sex and body fat percentage, on evoked



muscle responses, particularly motor thresholds, remains unclear. This study investigated the effect of sex and body fat percentage on lower limb motor thresholds elicited by TSS in healthy adults. Seven neurologically healthy adults (4F, 3M;  $23.6 \pm 4.7$  years; body fat:  $28.9 \pm 7.5\%$ ) received TSS. The cathode was positioned between the L1–L2 vertebrae, with stimulation intensities ranging from 10–190 mA. Electromyography (EMG) electrodes were placed over the rectus femoris, biceps femoris, tibialis anterior, medial gastrocnemius, and soleus muscles to measure motor thresholds. Body fat percentage was estimated via skinfold measurements using the Durnin-Womersley equation. A negligible correlation was observed between body fat percentage and motor threshold across all participants ( $R = 0.0014$ ). However, subscapular skinfold thickness showed a strong positive correlation with motor threshold ( $R = 0.6999$ ). Sex-specific analysis revealed a negligible relationship for females ( $R = 0.0061$ ), whereas males showed a strong positive correlation between body fat percentage and motor threshold ( $R = 0.9511$ ). These findings suggest that sex and localized adiposity, particularly subscapular fat, can influence the stimulation intensity required to elicit motor responses with TSS. Considering individual anatomical differences may enhance personalized stimulation protocols and aid in establishing normative data for clinical comparisons in populations with neurological disorders.

#### **5.A Single Bout of Low “Density” Exercise Optimizes a Post-exercise Executive Function Benefit**

*Antonio Mendes, Western University; Grace Gall, Western University; Jianchun Yin, Shanghai Normal University; Matthew Heath, Western University*

An extensive literature reports that a single bout of exercise provides a post-exercise executive function (EF) benefit. The majority of this work has focused on identifying the exercise type (e.g., aerobic vs. resistance) and/or duration that optimizes an EF benefit; however, limited work has examined whether the distribution of work-to-rest (i.e., density) impacts the EF benefit. The issue of exercise density is salient because it provides a framework to understand the physiological “supply and demand” mechanisms supporting transient and long-term EF changes. Here, healthy young adults ( $N=25$ ) completed a non-exercise control condition and conditions involving ten 1-min intervals of metronome-paced leg extensions interspersed with 1- (high-density: HD) and 2-min (low-density: LD) rest intervals. For all conditions, transcranial Doppler ultrasound measured middle cerebral artery velocity (MCAv) to estimate cerebral blood flow (CBF), and EF was assessed pre- and immediately post-intervention via the antisaccade task (saccade mirror-symmetrical to an exogenous target). Results showed that HD and LD conditions elicited comparable and elevated baseline to work interval increases in MCAv ( $ps < .001$ ); however, only the LD condition yielded a significant reduction in post-intervention antisaccade RTs ( $p < .001$ ). Moreover, MCAv and antisaccade RT difference scores were not correlated across any experiential condition ( $ps > .20$ ), indicating that a post-exercise EF benefit is not directly tied to an increase in CBF. Accordingly, results suggest that exercise density moderates post-exercise EF improvements and that the issue of “density” may support developing individualized short- and long-term exercise interventions that benefit EF and brain health.



## **6. Deltoid Muscle Activity Adaptations to an Elastic Perturbation during Treadmill Walking**

*Michael MacLellan, University of Prince Edward Island; Tara Campbell, Memorial University of Newfoundland; Brian Horslen, University of Waterloo*

The anterior (ADELT) and posterior (PDELT) deltoid muscles present a stereotypical activation pattern during upright walking and primarily function to dampen arm swing. If this damping activity is based on online sensory feedback, applying a force perturbation should lead to immediate adaptations that do not persist when the force is removed. If the muscle activity is preprogrammed based on past experiences of arm mechanics, we would expect a gradual adaptation in response to a force field, and persistent activity changes once the force is removed. The current study investigated the responses of the deltoid muscles to a posterior elastic perturbation at the right wrist during treadmill walking in order to explore the motor control mechanisms governing arm swing. Thirteen healthy young adults walked on a treadmill for a baseline walking condition for 2 minutes, followed by 10 minutes of perturbed walking adaptation, finishing with 5 minutes of unperturbed walking readaptation. Previous results indicated that range of motion of the perturbed arm did not change during the adaptation period. During the perturbation, ADELT activation acted to accelerate the arm forwards against the elastic force, while the PDELT activation decreased when the arm was decelerating forwards. Moreover, increased activation was present once the perturbation was removed to accelerate the arm backwards. In conclusion, the decreased activity in the PDELT during the perturbation supports the deceleration function of the deltoids during locomotion, and the increased ADELT activity following removal of the perturbation suggests a feedforward control mechanism to adapt to the elastic force.

## **7. The effectiveness of temporally patterned breaks on motor performance of a rhythmic task**

*Alexander Walker, Washington State University; Tristan Loria, Washington State University; Shikha Prashad, University of Texas at Arlington; Gracie Stockert, Washington State University; Gianna Bratcher, Washington State University; Jalen Hang, Washington State University; Gabriel McNichols, Washington State University; Samuel Song, Washington State University; Emma Ames, Washington State University; Chitnoop Sangera, Washington State University*

Optimizing practice schedules within rhythmic tasks remains underdeveloped. Fifty-nine participants practiced a rhythmic task wherein four fingers were used to depress keyboard keys in synchrony with sequential visual prompts paired with an auditory metronome. Participants were assigned to one of three groups. The unstructured break group took two-minute breaks between acquisition blocks. The patterned break group took two-minute breaks between acquisition blocks with the auditory metronome playing continuously to provide augmented feedback of the rhythmic aspect of the task. The no-breaks control group completed all acquisition trials in rapid succession (massed practice). The primary dependent variables were temporal error and temporal error variability. We hypothesized that both break groups would have lower temporal error and temporal error variability for each finger at the post-test vs. the control group. If providing augmented auditory feedback during breaks enhances the effectiveness of distributed practice, there may be lower temporal errors and temporal error variability in the post-test for the patterned vs. unstructured break groups. For temporal errors,



the middle, ring, and pinky finger improved from pre-test to post-test irrespective of group. Compared to the control group, the unstructured breaks group had lower middle and pinky finger temporal error variability. Middle, ring, and pinky finger temporal error variability was also lower in the unstructured breaks vs. the patterned breaks group. No differences were found between the control vs. the patterned breaks groups. These results suggest that taking short breaks may facilitate performance over augmented (patterned) and no-breaks when practicing a sequential rhythmic task.

#### **8.Pre-movement suppression of corticospinal excitability is time locked to an expected go-signal rather than movement initiation during a simple reaction time task**

*Meaghan Lapierre, University of Ottawa; Dana Maslovat, University of Ottawa; Anthony N Carlsen, University of Ottawa*

Previous studies have shown that corticospinal excitability (CSE) decreases during the foreperiod of a simple reaction time (RT) task, just prior to the go-signal. The underlying mechanism for this pre-movement suppression of CSE remains debated. Some researchers propose it may be related to movement preparation/suppression processes, while others argue it is tied to processes associated with movement initiation. To examine these possibilities, we used single-pulse transcranial magnetic stimulation (TMS) to probe CSE via motor-evoked potential (MEP) amplitude at various time points during the foreperiod of a simple RT task. On most trials (control trials, 86%), the duration of the foreperiod was fixed at 500ms, whereas on the remaining trials (delay trials), the foreperiod was extended by 500ms (i.e., 1000ms total) to introduce an unexpected delay. As expected, results showed that on control trials, MEP suppression occurred just prior to the actual movement. Critically, it was hypothesized that if CSE suppression is linked to movement initiation, MEP decreases would also be observed just prior to movement onset on delay trials. However, contrary to this prediction, on delay trials MEP suppression was time-locked to the expected (500ms), rather than the actual (1000ms), timing of the go-signal, and was sustained until movement onset. The temporal dissociation between MEP suppression and movement onset on delay trials suggests that pre-movement suppression may be more linked to movement preparation than movement initiation processes.

#### **9.Facilitatory Effects of Predictive Symbolic Cues Under Temporal Constraint in a Go-Before-You-Know Task**

*Kylie Cole, Dalhousie University; Brett Feltmate, Dalhousie University; Jennifer Swansburg, Dalhousie University; Heather F. Neyedli, Dalhousie University*

Previous research has shown that non-directional, predictive symbolic cues can influence reaching behavior in motor tasks, often producing inhibition of return (IOR)-like effects. However, facilitatory effects, commonly seen with traditional peripheral cues, have yet to be clearly observed in response to centrally presented symbolic cues. The present study aims to examine whether such cues can produce facilitatory effects under conditions of increased temporal constraint in a Go-Before-You-Know (GBYK) task. Participants initiated reaching movements toward one of two possible target locations following the presentation of one of



four predictive symbolic cues, before the true target location was revealed. The cues varied in their predictiveness, with two cues associated with a high likelihood (80%) of target appearance on either the left or right side, and two cues associated with a low likelihood (52.5 and 47.5%, respectively). A key amendment from the prior design was the introduction of a minimum velocity threshold that had to be met before the target appeared, reducing the likelihood of movement delay and promoting early commitment to a target side. Results showed that participants implicitly learned the associations between cue type and target location. They more frequently initiated reaches toward the predicted target side following high predictive cues compared to the low predictive cues. These results would suggest that under stricter task constraints, participants can utilize symbolic information strategically to enhance goal-directed behavior, providing new insights into how implicit cue learning influences motor planning.

### **10. Bimanual End-State Comfort in Children: Contributions of Hand and Object Constraints**

*Danielle Salters, University of Windsor; Sara Scharoun Benson, University of Windsor*

Second-order planning has been widely observed in young adults, while children have demonstrated inconsistent planning for the end-state comfort effect (ESC). ESC is a common indicator of second-order planning in object manipulation tasks, and has been detected in a variety of task designs: object transport, overturned tasks, and joint action tasks. It is not fully understood why some children unreliably display ESC compared to other children, and between variable tasks. The present study aimed to explore second-order planning in children through bimanual overturned cup tasks with children. Children ( $N = 70$ ; ages 6-11) performed four bimanual cup tasks, first with a standard cup size (6.7 cm diameter), and then their choice of cup size (4.7-8.4cm diameter). Four conditions were performed with both cups: 1) both upright (BU), 2) both overturned (BO), 3) right upright/left overturned (RULO), and 4) right overturned/left upright (ROLU). ESC grasps were coded and Poisson Regressions were run for all conditions. Across multiple tasks, age consistently predicted higher ESC performance ( $p < .05$ ; Standard Size BO, RULO, ROLU, Cup Choice BO, ROLU), with coefficients highlighting that older children demonstrated ESC more consistently. Despite hypotheses, hand size was not a significant predictor and no gender differences emerged. More frequent ESC was observed when all cups were in an upright position, regardless of cup size. Results highlight that the significant association with age suggests a developmental trend in bimanual control, and support the inconsistent performance of secondary-planning among children.

### **11. Tactile suppression is absent when a planned response is inhibited**

*Lana Khaddaj, University of Ottawa; Dana Maslovat, University of Ottawa; Anthony Carlsen, University of Ottawa*

The ability to detect tactile sensation is suppressed in a moving limb; however, the underlying mechanism for this effect is debated. A forward model explanation suggests that predictive processes attenuate peripheral sensation to better detect the limb's future sensory state. Alternatively, a backward masking account asserts that reafferent feedback masks weaker stimuli, making them harder to detect. To investigate whether a motor plan must be executed to induce suppression, the present study employed a tactile detection task during a stop-signal





reaction time paradigm. On stop trials, although a forward model is generated, the planned movement can be inhibited/cancelled given sufficient time. It was hypothesized that if tactile suppression is related to generation of the forward model, then suppression would be observed regardless of whether the movement was initiated or inhibited. Participants reacted to a visual go-signal by making a rapid wrist extension, but on 25% of trials a stop-signal was presented at a delay resulting in a 50% probability of successfully inhibiting the response. A near-threshold tactile stimulus was applied to the dorsum of the hand on each trial from 100 ms before to 100 ms after predicted movement onset, and participants were asked whether the stimulus was detected. Results showed that tactile suppression did not occur when the movement was successfully inhibited, even though a forward model was presumably generated. In contrast, suppression was present when the movement was executed on both go- and stop-trials. Collectively, these results are consistent with a backward masking account of tactile suppression.

## **12. Investigating the association between motor experience and neurophysiological markers of motor imagery ability**

*Sofia Knopf, The University of British Columbia; Anja-Xiaoxing Cui, The University of Vienna; Sarah Kraeutner, The University of British Columbia*

Motor imagery (MI) ability is an individual's capacity to mentally rehearse a movement, either by picturing (visual MI) or imagining the sensations associated with the movement (kinaesthetic MI). Research suggests an association between motor experience (e.g., sports, music-related training) and MI ability, measured via self-report questionnaires. To expand understanding of this association, we examined whether sport and music-related training influences corticospinal excitability (CSE) during MI, a neurophysiological marker of imagery ability. Participants (N = 20, right-handed) completed separate questionnaires to assess their sport and music-related training and performed two blocks of MI of a finger abduction task under two MI conditions (kinaesthetic, visual; order counterbalanced). Single pulse transcranial magnetic stimulation was delivered over contralateral motor cortex during MI and at rest. Amplitude of resultant motor evoked potentials (MEPs) used to index CSE. A linear regression was conducted on MEPs (normalized to rest) obtained during MI, with condition (kinaesthetic, visual), amount of formal sport and formal musical training as predictor variables. Preliminary results (N = 8, aged 27±12) suggest CSE was increased during MI (vs. rest) [Kinaesthetic:  $M(\text{normalized}) = 316 \pm 343 \mu\text{V}$ ; Visual:  $M(\text{normalized}) = 324 \pm 472 \mu\text{V}$ ]. No evidence of an association between sport or music-related training and CSE was found ( $R^2=0.21$ ,  $F(3,12)=1.05$ ,  $p=0.41$ ). Findings suggest neurophysiological markers of MI ability may be independent of motor experience. Future work will explore nuances related to type of motor experience (team vs. individual sport, musical engagement vs. training) towards understanding whether motor experience influences neurophysiological response to MI.

## **13. Sound Matters: Motor-Memory Coupling in Handwriting Across Auditory Conditions**

*Igor Serafini, SENMO LAB QUEENS UNIVERSITY; Obaida Al-Naib, SENMO LAB QUEENS UNIVERSITY; Gerome Manson, SENMO LAB QUEENS UNIVERSITY*



Amplifying real-time auditory feedback has been found to enhance movement fluidity during handwriting. Although this real-time feedback is beneficial for motor performance, it remains unclear if providing real-time feedback could also facilitate the recognition of words encoded with writing. The purpose of this study was to examine whether amplified sound feedback of handwriting facilitates recognition memory. Twelve neurologically healthy participants (aged 18–25) completed two experimental phases. Participants first watched an unfamiliar Arabic character being dynamically drawn for 5 seconds, then had 8 seconds to reproduce it from memory. This was repeated 36 times across three randomized conditions (12 per condition): natural auditory feedback, no feedback, and amplified feedback. A motion capture system tracked pencil-tip movement, and mean writing velocity was used as a measure of fluidity. Following each condition, participants completed a memory recognition test where recognition accuracy was assessed. A linear mixed-effects model revealed that natural auditory feedback produced higher recognition accuracy than amplified feedback. Crucially, we found a significant condition by velocity interaction, indicating a weaker speed-memory slope under natural sound compared to amplified sound. Taken together, our findings suggest that writing with natural sound facilitated memory performance. However, when writing with amplified sound, our results suggest that participants who produced more fluid movements had greater memory benefits. Future work should test adaptive auditory feedback protocols in rehabilitation settings to enhance both motor performance and memory retention.

#### **14.Changes in sensory precision with visuomotor adaptation**

*Emma Peters, University of Ottawa; Erin K. Cressman, University of Ottawa*

Visuomotor adaptation is accompanied by sensory changes, such that one's sense of felt hand position (i.e., proprioception) is shifted in the direction of the visual distortion. In addition to shifts in perceived hand position, recent work suggests that one's ability to localize their hand in space becomes more variable (i.e., less precise), at least when first training to reach with a visuomotor distortion. The current research looked to determine changes in precision of hand localization across visuomotor adaptation (i.e., early to late training), and in a retention interval. Participants trained to reach with cursor feedback that was rotated 40° clockwise relative to their hand motion. Throughout these training trials, participants completed a localization task in which they indicated when a visual cue was aligned with their hand position. Following a washout period of reaching with aligned cursor feedback, participants looked to re-adapt their reaches to the 40° cursor rotation and localize their hand. As seen previously, sense of hand position was immediately shifted clockwise in the direction of the altered cursor feedback during training and retention trials. Regarding precision of hand localization, hand estimates were less precise across reach training trials (i.e., early and late trials), and within the retention interval. Precision in hand localization only returned to baseline levels after the washout period. These results suggest that visuomotor adaptation leads to proprioceptive recalibration and reduces the precision with which one is able to localize their hand position. Key words: Proprioceptive recalibration, position sense, visuomotor adaptation, motor learning.





### **15. Investigating implicit sensorimotor adaptation in patients with multiple sclerosis**

*Eva Brison, Département de kinanthropologie, Faculté des sciences de l'activité physique, Université de Sherbrooke, Sherbrooke, Canada; Pierre-Michel Bernier, Département de kinanthropologie, Faculté des sciences de l'activité physique, Université de Sherbrooke, Sherbrooke, Canada*

Multiple sclerosis (MS) disrupts sensorimotor integration, causing diverse motor symptoms that vary between patients. Beyond motor control impairments, motor learning deficits have also been reported, with explicit components being particularly affected. It thus remains unclear whether implicit sensorimotor adaptation, the process through which motor commands are automatically adjusted in response to sensory prediction errors, is affected by MS. Given that sensorimotor adaptation is critical to practice-related functional reorganization and recovery, a better understanding of how it is altered in MS could help refine rehabilitation interventions. This study therefore aimed to examine the impact of MS on both motor performance and implicit sensorimotor adaptation. We used an intermittent visuomotor adaptation task (stochastic rotations of  $\pm 30^\circ$ ) and measured the post-rotation bias (PRB) in hand direction at peak velocity as a measure of implicit adaptation. PRB was compared between MS patients ( $n=21$ , 14 women,  $55 \pm 11$  years) and aged-matched healthy controls ( $n=21$ , 12 women,  $55 \pm 13$  years). Results revealed clear motor deficits in MS, with increased reaction time ( $p=.006$ ), increased movement time ( $p=.005$ ), and greater variability of hand trajectories at peak velocity ( $p=.014$ ), suggestive of noisier motor output. Strikingly, both groups presented robust implicit adaptation, with no difference whatsoever between MS patients and healthy controls (PRB:  $p=.979$  and  $p=.994$  for  $+30^\circ$  and  $-30^\circ$  perturbations, respectively). These results indicate that, in spite of impaired motor performance, the mechanisms that support implicit adaptation may be preserved in MS.

### **16. Reality check: How coaches perceive the effectiveness of virtual reality training**

*Maxime Trempe, Bishop's University; François Rodrigue, Université du Québec en Outaouais; Tavis Smith, Bishop's University; Arianna Koutrias, Bishop's University; Émilie Roy, Excellence Sportive Sherbrooke*

Sport coaches have long utilized video sessions to enhance athletes' decision-making skills. Traditionally, these sessions relied on fixed-screen modalities to display the videos (e.g., televisions, projectors, tablets). However, recent technological advancements have introduced more ecologically valid modalities, such as 360° videos (360°V) presented in a head mounted display. An increasing body of research supports the superiority of 360°V over traditional formats in training decision-making. Despite growing awareness of its existence and potential benefits, adoption of 360°V in regular coaching practice remains surprisingly limited. This study aimed to explore coaches' perceptions of 360°V to identify factors that facilitate or hinder its integration into training programs. Seven certified coaches from five different sports, who work with Tier 3 and Tier 4 athletes across Quebec, participated in one-on-one virtual semi-structured interviews, each lasting between 50 and 80 minutes. To be eligible, coaches were required to have prior experience incorporating 360°V into their coaching. Thematic analysis of interview transcripts revealed that coaches perceived 360°V as beneficial for enhancing tactical



decision-making and enabling safe skill development—particularly for injured athletes or when physical practice is not possible. Coaches also reported that athletes were receptive to this technology. However, barriers to sustained use included technological and technical complexity, time and human resources constraints, as well as selective resistance to innovation within sport organizations. To support broader implementation, sports scientists and practitioners should prioritize the development of user-friendly, sport-specific 360°V tools and advocate for institutional support to foster cultural acceptance and long-term integration.

### **17. Differences in gaze behavior between immersive 360° video and traditional fixed-screen video modalities**

*Maxime Trempe Trempe, Bishop's University; Eve Charbonneau, Université de la Réunion; Virginie Lévesque, Bishop's University; Anna Ba, Bishop's University; Thomas Romeas, Institut national du sport du Québec, Université de Montréal, York University*

Video-based training has long been used in sports to enhance athletes' perceptual-cognitive skills, such as decision-making and anticipation. Traditionally, these sessions have relied on various types of fixed screens (e.g., television screen, projectors, tablets, etc.) for the video presentation. However, recent technological advancements have introduced more ecologically valid presentation modalities, such as 360° video (360°V). Emerging evidence suggests that 360°V may be more effective than fixed-screen (FS) for training perceptual-cognitive skills, though the mechanisms underlying this advantage remain unclear. This study tested the hypothesis that 360°V enables different visual search strategies compared to FS. Thirty-five participants (18 varsity basketball players, 17 novices) wore an HTC Vive Pro Eye headset and viewed the same 25 basketball video clips in 360°V and FS modes while their eye and head movements were recorded. Visual events were categorized post-hoc using an algorithm adapted from Larsson et al. (2015). Compared to FS, 360°V elicited an increase in smooth pursuits, visual scanning, and head movements ( $p < 0.001$ ), alongside fewer and shorter visual fixations and saccades ( $p < 0.001$ ). These effects were not significantly modulated by expertise ( $p > 0.07$ ). Together, these results demonstrate marked differences in the visual search strategies used in both modalities, with 360°V potentially better reflecting real-world visual behavior. This supports the use of 360°V as a more ecologically valid tool for perceptual-cognitive training in sports, particularly for decision-making under dynamic conditions.

### **18. Parental bias in youth sport: The effects of implicit and explicit gender associations on support and pressure**

*Corliss Bean, Brock University; Ross Murray, University of Toronto; Shannon Kerwin, Brock University; Michele Donnelly, Brock University*

Implicit and explicit gender associations can shape perceptions and behaviours in impactful ways, including parents' youth sport decisions. Parental support and pressure play key roles in shaping youth sport experiences. This study examined the extent to which Canadian youth sport parents held implicit and explicit gender biases related to sport and whether these biases predicted support or pressure placed on their children. A secondary aim was to examine whether these relationships differed based on child's gender. Two-hundred forty Canadian



parents (Mage=45.56; 49.6% women) of boys and girls involved in youth sport completed an online survey that included demographic questions, measures of support and pressure in sport, one explicit gender-sport association question, and a Single-Category Implicit Association Test (SC-IAT) assessing implicit gender-sport associations. Parents reported significant explicit gender bias, with scores above the midpoint, indicating a stronger association between sport and men ( $M=6.94$ , range 1-10). In contrast, no significant implicit gender bias was observed based on SC-IAT scores. Regression analyses indicated that implicit gender bias interacted with child's gender to predict parental behaviors. Parents who implicitly associated sport with boys reported less support for their daughters ( $b=-0.216$ ,  $p=.048$ ) and less pressure for their sons ( $b=-0.490$ ,  $p=.038$ ). Explicit bias did not significantly predict support or pressure. Findings suggest parents' unconscious associations with sport may shape their behaviour toward their children in gendered ways. There is a need for continued efforts to promote girls' sport participation as valued, helping shift broader cultural narratives around gender and sport.

### **19. The Effect of Net Size Manipulation on The Self-Efficacy & Performance of University Students Performing a Penalty Kick**

*Johnathan Sherrard, University of New Brunswick*

Much of the sports psychology literature is focused on improving the self-efficacy of athletes so that they can compete to the best of their ability. The purpose of the present research is to build on the self-efficacy literature by exploring the relationship between net size manipulation, during practice trials of a penalty kick, and the self-efficacy and performance outcomes of university students when completing a series of kicks into a regulation-sized net. The study had a sample size of 63 participants. Participants were assigned to one of two groups. Group 1 was asked to shoot 25 penalty kicks on a 4-foot net. They were then asked to rate their confidence in their ability to score on an 8-foot net. After rating their confidence, they were asked to shoot 25 penalty kicks on the 8-foot net. Group 2 followed the same procedures but started by shooting 25 penalty kicks on a 12-foot net instead of the 4-foot net. A series of t-tests comparing Group 1 and Group 2 indicate no significant difference between the confidence scores or performance scores of those who did their practice trials on the 12-foot net compared to those who practiced on the 4-foot net. Future studies may consider assigning participants to a group based on their belief of which net size will help them perform better, testing the hypothesis that net size manipulation will make a difference if the participants believe it will make a difference.

### **20. Promoting physical activity in young adults living with and beyond cancer: Primary results from the 'physicAI aCTivity Counselling for young adult canCEr SurvivorS' (ACCESS) pilot trial**

*Jennifer Brunet, University of Ottawa; Jenson Price, Queens University; Sitara Sharma, University of Ottawa; Monica Taljaard, Ottawa Hospital Research Institute; Amirtha Srikanthan, The Ottawa Hospital; Fiona Gillison, University of Bath; Martyn Standage, University of Bath; Mark R. Beauchamp, University of British Columbia; Jennifer Reed, University of Ottawa Heart Institute; Yutong Chen, Ottawa Hospital Research Institute; Elham Sabri, Ottawa Hospital Research Institute*



**Background:** Physical activity (PA) benefits young adults living with and beyond cancer, yet participation remains low. The *ACCESS* intervention aims to address low PA participation in this cohort. **Purpose:** We analyzed data from a pilot randomized controlled trial on PA collected before (baseline; week 0) and after the 12-week *ACCESS* intervention (post-intervention [week 13], follow-up [week 24]) to inform the design of a full-scale efficacy trial. **Methods:** Forty-two young adults ( $M_{age}=33$  years; 81% female) were randomized post-cancer treatment to a virtual person-centered behaviour change intervention or usual care. The intervention, guided by self-determination theory, comprised 6x60-minute biweekly sessions incorporating behaviour change techniques to affect theory-driven mediators. The primary outcome (total PA hours/week) was assessed using accelerometers and analyzed descriptively using linear regression modelling, accounting for the correlation in repeated measures and prespecified covariates. No significance testing was performed; the correlation for repeated measures and variance estimates were used to inform sample size calculations for a full-scale efficacy trial. **Results:** The mean  $\pm$  standard deviation for PA in the intervention and control arms at baseline was  $28.8 \pm 10.2$  and  $25.9 \pm 9.4$  (range=5.6-46.7), respectively. The correlation for repeated measures of PA was  $r=0.67$ , and the combined variance was 103. Graphical representation of the model-based means and standard errors by arm with lines depicting individual profiles across assessments revealed important heterogeneity in PA for the whole sample. **Conclusion:** While efficacy conclusions cannot be drawn, results offer essential parameters for powering and implementing a future full-scale efficacy trial of the *ACCESS* intervention.

## **21. The effects of a mindfulness-based intervention on mindful awareness, anxiety, stress, flow, and well-being among Canadian university athletes**

*Ève LeBlanc, University of New Brunswick; Ryan Hamilton, University of New Brunswick*

According to Crocker et al. (2021), university athletes face unique challenges related to demanding schedules and heightened expectations, as they seek to find balance in their academic, athletic, and personal lives. Research in the United States suggests that psychological training, such as mindfulness-based interventions, may enhance well-being, reduce negative affect, and alleviate stress in this population (Kostrna & D'Addario, 2022). However, the generalizability of these findings to Canadian contexts remains limited due to systemic differences in size, competition level, and resource availability (Greiger, 2013). The current study examined the effectiveness of the Mindful Sport Performance Enhancement (MSPE) intervention, developed by Kaufman et al. (2009), in addressing stress and well-being among Canadian university athletes. Using a within-subjects longitudinal design, a trained facilitator—in this case, the primary researcher—delivered the six-session MSPE intervention to members of the University of New Brunswick men's and women's swim teams. Measures of anxiety, depression, stress, mindful awareness, flow, and overall well-being were collected pre-intervention, post-intervention, and at a one-month follow-up. While no statistically significant effects emerged, qualitative feedback and a feasibility analysis revealed promising trends. Participants reported increased self-awareness and enhanced present-moment attention, incorporating mindfulness practices into their daily routines. These findings contribute to the



growing body of literature on athlete mental health, highlighting the potential feasibility and perceived benefits of mindfulness-based interventions in Canadian university sport settings and laying the groundwork for future research with larger, more diverse samples.

## **22. Sign In, Stretch, Breathe, Sign Out: Pregnant Women and Prenatal Yoga Teachers' Perspectives of Online Prenatal Yoga**

*Kirina Angrish-Dandora, Faculty of Applied Health Science, Brock University; Dr. Kimberley L. Gammage, Department of Kinesiology, Brock University & Brock Functional Inclusive Training (Bfit) Centre*

Online synchronous prenatal yoga classes can address barriers to in-person prenatal yoga, increasing engagement. However, researchers have overlooked pregnant women's needs in synchronous formats. Using semi-structured interviews, this study explored barriers and motivators to online practice among 15 pregnant/previously pregnant women and six prenatal yoga teachers. Participants were recruited through fitness centers and social media. Five themes were generated. Safety focused on *physical and mental health* concerns associated with online yoga, with teachers adapting their teaching by incorporating mindful movements and emphasizing clear communication. *Accessible and available* yoga programs involved choosing an accessible videoconferencing platform, offering a program preview, teaching multiple classes weekly, and ensuring high quality video functionality. All women emphasized the importance of an experienced, knowledgeable, and positive female *teacher* in promoting comfort and program adherence. Pregnant women suggested the teacher's role extended beyond teaching to holistic prenatal care. Women described practicing an embodying activity, yoga, in a *disembodying space*. However, they made it embodying by practicing in their own space and tuning out the class for self-connection. Teachers promoted embodiment by encouraging autonomy, self-awareness and mom-baby connections. Women also discussed the struggle to build *social connections* online and highlighted the importance of verbal and non-verbal communication and one-on-one interactions for creating an engaging space. All women recognized that pregnant women play an active role in forming and maintaining these connections. Accessible prenatal yoga programs should prioritize women's safety and be taught by an experienced female teacher promoting embodiment and social connections.

## **23. From Competition to Continuity: Transition to Physical Activity After High-Performance Sport Retirement**

*Kayla Krasnor, Dalhousie University; Lori Dithurbide, Dalhousie University*

Retirement from high-performance sport represents a critical transition period for athletes and is frequently associated with increased risks of negative physical and mental health outcomes. Athlete retirement transition has been a focus of research and intervention development in the past decades, primarily centering on transferrable skills, mental health and well-being, and career transition. However, little attention has been paid to the transition of physical activity (PA) motivators and attitudes once athletes are separated from elite training and competition. A phenomenological approach using semi-structured interviews was implemented to gain an understanding of 10 recently retired Canadian National Team athletes' relationship with PA.



Interviews were analysed using thematic analysis, and codes were organized into four main themes. First, “Redefining the game” describes the shift athletes made to find sustainable PA after retirement. Second, “Meaningful motivators” shows how athletes motivated themselves by finding new meaning in PA. Third, “From drive to drift” explains how athletes struggled with motivation and their new, lower level of PA. Finally, “Contextual factors” were circumstances of competitive life that impacted athletes’ approaches to PA through the retirement transition. These results tell a story of moving away from performance-driven PA, grappling with the loss of that motivation, and the creation of new meaning in PA, influenced by the athletes’ careers and retirement stories. This information can help guide how sport organizations, coaches, and athletes themselves prepare for athletic retirement including a focused approach to creating a sustainable, healthy, and physically active lives.

#### **24. Evaluating Group Physical Activity Resources for Older Pakistani Women**

*Mahrux Tanweer, University of Calgary; Meghan McDonough, University of Calgary*

The population of Pakistani women aged 55 and older is steadily increasing in Canada. However, limited access to culturally tailored programs makes it difficult for many older women to feel included in recreational physical activity (PA). For older Pakistani women particularly, barriers such as unfamiliarity with group activity settings, safety concerns, and cultural inappropriateness contribute to social isolation and reduced PA engagement. This study aimed to investigate the availability and inclusivity of group PA programs for older Pakistani women in Calgary and surrounding areas. An environmental scan was conducted using a structured Google search with terms including older women, Pakistani, group physical activity, program, and Calgary—along with variations of each domain—to identify relevant PA programs. Four programs met our inclusion criteria, with two no longer active due to financial limitations. Semi-structured interviews were then conducted with fitness professionals (n = 3) identified in the scan, and data were analyzed using reflexive thematic analysis. Four themes were identified: (1) the need for accessible, tailored educational resources; (2) the importance of bridging language and cultural barriers; (3) the critical role of community leaders and fitness professionals in promoting participation; and (4) the influence of program location and cost. Findings indicate that current group PA offerings often do not align with the cultural or linguistic needs of older Pakistani women, creating a barrier to meaningful engagement. This research highlights the need for greater support and guidance for fitness program developers to better serve this demographic and promote inclusive, community-based PA participation.

#### **25. Closing the Education Gap: The Impact of a Sport Psychology Education Workshop on Athletic Therapists’ Perceived Effectiveness and Use of Psychological Skills**

*Melissa Pare, University of Windsor; Krista Munroe-Chandler, University of Windsor*

Psychological skills (e.g., goal setting, imagery, and self-talk) are effective strategies to overcome challenges experienced by injured athletes throughout the injury and rehabilitation process (Arvinen-Barrow & Clement, 2024). Athletic Therapists (ATs) play an important role in both the physical and psychological recovery of injured athletes (Tracey, 2008); however, many ATs report a lack of education and training in the psychological aspect of injury and





rehabilitation (Alexander et al., 2015; Driver et al., 2017). Therefore, additional continuing education workshops are needed to address the ongoing knowledge gap of implementing psychological skills into clinical practice. The purpose of the study was to evaluate a sport psychology education workshop for ATs aimed at increasing the use of psychological skills in clinical practice. Eleven certified ATs ( $M_{age} = 38.73$ ;  $SD = 11.63$ ) participated in a four-hour online synchronous workshop developed specifically for this study. Their perceived effectiveness (i.e., Attitudes About Imagery Questionnaire; Hamson-Utley et al., 2008) and frequency of psychological skills use (i.e., Psychology of Injury Usage Survey; Stiller, 2008) at baseline and post-workshop were measured. Repeated measures ANOVA indicated significant changes pre- to post- workshop regarding ATs' perceptions of the effectiveness of imagery ( $d = 1.17$ ) and use of psychological skills in clinical practice specific to goal setting ( $d = 1.39$ ) and additional skills such as self-talk, imagery, and relaxation ( $d = 0.87$ ). Future research is needed to expand the availability and sustainability of continuing education workshops to address the ongoing knowledge gap of implementing psychological skills in practice.

## **26.The history of women's hockey on Cape Breton Island: Psychosocial considerations**

*Jennifer MacInnis-Moore, Cape Breton University; Bettina Callary, Cape Breton University*

The Kehoe Forum, known as the first Canadian 'Home of Women's Hockey' is housed on the Cape Breton University campus in Nova Scotia. Research on its foundation prompted recommendations for commemorative walls of women hockey players to promote the game for girls and women and celebrate women's place in the sport. However, there is a dearth of information on the history of women's hockey on Cape Breton Island. The purpose of this project was to uncover the hidden history of women's hockey to unveil psychosocial considerations that can support women's hockey now. Document retrieval and analysis of over 100 articles and memorabilia collected from 110 people involved in women's hockey in Cape Breton over 75 years produced six key moments in time that identify meaningful psychosocial developments in women's hockey on the island. These include planting the seeds of the game's future: 1) the early formation of women's identities as players after the influence of War World II, and 2) the struggles for inclusion in national competitions. The explosive growth of women's hockey includes: 3) female minor hockey teams that created belonging, and 4) confidence in hosting National championships. Finally, in forging pathways in women's hockey: 5) the formation of high-performance hockey inspired younger players, which led to 6) the formation of a robust female hockey association. These key moments led to the present day opening of the first Canadian 'Home of Women's Hockey'. The history reveals the struggles for identity, belonging, and vision of women's hockey in rural Canada.

## **27.Fringe versus Mainstream Athletes: A Comparison of Developmental Training Histories**

*Jason Mergler, University of Manitoba; Benjamin Schellenberg, University of Manitoba; Leisha Strachan, University of Manitoba*

Fringe team sports are less popular, less attended, and have fewer resources than mainstream team sports. However, with Canadian sport participation rates having steadily declined and stagnated, a significant proportion (25%+) of national sport participants (Canadian Heritage,



2013) partaking in fringe sports, and few studies existing on these sports (Mergler & Strachan, 2025), more research is needed to better understand how fringe and mainstream team sport athletes compare. Thus, this study's purpose was to investigate the participation, competition, and sport histories and developmental trajectories of dodgeball athletes in comparison to those of (indoor) volleyball athletes. Any Canadian adult (aged 18+) whose current or previous main sport (most played/practiced) was either dodgeball or volleyball was eligible to participate in the study. All participants (255 total sample size; 63% completion rate) filled out a modified, sport-specific version of the Developmental History of Athletes Questionnaire (Hopwood, 2013). Both sport samples consisted of individuals in their mid-thirties who were highly educated, multi-sport athletes. However, dodgeball players began playing later into adulthood, spent less time specializing in their main sport, were proportionally less female, were involved in fewer other sports, and progressed across skill levels quicker (i.e., smaller competitive pool) than did volleyball players. Importantly, 18 to 39 and 12 to 29 were the most developmentally salient periods for dodgeball and volleyball players, respectively. Dodgeball organizations should prioritize building youth programs, create more opportunities for adult and female athletes to play and train, and advertise the economical and social nature of the sport.

## **28. Evaluating a 12-Week Yoga Intervention for Gynecologic Cancer Survivors Using Hierarchical Linear Modeling**

*Jenson Price, Trent University; Soulene Sabir, Western University; Brooklyn Westlake, University of Ottawa; Jennifer Brunet, University of Ottawa*

**Objective:** Yoga benefits individuals following cancer treatment; however, researchers have primarily focused on breast cancer populations and used study designs that preclude examination of trends over time. We aimed to evaluate the effects of a co-created Hatha yoga program on repeated measures of patient-reported outcomes among gynecologic cancer survivors. **Methods:** A multiple baseline series N-of-1  $A_1BA_2$  trial design was used. Participants completed a 12-week bi-modal Hatha yoga program with optional group discussions, journals, and pre-recorded videos for at-home practice. Outcomes were assessed via online questionnaires prior to ( $A_1$ ; 3-5 timepoints), during (B; 3 timepoints), and after the program ( $A_2$ ; 3 timepoints). Data from 20 participants ( $M_{age}=62.4$  years) were analyzed using hierarchical linear modeling following a stepwise model-building approach. **Results:** Piecewise models including fixed (i.e., an intercept and slopes for  $A_1$ , B, and  $A_2$ ) and random (i.e., an intercept) effects fit the data best. Significant ( $p<.05$ ) improvements were observed in quality of life ( $A_1$ :  $b=0.96$ ,  $SE=0.44$ ; B:  $b=0.44$ ,  $SE=0.11$ ), cognitive function (B:  $b=0.12$ ,  $SE=0.05$ ), sexual distress ( $A_1$ :  $b=-0.93$ ,  $SE=-0.93$ ; B:  $b=-0.25$ ,  $SE=-0.25$ ), negative body image (B:  $b=-0.22$ ,  $SE=0.10$ ), and perceived stress (B:  $b=-0.24$ ,  $SE=0.06$ ). Fatigue ( $A_2$ :  $b=-0.12$ ,  $SE=0.06$ ) and perceived stress ( $A_2$ :  $b=0.10$ ,  $SE=0.04$ ) worsened after the program. **Conclusions:** Results offer preliminary evidence that a co-created yoga program may improve and maintain (up to 8 weeks) patient-reported outcomes for gynecologic cancer survivors. These findings lay important groundwork for a future hybrid implementation-effectiveness trial to evaluate the program's real-world impact and scalability.





## **29. Transformational leadership and positive development: Assessing the cascade effect in university sport**

*Justine Cotnoir, University of Lethbridge; Olivia Hawkins, University of Lethbridge; Scott Rathwell, University of Lethbridge*

Coaches play a central role in shaping athletes' psychosocial development (PD). While they often exert direct influence, coaches also rely on athlete leaders, although their contribution to PD remains underexplored. The Full Range Leadership Model (FRLM)—which categorizes leadership as laissez-faire, transactional, or transformational—posits that transformational leadership (TFL) is most effective because it initiates a “cascade effect,” wherein leadership diffuses through a team as followers emulate their leaders. This study is the first to test the cascade effect in sport using a longitudinal design. We examined (a) whether coaches' TFL behaviors predict the emergence of transformational athlete leader networks over time, and (b) whether these networks mediated the relationship between coach leadership and athletes' PD. Thirty U SPORTS athletes (Mage = 20.47, SD = 1.98; Female, 66.7%; Male, 33.3%; Caucasian, 93.3%, Black/African, 3.3%, Mixed, 3.3%). Athletes reported on coach TFL (DTLI), transformational leadership among teammates, and PD outcomes (USES). Correlations showed that higher coach TFL was associated with fewer negative sport-related experiences (e.g., stress, exclusion, inappropriate adult behavior) in sport. Teams with denser networks of transformational athlete leaders reported greater initiative, basic skills, and social capital. Although baseline coach TFL did predict a cascade effect, increases in coach TFL from preseason to midseason were associated with an increase in athlete leadership during the same period and greater athlete leadership at midseason. Notably, athlete leadership did not mediate the relationship between coach TFL and PD outcomes. Findings offer novel insight into leadership dynamics in university sport.

## **30. Play to Lead: Coaches' support in developing female athletes' holistic leadership skills**

*Bettina Callary, Cape Breton University; Lindsey MacIntosh, Cape Breton University; Julia Callary, Riverview High School; Fallyn MacIntosh, Riverview High School; Morgan Rogers, University of Calgary*

Adolescent girls drop out of sport at a higher rate than boys of the same age (CWS, 2024). By providing opportunities for girls to be engaged in holistic sport participation, these trends can be reversed. Particularly, developing adolescent female athletes as leaders within their sport teams has shown promising, but scant research has explored how coaches can support holistic development of their athletes' leadership outside of the athletic environment. The purpose of this poster is to outline how two coaches supported holistic athlete leadership development through engaging in a year-long program. The participants in this self-study include two coaches and two athletes involved in the Play to Lead program. This is a Canadian-wide program funded by Jumpstart that supports athletes on their journeys as nascent leaders in sport and beyond. Each athlete invites a coach on that journey, and the coach is expected to assist the athlete in a leadership project of their choice. Exploring each milestone and task of the program through journal reflections and assignments, we unveil how these coaches supported the athletes in selecting different projects (program development and media



broadcasting), challenges and successes in the tasks, and the subsequent outcomes of the projects in relation to the development of key transferable leadership skills including confidence, communication, collaboration, networking, and creativity.

### **31. Perceptions of group dynamics in competitive and recreational adult athletes**

*Zakry Walsh, Wilfrid Laurier University; Seth Papineau, Wilfrid Laurier University; Mark Eys, Wilfrid Laurier University*

Group dynamics is an established field of exercise and sport psychology research (Eys & Brawley, 2018). However, sport group dynamics research has primarily focused on younger, elite athletes. Recently, Gayman et al. (2022) highlighted how group dynamics are experienced by older adults (e.g., leadership in the absence of a formal coach). Similarly, middle-aged athletes (i.e., 35-55 years) may have unique experiences within their teams (e.g., roles) and personal lives (e.g., childcare) that impact their sport participation and their team's dynamics. The purpose of the current study was to qualitatively explore the perceptions of group dynamics in recreationally and competitively oriented middle-aged adult athletes. In total, 10 athletes (7 females;  $M_{age} = 44.3$  years) participated in semi-structured interviews and responded to questions about their experiences of group dynamics on their adult sport teams. Template analysis (King, 2016) was conducted to analyze the interview data based on the conceptual framework for the study of sport teams (Eys et al., 2020). Participants emphasized the importance of membership to (and competing against) teams that had similar skill and intensity, and how the incongruity of motives led to conflict and dropout. Leadership perceptions were also impacted by the presence of a coach (or lack thereof), and teams heavily relied upon athlete leaders. Lastly, age-related factors (e.g., pregnancy, childcare, work) influenced group size, player status (e.g., part-time players), and the ability to practice. The findings of this study highlight the inherent nuances of adult athletes that are important considerations for future group dynamics research and practice.

### **32. Perceptions of Body Image Among Women Sport Officials**

*David J. Hancock, Memorial University of Newfoundland; Tori B. Carter, Memorial University of Newfoundland; Allyson Schweitzer, The University of British Columbia; Catherine M. Sabiston, University of Toronto; Erica V. Bennett, The University of British Columbia*

Body image reflects one's perceptions, cognitions, emotions, and behaviours related to their body's appearance/function. Research exists on women athletes' body image; however, women officials (i.e., referees, umpires, judges) have been overlooked. Our purposes were to: (a) explore women officials' body image and (b) compare their body image perceptions across sociodemographic characteristics. Participants were 227 women officials in Canada (10 sports; 6 competitive levels), aged 14-73 years ( $M=36.04$ ,  $SD=16.29$ ) with 1-55 years' experience ( $M=11.46$ ,  $SD=10.63$ ). Forty-seven participants identified as LGBTQIA2S+ with 9 ethnicities represented. Most participants reported being "neither under nor overweight" ( $n=95$ ) and "slightly overweight" ( $n=82$ ). Participants completed (a) Body Appreciation Scale-2 ( $M=3.55$ ,  $SD=0.72$ ; sometimes body-positive), (b) Body Surveillance Scale ( $M=4.27$ ,  $SD=1.27$ ; neutral about scrutinizing their bodies), and (c) Appearance-related Self-conscious Emotions



(range of  $M=2.36-2.79$ ,  $SD=0.84-0.99$ ; rarely/occasionally experienced shame, guilt, pride, envy, and embarrassment). ANOVAs revealed differences for (a) age (older officials [ $>60$  years] reported more positive body image compared to younger officials [ $<30$  years]) and (b) size (individuals perceiving themselves as overweight/slightly overweight experienced more negative body image). Correlations uncovered a positive relationship for age and body appreciation, with negative relationships between age and body surveillance, shame, guilt, envy, and embarrassment. It is concerning that younger officials report more negative body image. Further, as women officials have a lack of women mentors, learning body positivity from older women officials could be challenging for young officials. Organizations should be wary, as negative body image is a precursor to negative mental health, which influences workplace safety.

### **33.Exploring the state of Canadian sport-based mentorship initiatives for girl-identifying youth**

*Caroline Hummell, Brock University; Corliss Bean, Brock University*

Mentorship has been identified as a promising avenue to support the development, retention, and well-being of girls in sport. Yet, little is known about how mentorship is currently conceptualized and implemented in sport and recreation organizations targeting self-identifying girls in Canada. The purpose of this study was to explore the current landscape of sport-based mentorship programs for girls by examining how Canadian sport organizational staff understand, offer, and evaluate these initiatives. Using a qualitative research design, we conducted semi-structured interviews with Canadian sport organizational leads ( $N = 9$ ) and analyzed available program resources (e.g., websites, program manuals) to develop a rich understanding of mentorship offerings and perceived needs. Reflexive thematic and document analysis revealed three findings: (1) the importance of building quality, trusting relationships in sport contexts for girls' development; (2) challenges with applying mentorship in practice; and (3) a need for more evidence-informed structures and intentional program design to guide mentorship practices. Participants emphasized the role of mentorship in promoting safe sport and the awareness of what is possible beyond the sport environment for girls. However, while participants discussed a motivation to support girls through mentorship, they often lacked the resources, training, and evaluation tools to do so effectively. This study contributes to growing conversations around gender-responsive programming in sport and highlights the need for future research to co-design mentorship frameworks with organizations and girl-identifying youth. Practically, findings underscore the importance of investing in relational capacity and evidence-based mentorship models to better support girls' sport experiences in Canada.

### **34.The Effects of Psychosocial Stress on Athletic Performance**

*Cassidy L. Brooks, Nipissing University; Vanessa E. Byrne, Nipissing University; Dr. Justin M. Carré, Nipissing University*

Stress occurs in response to uncontrollable and/or unpredictable stimuli and may ultimately impact athletic performance (Koolhaas et al., 2011; Guillems & Edwards, 2010). Cortisol is a key stress hormone which regulates the body's physiological response to stress (Thau et al., 2019).



Evidence for a link between cortisol and athletic performance has been mixed, with some work suggesting that cortisol is negatively correlated with athletic performance (Doan et al., 2007; Siart et al., 2017) and other work indicating a positive association between cortisol and athletic performance (Passelergue et al., 1995; Crewther et al., 2011). In the current work, 26 youth hockey players (11-12 years old; 77% male) were recruited for an experiment investigating the impact of stress on athletic performance. We experimentally manipulated stress by having participants perform the Trier Social Stress Test (TSST) and a control condition (TSST-C) on separate days (repeated measures design). After the experimental manipulation, athletes performed three stickhandling/skating drills on synthetic ice. Saliva samples were collected throughout the protocol to track changes in cortisol concentrations. As expected, we found that participants' cortisol concentrations were higher after the stress exposure condition relative to the control condition. In addition, we found some evidence that stress exposure was associated with relatively poor performance on 1 of the 3 hockey drills. In summary, these preliminary findings revealed that stressful environments elevate cortisol levels in youth athletes, and this can have a negative impact on athletic performance.

### **35. Positive body image maintenance in adolescent girls and young women competitive athletes: An ongoing, active process**

*Taylor Unger, The University of British Columbia; Erica V. Bennett, The University of British Columbia; Desmond McEwan, The University of British Columbia; Katherine A. Tamminen, University of Toronto*

For girl and women athletes, body talk, discussions around the body's function and physical appearance, verbal pressures to change the body, and unsolicited negative commentary are pervasive. Women athletes also face stressors related to coaches, teammates, uniforms, judges, and sociocultural pressures to achieve the ideal athletic physique. However, little is known about women's coping and adaptation processes in relation to these body image stressors. The purpose of this research was to understand how late adolescent girls and young women athletes developed positive body image. Nine athletes aged 16 to 24 ( $M_{age}=19$ ) who self-identified as experiencing positive body image participated in a semi-structured interview followed by a collage session where they depicted their experiences of positive body image by gluing images and other art-supplies on paper. Three themes were generated from a reflexive thematic analysis of the data. Theme one, titled '*My Body is Just Right*,' pertained to factors (e.g., body acceptance and appreciation, self-defining body image) that facilitated the development and maintenance of positive body image. Theme two, *It's Harder for Girls*, referred to challenges faced in experiencing positive body image. Positive body image was not something to be achieved and then forgotten, but rather needing to be continually chosen and worked on once developed. Theme three, *I Choose to Love My Body Today*, encompassed body-related stressors and coping strategies used to develop and maintain positive body image. These findings suggest that positive body image may involve a continuous maintenance process through adaptive coping due to the pervasive body-related stressors.



### **36. Parenting healthy children: The relationship between parenting styles, child self-regulation, and health behaviours**

*Sheldon Fetter-Yearley, University of Windsor; Sarah J. Woodruff, University of Windsor*

Children's self-regulation (SR) impacts health behaviours (Miller et al., 2020) through social contexts (e.g., parenting styles; Eisenberg et al., 2019). One avenue to understanding SR in children is through the intergenerational transmission of SR from parent to child (Bridgett et al., 2015). Thus, the purpose of this study was to investigate the relationships between parenting style, children's SR, and children's health behaviours. North American parents ( $n = 244$ ;  $M_{\text{age}} = 37.85$ ,  $SD = 63.20$ ; 56.60% White) with young children (4-9 years old) completed an online questionnaire measuring parenting style (i.e., authoritative, authoritarian, permissive), children's SR (i.e., effortful control, negative affect, surgency), and health behaviours (i.e., eating behaviours, sleep disturbances, and physical activity (PA)) to explore the relationships between parenting style and children's SR, and children's SR and their health behaviours. Multiple linear regressions revealed, authoritative and authoritarian parenting styles positively predicted effortful control ( $b = 0.58, 0.39$ , respectively), where only authoritative parenting significantly predicted surgency ( $b = 0.30$ ). Permissive parenting negatively predicted effortful control ( $b = 0.30$ ) and positively predicted negative affect ( $b = 0.37$ ). Effortful control positively and negatively predicted components of eating behaviour ( $b = 0.25 - 0.34$ ), and negatively predicted sleep disturbances ( $b = 2.44$ ). Negative affect positively predicted components of eating behaviour ( $b = 0.19, 0.33$ ), and sleep disturbances ( $b = 3.87$ ). Surgency did not predict any health outcomes. PA was not significantly predicted by children's SR. The results demonstrate the role parenting styles play in children's development and of SR in facilitating health behaviours.

### **37. The SHINE (Supporting Her In Navigating Exercise) Program: Examining Peer Support as an Exercise Promotion Tool Among Undergraduate Initiates Through a Self-Determination Theory Lens**

*Madeline Fabiano, Lakehead University, School of Kinesiology; Aislin Mushquash, Lakehead University, Department of Psychology; John Gotwals, Lakehead University, School of Kinesiology; Erin Pearson, Lakehead University, School of Kinesiology*

Undergraduate women (UW) generally exercise less than their male peers, a gap that widened throughout the COVID-19 pandemic due to limited access to opportunities and support. A promising approach to enhance exercise motivation is peer-mentorship (PM) program: pairing knowledge-seeking individuals with experienced mentors. To date, theoretically grounded UW PM research remains sparse. Grounded in Self-Determination Theory, this experimental study explored how UW exercise engagement influenced motivation through a 6-week campus-based program. Both groups were expected to improve, with greater gains anticipated for intervention participants. Full-time inactive UW were randomized to an exercise-only or exercise-plus-PM condition. Six senior students with exercise expertise were trained as mentors via a workshop on motivational interviewing. All participants received a campus facility tour and encouragement to exercise triweekly. Mentors exercised with intervention participants once weekly and provided interim virtual support. Motivation was assessed at three time points



using the Behavioural Regulations in Exercise Scale-3 (BREQ-3) and Psychological Needs Satisfaction in Exercise Scale (PNSES); an open-ended exit-questionnaire captured program experiences. Twenty-six participants (13 control; 13 intervention) completed the program (M age = 24.3). Both conditions significantly ( $p < .05$ ) increased their external, identified, and integrated regulation, and autonomy and competence. Intervention participants significantly improved their relatedness and amotivation. Qualitatively, participants appreciated the self-guided format, educational material, and peer-support. Results suggest that brief PM can positively influence motivational constructs to support exercise adherence and address UW unique barriers. Findings will be shared with campus stakeholders to help establish a foundation for lifelong habits.

### **38. How special is specializing in Taekwondo? An investigation into elite athletes' lifelong sport participation experiences**

*Ceili Peterson, University of Toronto; Kathryn Johnston, University of Toronto; Antonia Cattle, University of Toronto; Joseph Baker, University of Toronto*

This study explores early sport participation patterns in Taekwondo, focusing on early specialization and its potential benefits and drawbacks. An online (REDCap) version of the Exposure to Sport Scale was used to collect demographic information, sport history, current practices, competition engagement, and play experiences from 60 adult Taekwondo athletes (18+) currently or formerly competing at the senior international level. The sample included athletes from North America ( $n = 22$ ), South America ( $n = 18$ ), Asia ( $n = 12$ ), and Europe ( $n = 8$ ). Athletes were classified into two groups based on their transition age to single-sport participation: highly specialized ( $n = 37$ ) and other engagement patterns ( $n = 23$ ). Analysis revealed that highly specialized athletes averaged lower rankings Olympic rankings ( $t(36.8) = 1.995$ ,  $p = .054$ ,  $d = .479$ ). Differences in Olympic ranking were also observed between engagement patterns across regions, but these differences were not statistically significant ( $F(2,42) = .211$ ,  $p = .811$ ,  $\eta_p^2 = .010$ ). A MANOVA comparing super-elite, elite, and competitive ranking groups showed a significant difference in training hours between the competitive and elite groups, ( $F(2,49) = 4.620$ ,  $p = .015$ ,  $\eta_p^2 = .159$ ), and a marginally significant difference in Taekwondo start age, with super-elite athletes starting later than elite and competitive athletes ( $F(2,49) = 3.049$ ,  $p = .056$ ,  $\eta_p^2 = .111$ ). These results suggest alternative engagement patterns benefit Taekwondo athletes pursuing super-elite status; however, further research is needed to identify the optimal early engagement pattern and its potential regional variations.

### **39. The Relationship between Mental Skills and Pain Experiences in Individuals with Persistent Low Back Pain**

*Mahan Shahrooie, Department of Kinesiology and Recreation Management, University of Manitoba; Melanie Gregg, Department of Kinesiology and Applied Health, University of Winnipeg; Shaelyn Stratchan, Department of Kinesiology and Recreation Management, University of Manitoba*

Chronic non-specific low back pain (CNSLBP) is a global disability with strong psychosocial contributors, despite this fact, rehabilitation often neglects the psychological dimensions of





pain and, physiotherapy still focuses mainly on biomechanics. This observational study explores the relationship between mental skills (mental imagery, self-compassion, pain self-efficacy), pain experience and functional abilities. Higher self-compassion, more adaptive imagery use, and stronger pain self-efficacy were expected to be associated with lower pain and better functioning. 176 adults (25–55 y;  $\geq 12$  weeks CNSLBP for an intensity of at least 30) will complete online questionnaires: Visual Analogue Scale (pain), Self-Compassion Scale, adapted Athletic Injury Imagery, Pain Self-Efficacy, and Roland–Morris Disability Questionnaire. Pilot data with 12 participants (aged 27–49;  $M = 33$  years; 58% female;  $BMI < 30$ ) completed the questionnaires. Pain intensity averaged 62.08/100, with a higher value indicating more pain. In these pilot data, pain self-efficacy correlated negatively with disability,  $r(10) = -.74$ ,  $p = .006$ ; healing imagery correlated with pain-management imagery,  $r(10) = .70$ ,  $p = .011$ ; and pain-management imagery correlated with overall mental skills,  $r(10) = .64$ ,  $p = .025$ . Subscales of self-compassion positively correlated with each other and with mental imagery dimensions, suggesting a cohesive psychological profile. However, pain management imagery use was lower compared to motivational and healing imagery. Identifying modifiable psychological predictors could encourage clinicians to integrate compassion-focused interventions, guided imagery, and efficacy training into routine care, bridging the current mind–body gap and enhancing rehabilitation outcomes for people living with CNSLBP.

#### **40.A qualitative exploration of emotions and emotion regulation among athletes with high levels of alexithymia**

*Kirsten Hutt, University of Toronto; Katherine Tamminen, University of Toronto*

Alexithymia is described as difficulty identifying feelings, difficulty describing feelings, and externally oriented thinking (Bagby et al., 1994). Alexithymia has been identified as a risk factor for psychosomatic disorders, depression, and anxiety (Bankier et al., 2001). In sport contexts, alexithymia has primarily been discussed as a motive to engage in high-risk sport (Woodman, 2008), although there is no research exploring how athletes with alexithymia describe and understand emotions in sport. The purpose of the present study is to explore how emotions are experienced and regulated by athletes with elevated alexithymia scores. Eight athletes ( $n = 2$  male,  $n = 6$  female) scoring +1SD on the Perth Alexithymia Questionnaire (Preece et al., 2018) participated in semi-structured qualitative interviews. Interview transcripts were analyzed using reflexive thematic analysis (Braun & Clarke, 2019). The first key theme, *Neutral Emotions, Strong Game*, concerned athletes' beliefs about the importance of maintaining a neutral emotional state while competing to ensure optimal sport performance. A second theme, *A Minute to Myself*, reflected athletes' use of strategies like isolating themselves from teammates to regulate their negative emotions. A third theme was *Loss for Words*, which reflected challenges athletes faced when discussing and articulating their emotions during the interviews, as athletes struggled putting their emotional experiences into words. These results demonstrate the need to continue exploring how athletes with alexithymia regulate and express their emotions in sport. These insights may help inform interventions aimed at addressing emotional awareness in athletes.



#### **41. Conceptualizations of the Coach-Athlete Relationship: A Scoping Review**

*Madeline Schmidt, Queen's University; Stuart Wilson, Queen's University; Jean Côté, Queen's University*

The complex and influential nature of the coach-athlete relationship (CAR) has led to significant exploration in sport psychology research. Various theoretical frameworks have been used to conceptualize the CAR, including models of interdependence, leadership, and motivation, resulting in potentially siloed and overlapping bodies of evidence. This scoping review aims to identify, map, and compare the range of frameworks and conceptualizations used to represent the CAR in sport psychology research. Following the PRISMA-ScR guidelines, we gathered studies from 11 major journals in sport coaching and psychology, resulting in a final 429 studies. The information chart included the type of study, methods used, specific measures used, and the major frameworks used to support the study. The articles were abductively categorized into 11 types of conceptualizations: motivation (33.5% of studies), leadership (17%), interdependence (10.5%), efficacy (4%), effective coaching (4%), communication (7%), skill and assets development (8%), safe sport (2%), personality (4%), demographics (4%), and other (6%). Findings illustrate three dominant conceptual lenses used to explore CAR: the outcomes approach (e.g., Does the CAR affect individual motivation or motivational climate?), the determinants approach (e.g., What leadership behaviours affect the CAR?), and the middle ground approach (e.g., How are CARs affected by individual, group, and contextual variables?). These three approaches have strengths and limitations suited to different research goals; thus to avoid siloed bodies of evidence, the advantages of each approach should be acknowledged and selected in concert with the research question at hand.

#### **42. Exploring Unexpected Demands in Weekly Physical Activity Goal Pursuit**

*Mackenzie G. Marchant, College of Kinesiology, University of Saskatchewan; Leah J. Ferguson, College of Kinesiology, University of Saskatchewan; Laurie-Ann M. Hellsten, Faculty of Education, University of Winnipeg; Kent C. Kowalski, College of Kinesiology, University of Saskatchewan*

Engagement in weekly physical activity can become difficult when demanding circumstances disrupt goals. While research has examined general demands to physical activity (e.g., lack of time), less is known about unexpected demands. These include unforeseen circumstances that may not be considered at the time goals are set (e.g., increased workload). This study explored the prevalence and nature of unexpected demands and goal responses among individuals who set weekly physical activity goals over time. Participants completed three online surveys over three months (Time 1:  $M_{age}=36.1\pm12.3$  years,  $N=200$ ; Time 2:  $N=93$ ; Time 3:  $N=60$ ). Eligibility at each timepoint required both setting a weekly physical activity goal and experiencing unexpected demand(s) in the same week. At each timepoint, participants reported their unexpected demand(s), and whether they met, revised, or abandoned their weekly goal. Those who revised their goal identified revision strategies including adjusting the frequency, duration, or type of activity. Participant-reported unexpected demands were analyzed using content analysis. A codebook was developed deductively from existing literature and inductively from Time 1 responses, then applied to Times 2 and 3. Across timepoints, participants reported a





total of 517 unexpected demands, the most frequent being work responsibilities ( $n=120$ ), family responsibilities ( $n=82$ ), and personal illness ( $n=68$ ). Revising the weekly goal was the most common response to unexpected demands, reported by 48.5% of participants. Of those who revised their goal, 93.5% adjusted activity frequency. This study identified unexpected demands and responses that may shape physical activity goal pursuit, offering insights to inform adaptive engagement strategies.

#### **43. “We can do whatever inspires us”: Girls’ perceptions of belonging, connection, and empowerment within one women-led girls-only baseball organization**

*Mikayla McEwan, Brock University; Corliss Bean, Brock University*

Girls often face barriers to meaningful sport participation, especially within men-dominated sports. Increasing inclusive sport spaces for girls is crucial for fostering their belonging and enjoyment in sport. Canadian Girls Baseball (CGB) is a women-led organization that offers girls-only programming and intentional leadership opportunities to encourage girls’ retention in sport. The purpose of this study was to explore participants’ experiences of gender within this unique context. Seventeen youth athletes and seven junior coaches participated in two focus groups over 4 weeks to explore the study purpose. Data were analyzed using reflexive thematic analysis and two themes were created: (a) gendered realities in baseball and (b) inclusive sport spaces for social and personal growth. Within the first theme, participants articulated that exposure to women mentors and girl-identifying peers at CGB encouraged their sustained involvement in baseball and facilitated positive shifts in baseball culture, which was meaningful for participants given their previous negative experiences in men-dominated baseball spaces. Within the second theme, participants outlined that being in this girls-only environment fostered connection and relatedness between peers and coaches, promoting a psychologically safe and supportive atmosphere. Being around other girls fostered feelings of comfort, allowing participants to express themselves authentically. The inclusive environment cultivated within CGB fostered girls’ sense of empowerment and personal growth. Findings extend understanding of how girls-only sport spaces can reduce gendered barriers and promote feelings of inclusion. These insights highlight the value of intentionally structuring safe and supportive sport environments for girls that promote inclusion, mentorship, and meaningful participation.

#### **44. Youth sport coaching as social contribution: Exploring developmental pathways to community service**

*Erin Teschuk, University of Ottawa; Karl Erickson, York University; David Hancock, Memorial University of Newfoundland; Matt Vierimaa, Acadia University*

The concept of Contribution – a thriving individual giving back to their community and society – is posited as the ultimate stage of Positive Youth Development (Lerner, 2005). In youth sport, coaching is a direct example of such “giving back”, whereby former youth sport participants devote their time and energy to providing positive sport experiences for the next generation. Yet pragmatically, recruiting and retaining coaches remains one of the biggest challenges faced by youth sport organizations. This research examines the developmental experiences and



pathways by which youth sport participants contribute back to the youth sport community via coaching. This qualitative study used a critical realist Grounded Theory approach (Kempster & Parry, 2015). Semi-structured interviews were conducted with 23 current youth sport coaches across 12 sports who had successfully transitioned from youth sport athlete to coach, seeking to identify key experiences, relationships, and program characteristics that facilitated their transitions into coaching. Results suggest a self-sustaining developmental cycle that can be leveraged by youth sport organizations, revolving around four core mechanisms: 1) Elements of a positive youth experience that sparked desire to give back to youth sport; 2) Opportunities for early coaching involvement- often beginning with small-scale involvement or a personalized call to action; 3) Supported and rewarding experiences while coaching; and 4) Current coaches aiding the development of the next generation of coaches. This developmental cycle is facilitated at every stage by coach mentors, recognition of positive coaching attributes, and belongingness to a greater sport community.

#### **45. Beyond center ice: A scoping review on long-term psychosocial player development in ice hockey**

*Hannah Rabinovitch, University of Toronto; Kathryn Johnston, University of Toronto; Alia Mazhar, University of Toronto; Joseph Baker, University of Toronto*

Research on ice hockey player development has largely focused on technical, tactical, and physical aspects, with limited attention to psychosocial development. This scoping review aimed to examine the literature on psychosocial development in male ice hockey players. Using a PRISMA-based approach, five databases were searched for articles published in the last 20 years. As development is a 'blurry' term across the literature, the search strategy was intentionally broad. More specifically, the initial search term used was "Hockey" (but not "ball" OR "field" OR "sledge" hockey) to capture as many articles as possible. Following duplicate removal, 6223 articles were extracted. Titles and abstracts were screened according to the following inclusion criteria: a) written in English, b) sample described as male or mixed-sex ice hockey players, c) psychosocial focus, and d) competitive sport sample. Seventy-seven articles were included in the final dataset, and were coded for variables such as study-design, country, sample size, age, psychosocial tool/measurement, and psychosocial foci. The findings highlight that 66% of studies examining psychosocial components of hockey players employ cross-sectional designs, 56% are concentrated in North America, 27% used 201-500 participants, and 36% involve adolescent hockey players (age 12-17). The results identified motivation, anxiety, and depression as the most explored psychosocial foci across the literature. The findings have potential to identify key factors affecting player behaviour both on and off the ice, and inform directions for future research to benefit athletes, coaches, and other stakeholders involved in athlete development.

#### **46. Development of a Concussion Surveillance Tool for Special Olympics Canada using the Nominal Group Technique**

*Kelly Arbour-Nicitopoulos, University of Toronto, Faculty of Kinesiology and Physical Education; Christina Ippolito, University of Toronto, Department of Occupational Science and Occupational*



*Therapy; Megan Wong, University of Toronto, Faculty of Kinesiology and Physical Education; Emma Irwin, University of Toronto, Department of Occupational Science and Occupational Therapy; Giullia Peck, University of Toronto, Department of Occupational Science and Occupational Therapy; Nikoleta Odorico, University of Toronto, Rehabilitation Sciences Institute; Emily Bremer, Acadia University, School of Kinesiology; Nick Reed, University of Toronto, Department of Occupational Science and Occupational Therapy, Rehabilitation Sciences Institute*

Background: Concussions are a serious public health concern, however athletes with intellectual disability are often underrepresented in research. Concussion rates and causes within Special Olympics Canada (SOC) are unknown. Purpose: Co-create a Concussion Surveillance Tool relevant to athletes with intellectual disability and understand the importance of the tool and its items. Methods: A nominal group technique (NGT) was conducted, which allows structured sharing of ideas. Two concepts were considered: 1) concussion-related information to collect, and 2) supports to promote concussion protocol adherence. Participants voted for all final ideas (1=not important to 5=very important) and items that reached 75% consensus were included in the tool. NGTs were recorded, transcribed, and analyzed thematically. Results: Six participants (4 men, 2 women; 41-80 years; 5 coaches, 1 physician) completed the NGT across 3 meetings. Thirty-eight ideas for concept 1 (surveillance) and 36 ideas for concept 2 (supports) were identified. Twenty ideas reached consensus and were included in the tool. Items were collated into four categories: 1) demographics (e.g., concussion history); 2) incident description (e.g., cause of injury); 3) athlete injury description (e.g., symptoms); and, 4) follow-up recommendations (e.g., athlete supports at home). Four themes were identified: 1) gaps in current practice; 2) importance of surveillance items included; 3) helpful medical handover processes; and, 4) considerations for athletes with intellectual disability. Discussion: The Concussion Surveillance Tool will allow SOC and researchers to gather concussion incident information. Use of the tool will improve concussion management and identify gaps where concussion education and prevention can be prioritized.

#### **47. Factors influencing young adults use of public fitness facilities**

*Alyssa Hughes, University of Lethbridge; Alex Engel, University of Lethbridge; Alexa Fowler, University of Lethbridge; Scott Rathwell, University of Lethbridge; Paige Pope, University of Lethbridge*

Among emerging adults (ages 18-25), many individuals fail to meet physical activity guidelines, and the social environments of public fitness facilities (PFFs) may significantly influence their engagement. The purpose of this study was to explore the strength and direction of the relationships between personal and environmental factors with one's use of a PFF. A sample of 450 emerging adults (285 women, 173 men, 9 other) responded to an online survey including demographics, self-efficacy, social physique anxiety, body image, motivations, and perceptions of environmental factors. Three path analyses were conducted using Mplus, examining how personal and environmental factors predicted engagement in general, strength, and cardio zones of PFFs. Results revealed that a range of factors collectively contributed to the models and influenced exercise engagement across general, strength, and cardio zones ( $R^2 = .32 - .47$ )



with coping ( $\beta = .16$ ;  $p < .000$ ), scheduling ( $\beta = .30$ ;  $p < .000$ ), and task self-efficacy ( $\beta = .14$ ;  $p = .005$ ) emerging as the strongest correlates. In contrast, body image factors such as social physique anxiety and discrepancies between perceived and ideal fat or muscle mass were not significant associated with facility use. However, environmental factors such as others lifting heavy weights ( $\beta = -.17$ ;  $p = .017$ ) and experiencing unwanted attention ( $\beta = -.15$ ;  $p = .033$ ) negatively influenced exercise engagement, particularly within cardio-focused gym zones. Ultimately, fostering self-efficacy while minimizing negative social pressures may be key to addressing the psychosocial dynamics within PFFs, and supporting sustained exercise engagement in emerging adults.

#### **48. Learning from Olympic Athletes about their Goals: A Longitudinal Qualitative Study**

*Patti C. Parker, Thompson Rivers University; Amber D. Mosewich, University of Alberta; Lia M. Daniels, University of Alberta*

We examined Olympic athletes' goals and how they unfold over time as they prepare for, compete at, and reflect following, the Paris 2024 Olympics. Managing goals and barriers to goals can be accomplished through goal pursuit, adjustment when needed, and goal setting approaches (Bird et al., 2024; Wrosch et al., 2013). We sought to learn about Olympic athletes' goals with two research questions: (a) What are the athletes' main Olympic goals, and (b) What are barriers and facilitators to goal progress? We interviewed six athletes (5 women, 1 man;  $M_{age}=26.4$  years,  $SD=2.70$ ) 3-4 times over a five-month period, pre, during, and post-Olympic Games. The athletes competed in swimming events representing Canada, Belgium, and the Netherlands. We employed a longitudinal qualitative design to investigate athletes' goals and barriers since they can shift and change over time. Reflexive thematic analysis was used to interpret the interviews. For RQ1, two themes were created reflecting athletes' goals: *Goal type and Social goals*. Goals ranged in type from outcome-focused goals (e.g., placing), process-goals (e.g., focus on technical skills), and just-in-case goals (enjoy-the-moment), and some were social in nature (for accountability, shared goals). For RQ2, four themes conveyed facilitators and/or barriers of goals: *Behavioural strategies* (e.g., break-into-manageable steps), *Cognitive strategies* (e.g., self-regulatory thinking), *Need for balance* (e.g., mental breaks), and *Contextual factors* (e.g., physical health). The findings offer current insights on athletes' goals during their Olympic experience, as well as on various strategies used to facilitate goals, and deal with (un)anticipated and hidden barriers.

#### **49. Measuring Sport Performance: Psychometric Development and Evaluation of The Sport Performance Perceptions Scale - Training (SPPS-T) and - Competition (SPPS-C)**

*Margo E. K. Adam, University of Alberta; Danielle D.L. Cormier, University of Alberta; Amber D. Mosewich, University of Alberta; Rachel L. Duckham, The Royal Melbourne Hospital and Deakin University; Leah J. Ferguson, University of Saskatchewan*

Sport performance is an important and complex multidimensional and context-influenced factor that is often misunderstood or oversimplified. However, sport performance is often haphazardly measured and often assessed through the application of non-sport measures (e.g., Game Performance Assessment Inventory) and/or observable metrics (e.g., time), highlighting a



need for a context-specific perception-based measure. The purpose of this research was to develop and evaluate context-relevant measures of sport performance perceptions. An initial set of 34 items was generated reflecting elements of sport performance perceptions, the Long-Term Athlete Development Model, and athlete/coach health metrics. Athletes ( $N=197$ , women=93, men=102, 2=non-binary gender,  $Age=23.16$ ) from a range of competition levels and sport types, were invited to complete a brief online survey. Athletes ( $n=88$ ) also completed a follow-up of the items 5 to 25 ( $M=18.77$  weeks) weeks later. A set of two, 12-item measures resulted from a Confirmatory Factor Analysis: 1) The Sport Performance Perceptions Scale-Training and 2) The Sport Performance Perceptions Scale-Competition. Model fit indices for Training were  $\chi^2(54)=105.04$ , CFI=.87, TLI=.84, RMSEA=.072, SRMR = .061; and for Competition were  $\chi^2(54)=140.08$ , CFI=.84, TLI=.80, RMSEA=.093, SRMR=.070. Test-retest results for Training Time ( $\alpha=0.77$ ) versus Time ( $\alpha=0.73$ ) were  $r=0.455$ ;  $p<.001$ , while Competition Time ( $\alpha=0.81$ ) versus Time ( $\alpha=0.73$ ) were  $r=0.694$ ;  $p<.001$ . These fit indices, in addition to the test-retest reliability, and ecological, content, and discriminant validity of the measurement, provided compelling evidence for the continued use of the SPPS-T and SPPS-C.

#### **50. Toward evidence-based guidance: Reviewing resources for parents on youth body image**

*Madison F Vani, University of Toronto; Alishba Mansoor, University of Toronto; Landyn Meadows, University of Toronto; Elise Christopoulos, University of Toronto; Fengyue Xu, University of Toronto; Catherine M Sabiston, University of Toronto*

Body image concerns are prevalent among youth in sport and associated with worse sport experiences and dropout. Parents play a key role in children's body image and fostering a positive sport environment but feel inadequately prepared to help, underscoring the need for targeted, evidence-based resources. To inform the development of body image in sport guidelines for parents, we synthesized available resources for parents on youth body image using a scoping review (study 1) and systematic evaluation of online resources (study 2). Study 1: Nine databases were searched from January 1 2014-February 11 2025. Four independent coders screened in duplicate using predetermined criteria. Data were analyzed with descriptive statistics and conventional content analysis. The search yielded 13,204 records and 13 were included. Most articles described programs (54%) or guidelines/recommendations (31%) that included an online text format (92%). Parents were commonly recommended to use modelling, empathetic communication, emotional support, and media exposure limits. Few resources were tailored to adolescents or underserved identity groups. Study 2: Publicly available resources were identified using Google. Four independent coders screened resources and analyzed data using a conventional content analysis. Of 19 publicly available resources meeting inclusion criteria, 58% included references and 21% addressed identity factors beyond gender. One resource was designed for the sport context. Parents were mainly recommended to use modelling, communication, and emotional support. Overall, there are few inclusive, evidence-based tools to help parents support youth body image. Researchers should address adolescent-specific needs and diverse family experiences when developing guidelines for sport.



### **51. Understanding of how safety and risk are negotiated and leveraged in rugby policies**

*Samantha Burelle, York University; Parissa Safai, York University; Karl Erickson, York University*

We promote sport as a safe and healthful activity that is beneficial for development and well-being; yet organized, competitive sport requires individuals (i.e., athletes, coaches, officials, etc.) to expose themselves to and assume certain risk(s). ‘Safe sport’ is the protection of individuals’ rights to participate in sport free of harm or danger via policy, education, and training (Donnelly et al., 2022; Stirling et al., 2023). As a concept, ‘safe sport’ occupies space in public consciousness and carries tremendous emotional and symbolic value. And yet, to date, there has been an absence of critical evaluation of the very concept of safety in sport that is being assumed in safe sport initiatives, policies, and related formal documents. Thus, the purpose of this study is to further explore safety, and by extension, risk, in sport within policies and/or formal documents and to better understand how the two concepts are negotiated, leveraged, and implemented. Thirty sport policies (i.e., Harassment Policy, Rowan’s Law, Anti-Doping Policy, etc.) and formal guiding documents (i.e., Match Official Code of Conduct, Child Protection Incident Report Procedures, Air Quality Guidelines, etc.) were analyzed via Critical Discourse Analysis (CDA). All documents were publicly available and accessed through Rugby Ontario’s website. This study provides both theoretical and practical implications on the nuances and complexities of safety, and by extension, risk, in sport and inform more robust policies and safety practices in rugby, respectively. Ultimately, contributing to the necessary discussions on how to achieve Canada’s goal of a safe sport for all.

### **52. Black steps, strong steps: Are Black adults living with type 2 diabetes meeting the Canadian 24-Hour Movement Guidelines?**

*Kevin Mageto, University of Saskatchewan; Heather J. A. Foulds, University of Saskatchewan;*

*Nancy C. Gyurcsik, University of Saskatchewan; Leah J. Ferguson, University of Saskatchewan*

Black adults living in Canada experience almost twice the prevalence of type 2 diabetes (T2D) observed in their White counterparts. However, little is known about how many achieve minimum physical activity levels recommended by the Canadian 24-Hour Movement Guidelines to manage their T2D. The purpose of this study was to estimate the proportion of Black adults living with T2D in Canada who report achieving the 24-Hour Movement Guideline of 150 minutes of moderate to vigorous aerobic physical activities per week. Between May-August 2024, 186 adults ( $\geq 18$  y) who self-identified as Black, lived in Canada, and reported physician-diagnosed T2D, completed the International Physical Activity Questionnaire–Long Form. Descriptive analysis showed that 38% of the participants ( $n = 71$ ) met the guideline, 33% ( $n = 61$ ) did not, and 29% ( $n = 54$ ) were excluded because key activity data were missing or invalid. The percentage of participants meeting the physical activity guideline more than doubles the 18% national average for Canadians adults overall. Data indicates that many respondents incorporate walking, cycling, household chores, active travel, and physically demanding work—into their daily routines. These findings provide the first population-specific baseline for physical activity among Black adults living with T2D in Canada. Future work should partner with Black communities to learn which cultural practices and daily routines help Black adults living with T2D stay active. Co-creating practical, culturally relevant resources will be an important





step toward helping more Black adults living with T2D reach—and enjoy—the recommended activity levels.

### **53. Mapping non-accidental violence toward sport officials through a scoping review**

*Maria Luisa Pereira Vargas, Memorial University of Newfoundland; Tom Webb, Coventry University; Paul Gorczynski, University of Greenwich; Laura O’Keefe, Memorial University of Newfoundland; David Hancock, Memorial University of Newfoundland*

There is yet to be a focused review and synthesis on non-accidental violence toward sport officials despite a surge in academic enquiry into the topic over the last 25 years. As such, the aim of this review is to examine: (a) Prevalence rates and types of abuse; (b) Perpetrators of abuse; (c) Demographics and risk; (d) Impact of non-accidental violence; (e) Coping; and (f) Organizational support. Articles were screened in March 2025. 32 articles were included in this scoping review with 13 countries and 7 sports represented across the included studies. 43.7% of studies used qualitative methods, and only 4.1% of the total sample were women officials. Sport officials frequently experienced non-accidental violence, in particular verbal abuse, from athletes, coaches, and spectators; with organizations also identified as key contributors to the maintenance of the problem. Non-accidental violence had serious consequences for officials such as depression, low self-esteem, and attrition, particularly those with limited support and coping resources. We recommend future researchers prioritize vulnerable and marginalized sport officiating groups (e.g., young women, LGBTQ+, ethnic minorities), and diversify methodological choices through employing more in-depth qualitative methods and expanding research questions to focus on the mental health impact of non-accidental violence. Finally, researchers may consider an organizational lens—one which examines how structures, norms, and practices within sports organizations contribute to abuse—to ensure the advancement of research and practice in the field.

### **54. Externally valid verbal and non-verbal encouragement: A mixed-method study**

*Edda van Meurs, University of Münster; Margaret Nieto, St. Francis Xavier University; Bernd Strauss, University of Münster; Sebastian Harenberg, St. Francis Xavier University*

Active social influence (e.g., cheering) aims to support athletes by mobilising resources, such as motivation and self-efficacy. Current evidence indicates its performance-enhancing effects. In experimental studies, researchers examined how its application (e.g., with or without cheering) and/or characteristics (e.g., frequency, content) influence sport performance. Unfortunately, these studies often lack external validity because the experimental stimulus features standardised phrases, which are given at regular intervals by experimenters unknown to the participants. This may limit the transferability of the evidence to sport settings. To date, there is a lack of research documenting how verbal encouragement (VE) and nonverbal encouragement (NVE) occur naturally. The present observational study analyses VE and NVE quantitatively and qualitatively to identify whether both VE and NVE become more frequent as the task becomes more demanding. We video-recorded  $N=39$  Canadian hockey student-athletes (49% female,  $M_{age}=20.97$ ,  $SD_{age}=1.91$ ) during their pre-season endurance assessment. The participants worked in pairs: while one was running, the other student-athlete was encouraging

them. The VE and NVE per second were coded, transcribed and analysed using deductive-inductive thematic analysis. As expected, VE and NVE increased over time, indicating an increase in a resource to cope with the demands of the task. The coding framework classified most statements as informational, appraisal or tangible support. The present evidence may inform future experimental research aiming to use more externally valid encouragement stimuli. Moreover, interpersonal differences in encouragement behaviour between male and female athletes are discussed.

### **55.Promoting Fundamental Movement Skills Through Game-Based Intervention Design**

*Danielle Salters, University of Windsor; Emily Chauvin, University of Windsor; Sarah Woodruff, University of Windsor; Sara Scharoun Benson, University of Windsor*

Fundamental movements skills (FMS) represent locomotor, object control, and stability skills required for long-term participation in physical activity. This pilot program delivered a game-based intervention in a lower socioeconomic community and aimed to promote FMS in children (ages 8-12), and to explore instructional strategies employed by volunteers. Instructors ( $N=13$ ) guided children ( $N=30$ ) through an 8-week program, emphasizing 1-2 FMS per session. FMS were assessed pre- and post-intervention through the Test of Gross Motor Development, and instructional strategies were coded using the Instrument for Identifying Teaching Styles. Children who completed the entire intervention ( $N=11$ ) demonstrated improvements in both locomotor (+3.27) and ball skills (+2.91) scores, though not significant. Additional baseline analyses were insignificant. Descriptive statistics demonstrated that boys scored higher in ball skills ( $M_{diff} = 2.06$  points), while girls scored higher in locomotor skills ( $M_{diff} = .77$  points). Older children at baseline scored significantly higher than younger children in ball skills ( $p < .01$ ,  $M_{diff} = 7.99$  points). No significant differences emerged across instructional styles, with no significant associations between FMS and instructional strategies. Locomotor ( $B = -.104$ ) and overall FMS ( $B = -.088$ ) demonstrated slightly stronger associations for instructor-led styles, while ball skills ( $B = .014$ ) demonstrated slightly stronger associations for child-led styles. A lack of significant findings may be attributed to the use of varied instructional approaches. Findings underscore a need for pedagogical training for community instructors, as well as supporting the potential benefits of a game-based program to promote FMS in underserved communities.

### **56.Internalized Body Size Stigma Hinders Adaptation of a Different Body in Virtual Reality**

*Xiaoye Michael Wang, University of Toronto; Delaney E. Thibodeau, University of Toronto; Ali Mazalek, Toronto Metropolitan University; Catherine M. Sabiston, University of Toronto; Timothy N. Welsh, University of Toronto*

Internalized body size stigma contributes to negative body image and can distort how individuals perceive their own body. Virtual reality (VR) offers a potentially novel platform for interventions that alter body representation when the user embodies a virtual body (i.e., an avatar) that is different from their own body. However, the influence of pre-existing body image attitudes on the virtual embodiment process remains unclear. In the present study, we used a body-scaled affordance paradigm to examine how embodying avatars with altered body size (20% smaller, equal, or 20% larger;  $N = 20$  per condition) affects body perception in VR and





how this effect is modulated by body image constructs. Participants completed affordance tasks in physical and virtual environments in which they were presented with an aperture (space between two poles) of varying widths. Participants were asked to determine the minimal apertures they could pass through in both action (walk sideways through adjustable apertures) and perception (visually estimating aperture width) tasks. Affordance ratios were calculated as the ratio of thresholds from the perception and action tasks. These ratios were adjusted for VR-specific distortions and used as indicators of perceived body size relative to one's action capabilities (i.e., the physical/avatar body size). Regression analyses revealed that higher internalized body size bias and body-related guilt were associated with persistent overestimation of body size in VR. These findings highlight that negative body image attitudes and emotions, particularly those linked to body size stigma, may hinder perceptual adaptation to altered body representations in VR.

#### **57. Using the capability, opportunity, and motivation (COM-B) model to understand the readiness of recreational physical activity (PA) professionals to teach wheelchair skills training**

*Jenna Smith, University of Toronto; Kelly Arbour-Nicitopoulos, University of Toronto; Krista L. Best, Université Laval; Ashley Stirling, University of Toronto*

Wheelchair skills training is associated with positive outcomes related to rehabilitation, confidence, and community participation. Unfortunately, the majority of clinicians in Canada do not report delivering wheelchair skills training to their clients due to a lack of time, knowledge, and resources. One solution is to extend training delivery from healthcare settings into recreational PA settings. This study explored the knowledge and preferred learning of PA professionals towards wheelchair skills training in recreational programming. Ten PA professionals (60% female, ages 19-45) participated in an online, 60-minute interview. The interview guide was semi-structured and informed by Michie et al.'s capability, opportunity, and motivation (COM-B) model and Evan et al.'s quality participation framework. Data were hand-transcribed and analyzed using abductive reflexive thematic analysis. Four themes were identified in total, with two themes and one subtheme speaking directly to the capabilities, opportunities, and motivations of PA professionals: *Bring It On* discusses the PA professionals' limited awareness of wheelchair skills training and their motivation to learn more about this resource; *The Basics* describes existing gaps in the PA professionals' capabilities (i.e. familiarity with wheelchair skills) and opportunities (i.e. education on wheelchair use) required to teach wheelchair skills training; and *Let Me Try* outlines the desired learning preferences of the PA professionals towards wheelchair skills training. In summary, PA professionals feel motivated towards learning more about wheelchair skills training; however, they have had limited opportunity to learn about wheelchair use and are not currently capable of teaching wheelchair skills training on their own.

#### **58. Gathering initial content and substantive validity evidence for a scale to measure negativity bias in sport: Leveraging expert review and cognitive interviews**



*Benjamin J. Sereda, University of Alberta; Amber D. Mosewich, University of Alberta; Margo E. K. Adam, University of Alberta; GERALYN R. RUISSEN, University of Alberta*

Negativity bias refers to the disproportionate psychological impact of negative experiences, stimuli, and events compared to those that are neutral or positive. This phenomenon is pervasive across diverse contexts, including sport. Despite relevance to sport, there is an absence of research in sport contexts, including a lack of empirically validated measurement tools. Accordingly, the purpose of this study was to develop and collect initial content and substantive validity evidence for a sport-specific scale to measure negativity bias. There were three sequential stages: (1) initial item generation, (2) expert review, and (3) cognitive interviews. An initial pool of 84 items was developed, guided by negativity bias literature in other domains and previous empirical evidence from the research team. Next, experts ( $N = 12$ ) with PhDs in areas relevant to the scale content evaluated the content validity of the measure, including the content relevance, representativeness, and technical quality. Items were refined in response to the expert feedback. Cognitive interviews were then conducted with competitive athletes ( $N = 14$ ) to gain insight into how they interpreted and responded to scale items (i.e., substantive validity). The interviews involved asking the athletes to verbalize their thoughts as they read and answered each question. Items were refined iteratively between and following interviews. Establishing initial validity evidence through multiple methods is essential for confidence in the scale's readiness for further psychometric evaluation. This project outlines the procedures and importance of expert reviews and cognitive interviews – two often overlooked steps in collecting content and substantive validity evidence, respectively.

### **59. A critical realist exploration of athletic identity in middle-aged adult athletes**

*Derrik Motz, University of Ottawa; Scott Rathwell, University of Lethbridge; Bradley W. Young, University of Ottawa*

Athletic identity (AI), the degree to which one identifies with the 'athlete' role, encompasses properties (i.e., prominence relative to other roles and effects on self-worth) and processes (social reinforcement and self-presentation). While Dionigi (2002) highlighted unique identity considerations of adult athletes, AI research has focused on youth and elite populations, largely overlooking adults. This study explored adult athletes' experiences of AI and the personal, social, and cultural realities attributed to their AIs. Eight adult athletes, aged 45-54, participated in elaborative think-aloud interviews (Koskey, 2016) using Athletic Identity Measurement Scale (AIMS3G; Brewer et al., 2022) items as prompts. Using critical realist thematic analysis (Christodoulou, 2024), participants' experiences were categorized, and causal mechanisms were retrodeduced. Intertwined psychological, social, and structural forces shaped adults' AIs. AIs gained meaning from mastery and well-being, not solely competition. Life roles (parental, professional) challenged the prominence of adults' AIs which necessitated negotiations for time, resources, and responsibilities. Aging forced adults to accept performance declines while resisting narratives of being "too old". To protect their AIs, adults decoupled self-worth from performance and focused on personal growth. They navigated their self-presentation; some felt discomfort presenting with the 'athlete' label, whereas others used it to foster social connections. Finally, AIs were reinforced within supportive sport communities and shaped by



generational gender norms and financial freedom. In contrast to youth/elite athletes' performance-focused AIs, adults' AIs are characterized by continuous negotiations against the forces of aging, competing life roles, and deliberate management of how their AI interacts with their social worlds.

#### **60. Operating under pressure: A scoping review on stress and coping among sports officials**

*Maria Luisa Pereira Vargas, Memorial University of Newfoundland; Ian Cunningham, Edinburgh Napier University; Duncan Mascarenhas, Edinburgh Napier University; Philip Sullivan, Brock University; Megan Holden, Memorial University of Newfoundland; David Hancock, Memorial University of Newfoundland*

Sports officials experience a range of external (e.g., abuse, competition pressures) and internal stressors (e.g., fear of making mistakes). Despite the importance of officials, and their pressurized work environment leaving them susceptible to stress, a thorough review of stress, anxiety, and coping among officials has yet to be conducted. The aim of this review is to map existing research on stress, anxiety, and coping in officials and thereby identify gaps in the literature. Following guidelines by Arksey and O'Malley (2005), four databases were searched for articles that met inclusion criteria. Forty-five articles were included in this scoping review which were conducted across 16 countries and included diverse samples in terms of officiating level and age. However, of the total 9,948 participants, only 7.9% were female. Synthesized article findings highlighted that officials experience multiple stressors which were situational, relational, and/or organizational in nature. Officials attempted to combat stress and anxiety through various coping strategies, but approach-coping was deemed to be the most useful. The consequences of stress, anxiety, and an inability to cope included poor decision making and performance, burnout, and intentions to quit. Although findings present valuable insights into stress and coping in officials, 37% of research was conducted pre-2000, meaning the current body of literature may not reflect how stress is experienced by sports officials in modern sporting environments. Future research should broaden study scope and examine contemporary pressures (e.g., social media scrutiny, professionalization of sport, the growth in female sports) which can influence stress and coping.

#### **61. Beyond the Scale: Exploring Women Athletes' Weight Perceptions and Well-being**

*Grace Spilchak, University of Alberta; Amy Alex, University of Alberta; Margo E.K. Adam, University of Alberta; Leah J. Ferguson, University of Saskatchewan*

Women athletes often navigate a complex interplay between performance demands and societal appearance ideals, which can influence their psychological well-being. This study investigates weight perceptions among women athletes, focusing on discrepancies between actual and ideal weights and in relation to well-being. Women athletes ( $N=170$ ) aged 14 -39 ( $M=22.14$ ,  $SD=4.88$ ) from a range of sports were surveyed. Data was analyzed using correlations, independent t-tests, and regression analyses to examine relationships between weight discrepancy and well-being indicators. Results revealed that younger athletes experienced greater weight discrepancies ( $r= -0.343$ ,  $p < .001$ ) — these discrepancies were associated with lower levels of body appreciation ( $r=-0.451$ ,  $p<.001$ ), intuitive eating ( $r=-$



0.275,  $p=.007$ ), and self-compassion ( $r=-0.300$ ,  $p=.003$ ). Separately, athletes who reported having an ideal weight had lower body appreciation ( $M=3.66$  vs  $4.15$ ,  $p<.001$ ,  $d=0.71$ ), intuitive eating ( $M=3.35$  vs  $3.58$ ,  $p<.001$ ,  $d=0.49$ ), and self-esteem ( $M=2.56$  vs  $2.96$ ,  $p=.01$ ,  $d=0.40$ ) with higher self-criticism ( $M=5.38$  vs  $4.76$ ,  $p=.04$ ,  $d=-0.32$ ). This study highlights that holding an ideal weight might create barriers to reaching one's potential and well-being in sport and that a shift away from weight ideals is needed in sport culture.

## **62. How Athletes' Self-Construal Shapes Perceptions of Cohesion**

*Mackenna Schiavo, University of Windsor; Todd M Loughhead, University of Windsor; Krista J Munroe-Chandler, University of Windsor*

Self-construal—how individuals perceive their sense of self to others (Markus & Kitayama, 1991)—may play a significant role in shaping athletes' perception of team cohesion. Independent self-construal emphasizes autonomy, personal goals, and internal attributes, while interdependent self-construal stresses social connectedness, relational roles, and group harmony (Markus & Kitayama, 1991). While much of the research on cohesion highlights external influences such as leadership, less attention has been given to how athletes' self-perceptions influence cohesion. Carron et al.'s (1985) model of cohesion distinguishes between task and social dimensions at both the individual and group level. These dimensions may align with athletes' dominant self-construal: those with independent self-construals may gravitate toward task-based involvement (e.g., Individual Attractions to the Group-Task), whereas those with interdependent self-construals may resonate more with social and relational aspects of cohesion (e.g., Group Integration-Social). This study examined the relationship between self-construal and cohesion in 278 athletes from various team sports. Participants completed the Self-Construal Scale (Singelis, 1994) and the Group Environment Questionnaire (Carron et al., 1985). The results showed that interdependent self-construal was a strong predictor of all four cohesion dimensions ( $\beta = .276$  to  $.532$ ). Independent self-construal also positively predicted cohesion, but with smaller effects ( $\beta = .073$  to  $.206$ ). These findings suggest that athletes who see themselves as interconnected with others are more likely to experience stronger perceptions of cohesion. Understanding self-construal may offer coaches and mental performance consultants insight into how to better foster both task and social bonds within teams.

## **63. "The Ultimate Girl's Day Out"?: An exploration of consumerism, womanhood, physical activity, and health as communicated through the National Women's Show – Montreal**

*Lindsay Duncan, McGill University; Olivia Feng, McGill University; Katelyn Forner, McGill University; Jade Bailey, McGill University; Alexa Tiramola-Pugh, McGill University; Erika Spagnuolo, McGill University; Chelsea Murray, McGill University*

The National Women's Show, held annually in six Canadian cities, is marketed as "the ultimate girl's day out," confronting attendees with a multitude of messages about health, wellness, fitness, and beauty. As these concepts are increasingly marketed as inseparable ideals for women, it is essential to critically examine how such narratives are constructed and communicated. This study explored how the National Women's Show – Montreal constructs



cultural narratives about consumerism, womanhood, health, and the role of physical activity within them, and what implications these narratives hold for women's identities. We conducted a critical, collective, event ethnography in which six researchers attended the first day of the 3-day event and engaged with its activities. Data sources included photographs, product samples, pamphlets, reflexive field notes, website and social media screen captures, and post-event team discussions. An ethnographic content analysis was conducted using a constant comparison method. The narratives observed were strongly rooted in neoliberal feminist ideals equating health with beauty, youthfulness, and weight (loss) and promoting consumerism as a means to achieve normative femininity. We identified three key subject positions: (a) the (dis)empowered woman, where empowerment is achieved through bodily regulation and self-discipline; (b) the naïve woman, who is assumed to want to "be healthy and active" but lacks the knowledge to do so; and (c) the booked and busy woman, who is targeted with quick, efficient (but not joyful) solutions to meet beauty and wellness goals. These findings underscore the need to challenge reductive, gendered health narratives in commercial spaces.

#### **64. Who Keeps Playing? A Retrospective of Sport Participation in Childhood to Predict Participation in Adulthood**

*Melanie Gregg, The University of Winnipeg; Sarah Teetzel, University of Manitoba*

The Long-Term Development in Sport and Physical Activity 3.0 framework guides the organization of sport in Canada. Evidence is required to support the framework's assumption that a multisport approach in youth has positive outcomes on adult physical activity participation. Participants were 323 Canadian adults aged 18-60 ( $M_{age} = 32.92$  years;  $SD = 12.51$ ) who completed online questionnaires assessing quality sport experiences, personal meaning of sport participation and sport participation profiles at both age 12 and in adulthood. Those who engaged in a greater variety of activities at age 12 played sports for the challenge ( $r = .24, p = .001$ ) and were likely to participate in a greater variety of activities in adulthood ( $r = .70, p = .001$ ). Participants who valued sport for social bonding at age 12 participated in mostly unorganized activities where they could play with neighborhood friends ( $r = .16, p < .05$ ), that relationship did not hold for adulthood when most adults participated in individual physical activities on their own. Those who participated in organized sport at age 12 were most likely to participate in organized sport in adulthood ( $r = .47, p = .001$ ). Reasons for physical activity and sport participation shift from childhood to adulthood. What seems to be most important for determining physical activity participation in adulthood is having opportunities for sport participation during childhood that are good quality, supported by families, having friends who participate, and having choice in activity whether that is specialized or sport sampling.

#### **65. "You can just be in your body how it is": Queer embodiment and resistance in physical activity**

*Jade Alexandra Bailey, McGill University; Erika Spagnuolo, McGill University; Lindsay Duncan, McGill University*

Despite growing attention to the role of embodiment in sport and exercise psychology, limited research has examined how queer cis- and transwomen experience embodiment within



physical activity (PA) contexts. This gap in the literature reflects a broader pattern of exclusion that renders queer women invisible in spaces that reinforce heteronormative and binary gender ideals. Understanding how queer women navigate the constraints of these norms is essential for designing inclusive PA and sport environments that promote embodiment and support gender and sexual diversity. As such, the purpose of this study was to explore how queer women experience, negotiate, and describe embodiment through PA in the context of both normative pressures and liberatory possibilities. We conducted semi-structured interviews with 16 participants (15 cisgender women, 1 transfemme nonbinary individual) and analyzed them using reflexive thematic analysis. Three overarching themes were constructed: (1) *Reclaiming the Body* captured how participants used movement to resist objectification, engage in gender-affirming practices, and cultivate self-connection; (2) *Fitting In, Working Out* explored how heteronormative PA spaces facilitated disembodiment, assimilation, and queer erasure; and (3) *Sweating in Solidarity* illuminated how collective visibility and queer-specific fitness spaces fostered joy, pride, and resistance. Findings demonstrate how PA can be both a site of marginalization and empowerment. Further, findings emphasize the importance of disrupting heteronormative frameworks that uphold rigid and binary constructions of gender. This study contributes to emerging conversations about queer embodiment and calls for the creation of inclusive movement spaces as well as intersectional, identity-affirming approaches in sport and exercise psychology.

#### **66.The Fine Line Between Trust and Trauma: Athlete Perspectives on Coach Abuse in Canadian University Sport**

*Sophia Milner, Kinesiology, Nipissing University; Dr. Tracey Curwen, Psychology, Nipissing University*

Abuse in sport has been widely documented; however, despite recent media attention on coaches abusing university athletes (USports), there is little published research on this issue. USports athletes are uniquely vulnerable to abuse from coaches because of their financial, academic, and lifestyle influences. Due to the general lack of research and the fact that most evidence is based on American samples, this study examined coaches' behaviours toward Canadian university athletes, using self-reported experiences of current and former USports competitors. A total of 145 USports athletes (68 past, 77 current) anonymously completed an online questionnaire designed to assess their experiences of coaches engaging in athlete-directed emotional, physical, sexual, and neglectful behaviours. Additionally, participants completed the Coach-Athlete Relationship Questionnaire (CART-Q), and shared personal experiences and examples. Quantitative analyses revealed that most athletes were exposed to (witnessed or experienced) at least one coach who engaged in abusive behaviour and, in fact, many participants reported repeated exposure to multiple types of abusive behaviours. Comparing responses from current and former athletes revealed both similarities and differences in their abuse experiences. Perceived coach-athlete relationships was a factor in athletes' views of their coaches' behaviours. Qualitative data revealed themes of normalization, fear of speaking out, and organizational silence. This study, combined with the existing evidence, leaves little doubt that coach-abuse of athletes is a prevalent and multifaceted issue;





therefore, USports may benefit from further abuse-related targeted policies, enhanced athlete protections, and additional coaching focused education and training.

### **67. Mindfulness, Self-Compassion and Grit: Canadian Student-Athlete Perspectives on their Path to Success**

*Cedric Ralph, Saint Mary's University; Quinn MacDonald, Saint Mary's University; Marc Patry, Saint Mary's University*

The field of sports psychology has long examined how athletes cope with the unique stressors of sports. Student-athletes face these demands alongside the additional pressures of academics. While research on self-compassion has focused on its role in reducing self-criticism and psychological distress while enhancing well-being, little is known about how self-compassion may support an athlete's sustained interest and perseverance in sport, commonly referred to as grit. Self-compassion, a self-attitude involving mindful awareness of personal suffering, kindness toward oneself, and recognition of shared humanity, has been linked to greater self-control and adaptive goal pursuit. The present study explored the relationship between self-compassion and grit in varsity student-athletes at Saint Mary's University (N = 51). Participants completed questionnaires assessing self-compassion, mindfulness, grit, fears of compassion, well-being, and perceived performance. We hypothesized that mindfulness would mediate the relationship between self-compassion and grit, providing insight into processes that support sustained motivation in sports. Findings revealed a moderate positive relationship between mindfulness and self-compassion and a moderate negative relationship between mindfulness and self-criticism. While the hypothesized mediation model did not entirely fit the data, additional analysis revealed other variables potentially influencing grit.

### **Friday October 3<sup>rd</sup>**

#### **Sessions #1 (Friday Oct 3<sup>rd</sup>, 8:00-9:15 AM)**

##### **Session 1A: Exercise, Disability, and Chronic Disease**

#### **Reallocating daily movement behaviours and psychological distress: Disproportionate impacts for university students with disabilities**

*Roxy H. O'Rourke, University of Toronto; Jenna D. Smith, University of Toronto; Ross M. Murray, University of Toronto; Catherine M. Sabiston, University of Toronto*

University students experience elevated psychological distress, and experiencing a disability may amplify that risk. While physical activity, sleep, and sedentary behaviour are linked to mental health, limited research has examined how reallocating time between these behaviours affects distress, particularly for students with disabilities. Grounded in time-use epidemiology principles, this study examined how reallocating time among daily movement behaviours relates to psychological distress and whether associations differed by disability status. Data were drawn from the Canadian Campus Wellbeing Survey (N=4472; 7% disabled;  $M_{age}(SD)=22.6(5.1)$ ). Isotemporal substitution models estimated effects of replacing 10





minutes/day of moderate-to-vigorous physical activity (MVPA), sedentary time, or sleep with another behaviour on psychological distress, measured using the Kessler Psychological Distress Scale (K10). Interaction terms tested whether effects differed by disability status. Replacing sedentary time with sleep ( $\beta=-0.15$ ,  $SE=0.017$ ,  $p < .001$ ) or MVPA ( $\beta=-0.07$ ,  $SE=0.025$ ,  $p=.005$ ) was associated with significantly lower distress. Replacing sleep with sedentary time ( $\beta=0.15$ ,  $SE=0.017$ ,  $p<.001$ ) or MVPA ( $\beta=0.08$ ,  $SE=0.030$ ,  $p=.006$ ) and replacing MVPA with sedentary time ( $\beta=0.07$ ,  $SE=0.024$ ,  $p=.004$ ), were associated with increased distress. Two significant interactions showed stronger negative effects of sedentary time for students with disabilities: replacing MVPA (interaction:  $\beta=0.063$ ,  $SE=0.024$ ,  $p=0.008$ ) or sleep (interaction:  $\beta=0.061$ ,  $SE=0.025$ ,  $p=0.014$ ) with sedentary time were more strongly associated with distress. These results highlight students with disabilities as an at-risk group. For exercise psychology, they highlight the need for inclusive, accessible, theory-informed interventions targeting sedentary time to promote mental health equity.

### **Investigating The Interaction between Physical Fitness and Executive Function among Children and Youth with Developmental Disabilities**

*Mikayla Bottomley, Acadia University; Dr. Emily Bremer, Acadia University*

Background: Executive function refers to a set of top-down mental processes recruited to elicit goal-directed behaviours. People with developmental disabilities typically experience challenges with executive function. Previous research supports the use of physical activity-based interventions for improving executive function, but few studies have investigated the relationship between physical fitness and executive function directly. Purpose: This study explored whether physical fitness was associated with executive function for people with developmental disabilities throughout a 16-week adapted physical activity program. Methods: Participants ( $n=45$ ) in this study were between 4 and 24 years old with any developmental disability, and enrolled in the Acadia S.M.I.L.E. Program. Physical fitness was measured using a composite score generated from grip strength, the 2-minute walk test, and standing long jump data. Executive function was measured using the NIH Toolbox Flanker Inhibitory Control and Attention Test. A linear mixed-effects model assessed the interaction between physical fitness and executive function over four time points (baseline, pre-, post-, and follow-up). Results: Findings show a positive relationship between higher physical fitness and better executive function, although statistical significance was not reached ( $p=0.309$ ). Further, while executive function did not change significantly over time, findings showed a trend toward delayed improvement near follow-up ( $p=0.052$ ). Discussion: Although not statistically significant, the trend toward delayed improvement in executive function near follow-up testing supports the continued exploration into adapted physical activity programs for enhancing executive function for people with developmental disabilities.

### **Movement Behaviours of Post-Secondary Students Experiencing Disabilities**

*Marley A. R. S. Mullan, Queen's University, School of Kinesiology and Health Studies; Ian Janssen, Queen's University, School of Kinesiology and Health Studies, and Department of Public Health Sciences; Shane N. Sweet, McGill University, Department of Kinesiology and Physical*



*Education & Center for Interdisciplinary Research in Rehabilitation of Greater Montreal; Amy E. Latimer-Cheung, Queen's University, School of Kinesiology and Health Studies; Jennifer R. Tomasone, Queen's University, School of Kinesiology and Health Studies*

Little data exists regarding health behaviours of post-secondary students experiencing disabilities. The purpose of this study was to explore associations between disability and movement behaviours ([MB]; physical activity, sleep, sedentary behaviour, and screen time) among students attending post-secondary institutions across Canada. A secondary data analysis was conducted using data from the online Canadian Campus Wellbeing Survey Fall 2020 to Winter 2023 cycles ( $n=69,239$ ). Associations between disability experience (physical, blind/visual impairment, Deaf/hard of hearing, neurological) and adherence to MB recommendations were determined using log-binomial regression, after controlling for several confounders (e.g., age, gender, domestic/international status, etc.). Participants experiencing disabilities were 17% (95% CI: 12-23%) less likely to meet all MB recommendations than participants not experiencing disabilities. Participants experiencing physical disabilities were 6% (95% CI: 4-9%) less likely to meet physical activity recommendations than persons not experiencing physical disabilities. Adherence to MB recommendations did not differ among participants experiencing Deafness/hard of hearing and participants not experiencing Deafness/hard of hearing (Prevalence Ratios of 0.94-1.06,  $p>.05$ ). Participants experiencing blindness/visual impairments were 13% (95% CI: 2-22%) less likely to meet screen time recommendations than participants not experiencing blindness/visual impairments. Persons experiencing neurological disabilities were 18% (95% CI: 12-23%) less likely to meet all MB recommendations than persons not experiencing neurological disabilities. Significant relationships were not observed between number of disabilities experienced and adherence to MB recommendations (Prevalence Ratios of 0.82-0.88,  $p>.05$ ). Findings highlight the need for meaningful programs/resources promoting MB among post-secondary students experiencing disabilities.

#### **Nature in Motion – Physical activity levels of children with disabilities at an outdoor childcare center.**

*Alessia Capone, University of Toronto; Maeghan E. James, Children's Hospital of Eastern Ontario Research Institute; Louise de Lannoy, Canadian Centre for Outdoor Play; Paula ter Huurne, Canadian Centre for Outdoor Play; Amy Jo Smith, Canadian Centre for Outdoor Play; Kelly P. Arbour-Nicitopoulos, Faculty of Kinesiology and Physical Education, University of Toronto*

Background. Outdoor spaces offer physical activity (PA) opportunities for young children which promotes confidence, self-regulation, and risk taking. Supporting PA for children with disabilities outdoors may lead to children's increased autonomy in active play, affecting PA throughout life. The purpose of this study is to compare how PA participation of children with and without disabilities compare in an outdoor environment. Methods. This study occurred in a naturalized outdoor childcare centre which promotes outdoor play by providing daily access to play sites, within a forest, designed by early childhood educators. Children's play was observed using a chest harness GoPro-camera. Observation time was varied (7-64 mins of play time) due to personal or psychological needs (e.g., bathroom use). Six children with disabilities and six age



matched peers without disabilities wore cameras during the same play session. A modified OSRAC-DD protocol was applied to video data to classify the PA levels as: (1) stationary, (2) trunk and Limbs, (3) slow/easy movement, (4) moderate movement, (5) fast movement. Videos were coded in duplicate and analyzed in SPSS. Results. Both groups of children took part most in trunk and limbs PA (35.9% and 43.8% of the time, respectively), and least often in fast movement PA (2.9% and 1.5%, respectively). There were no significant differences in PA levels between groups. Conclusion. Results suggest that outdoor play may create similar PA opportunities for children with and without disabilities. These findings will inform a qualitative analysis of play experiences across PA levels in natural spaces.

**“Good for my body. Good for my soul.”: Exploring Older Adults Living with Chronic Disease(s) Experiences with Community Based Exercise Programming**

*Alia Mazhar, University of Toronto; Micheline Senia, University of Windsor; Sean Horton, University of Windsor; Joe Baker, University of Toronto*

Longer lifespans are associated with increased risk of developing chronic diseases (CD). However, exercise can delay the onset of and promote the management of CD symptoms. One avenue for older adults to pursue exercise is through community-based exercise programs (CBEP). Unfortunately, engagement with and adherence to such programs is a poorly understood area. To combat this, researchers (and practitioners) require a more comprehensive understanding of the experiences of older adults as they pursue such activities. The present study discusses findings from one partner organization offering a CBEP. In total, 11 individuals (9 female, 2 male) participated in virtual semi-structured interviews conducted between March 2022 and July 2023. During this time, the limitations imposed by the COVID-19 pandemic had prompted organizations to provide virtual synchronous exercise classes. Interviews were transcribed verbatim, and transcripts were coded using reflexive thematic analysis. Three major themes were identified: *Characteristics of the adapted CBEP contributing to a positive experience*, *Features specific to the online format that impact participation*, and *“You can’t do it alone”: The perspective of exercise engagement beyond the program*. The central concept uniting these themes was that participant experiences were shaped by the need for guidance and relatedness. Our work suggests participants will have a positive experience when virtual synchronous exercise programs are delivered by individuals who are competent (i.e., can tailor exercise programming), professional, and personable. This study contributes to our understanding of older adults’ experiences in CPEB and enhances our understanding of factors related to adherence.

Session 1B: Group Dynamics

**Leader humility and group cohesion in interdependent sport teams**

*Anthony Griffo, Wilfrid Laurier University; Mark Eys, Wilfrid Laurier University*

Cohesion is a multidimensional construct that concerns group members’ perceptions of unity relative to task objectives and interpersonal relationships (Eys & Beauchamp, under review). The importance of cohesion in sport may be inferred through associations with key individual



(e.g., role commitment; Coleman et al., 2021) and group-oriented correlates (e.g., collective efficacy; González-Ponce et al., 2015). Coaches are critical toward developing cohesion as their behaviours influence group dynamics (Juntumaa et al., 2007). Coaches who possess *humility* may be influential by accepting feedback, appreciating others' abilities, and maintaining an accurate self-view. Leaders' expression of humility may also be associated with their group's expression of this characteristic (i.e., *collective humility*; Owens & Hekman, 2016). The present study aimed to determine if athletes' perceptions of coach humility relate to group cohesion mediated by collective humility. Athletes' ( $N = 259$ ; 126 females;  $M_{age} = 17.52$ ) perceptions were obtained at two points in their competitive season, approximately six weeks apart ( $M_{days} = 47.29$ ). Two mediation analyses were conducted using the PROCESS macro (model 4) to examine if the relationship between leader humility and cohesion (i.e., task and social) was mediated by collective humility. Results indicated that leader humility was associated with both task (standardized  $IE = .21$ ,  $SE = .04$ , 99%  $BCIs$  [.09, .33],  $p < .001$ ) and social cohesion (standardized  $IE = .14$ ,  $SE = .03$ , 99%  $BCIs$  [.06, .22],  $p < .001$ ), mediated by collective humility. These results suggest that coach and collective humility were salient perceptions relative to athletes' perceptions of team cohesion.

### **The relationship between positional competition and social identity in Canadian student-athletes: Differences between starters and non-starters**

*Sebastian Harenberg, St Francis Xavier University; Chaslynn MacLeod, St Francis Xavier University*

Defined as teammates vying for the same limited playing time in a position, positional competition is an omnipresent process in high performance teams. Harenberg and colleagues (2021) proposed a framework of positional competition which suggests it sharing relationships with various group dynamics concepts. One of such concepts is social identity, which can be seen as the sense of self based on a group membership. The relationship between positional competition and social identity within team sports has yet to be examined, which was the purpose of the present study. One hundred and eighty-one student-athletes (female  $n=80$ , age  $mean = 20.11$ ,  $SD = 1.52$ ) from an Eastern Canadian university completed a questionnaire measuring positional competition (PCTSQ,  $\alpha = .69-.88$ ) and social identity (SIQ,  $\alpha = .69-.88$ ). The results revealed that the dimensions of positional competition predicted between 16.5% and 35.3% of the variance of social identity. When split between starters and non-starters, the explained variance of ingroup ties was 37.8% for starters and only 19.5% for non-starters. For ingroup affect, the explained variance was 34.7% for starters and 43.2% for non-starters. For starters, effort to improve and coach recognition were significant predictors in both regressions. Push by teammate and communication were significant predictors for non-starters. The findings suggest that positional competition and social identity share a strong relationship, which may be experienced differently within subgroups (e.g., starters/non-starters). Mental performance consultants and coaches may find this information valuable as both variables are important contributing factors to team functioning.



### **The intersection of coach- and parent-initiated motivational climates toward cohesion in youth sport**

*Taylor Coleman, Wilfrid Laurier University; Mark Eys, Wilfrid Laurier University*

Social agents are instrumental in the development of a team's motivational climate (Keegan et al., 2014). Coaches can initiate performance and/or mastery climates in youth sport, which have subsequent effects on cohesion (Eys et al., 2013). Parents also create climates that impact athlete perceptions (e.g., perfectionism; Appleton et al., 2011). Notably, coach and parent initiated motivational climates do not occur in isolation from one another. As such, the current project examined the intersection of coach- and parent-initiated motivational climates relative to athlete perceptions of cohesion in youth sport. Athletes ( $N = 96$ ; 37 girls;  $M_{age} = 15.17 \pm 1.59$ ) on 10 interdependent sport teams (e.g., basketball) completed surveys assessing parent- and coach-initiated motivational climates and cohesion during their season. Cluster analyses (hierarchical and K-cluster procedures) were used to identify 5 distinct motivational climate profiles representing various combinations of parent and coach-initiated motivational climates. Via MANOVA, we identified that the clusters broadly differed in perceptions of task and social cohesion,  $\Lambda = .78$ ,  $F_{(8,172)} = 2.87$ ,  $p < .01$ ,  $\eta p^2 = .12$ . The cluster of participants who perceived high coach and parent mastery climates yielded the strongest perceptions of cohesion, while participants in clusters who perceived high coach performance climate (without equivalent mastery climate perceptions from either source) resulted in the lowest perceptions of cohesion. This study provides insight into the interactive effects of coach and parent influence in the youth sport environment and its implications for an emergent state critical for teammate relationships and team success.

### **Exploring Sense of Community Characteristics Among Canadian Masters Swimmers: An Interpretative Phenomenological Analysis**

*Catalina Belalcázar, University of Ottawa; Dr. Bettina Callary, Cape Breton University; Dr. Bradley W. Young, University of Ottawa*

A Sense of Community (SOC) promotes sustained engagement and well-being in sport. With growth in adult sport participation and emerging insights into unique psychosocial dynamics among older athletes (Callary et al., 2021), understanding SOC experiences is critical for enhancing effective coaching and programming. This study, informed by SOC conceptual frameworks (McMillan & Chavis, 1986; Warner & Dixon, 2013), explored how coached adult swimmers experienced SOC in a Canadian Masters (adult) swim club, examining perceived community characteristics derived from their involvement. It addresses a significant gap by investigating SOC in Masters-level sport contexts. Data were collected over 11 weeks, including 12 in-pool and 9 dryland observations of athletes and coaches to contextualize swimmers' experiences, researcher reflections, and two semi-structured interviews per swimmer (ages 60–78,  $n=8$ ). Interpretative Phenomenological Analysis guided a detailed idiographic and cross-case analysis, focused on swimmers' unique interpretations through iterative coding and theme development to deeply explore the meanings they attributed to characteristics of community. Results identified four characteristics fostering SOC: *Comfortable and Relaxed Relationship-Building, Traditions and Norms, Adult-Oriented Adaptations and Coaching, and Collaboration*.



Findings highlight that SOC in adult sport clubs is established through intentional relationship-building activities and supportive club traditions, with coaching approaches explicitly adapted to adult athletes' needs, and collaborative organizational practices promoting fairness and shared responsibility. Implications include the need for tailored coaching and structural practices designed to foster meaningful community connections in adult sport settings, as means to support older athletes' psychosocial well-being and enhance athlete retention.

**Come to consensus even on the small things: First results of an instrumental case study into group decision-making in elite mountaineering**

*Svenja A. Wolf, Florida State University; Anna E. Bergauer, Technical University of Munich; V. Vanessa Wergin, The University of Queensland*

Although groups provide their members with numerous benefits, they can entail drawbacks such as inaccurate decision-making (Janis, 1972; Myers & Lamm, 1976). A physical activity context in which both groups and decisions are prevalent – and where inaccurate decisions have severe consequences – is mountaineering (Burnette et al., 2011). However, we know little about the ways in which groups make decisions in these dynamic and uncertain environments and which factors discriminate between success and failure – or survival and death. Operating from a relativist-subjectivist position (Thorpe & Olive, 2017), leaning on the conceptual framework for sport teams (Eys et al., 2020) and IGLOO model of ecological nesting (Nielsen et al., 2018), we conducted an instrumental case study (Hodge & Sharp, 2017) of one male expedition training squad (3 coaches, 9 athletes) to advance our understanding of the phenomenology, consequences, and influences of group decision-making at the (aspiring) elite level of mountaineering. Analyses of participants' daily questionnaire responses (<https://tinyurl.com/2r5syb5m>) across a five-day course of big wall climbing in the Dolomites show that most group decisions were unexpected but of moderate complexity and consequentiality and taken either by delegation to one member or group consensus. In turn, more group consensus and less member delegation related to higher athlete- and coach-rated decision quality whereas greater psychological safety related to higher decision satisfaction. To us, this suggests that mountaineering groups should pay attention to the processes with which they make even small decisions to ensure maximum decision quality, satisfaction, and ultimately safety.

Session 1C (Motor Learning and Control Symposia): Honoring the Legacy of Dr. Eric Roy

**Lead Abstract: Honouring the Legacy of Dr. Eric Roy**

*Pamela Bryden, Wilfrid Laurier University; Digby Elliott, McMaster University; Dave Westwood, Dalhousie University; Sara Scharoun, University of Windsor; Geneviève Desmarais, Mount Allison University; James Tung, University of Waterloo; Linda Rohr, University of Windsor; Dave Gonzalez, Dalhousie University*





Dr. Eric Roy's pioneering research in neurocognitive and neuromotor mechanisms has left an indelible mark on the field of movement science and clinical neuropsychology. His work explored how movements are learned and controlled, focusing on both healthy individuals and those with neurologic disorders such as stroke, Alzheimer's disease, and Down syndrome. With a particular emphasis on aging, he examined disruptions in prehension, movement sequencing, limb gesturing, and tool use, shedding light on the complex interplay between cognition and motor function. A central theme of Dr. Roy's research was understanding manual asymmetries in performance and their relationship to hand preference. His groundbreaking work on apraxia led to the development of a cognitive neuropsychological model that identified disruptions in gesture production and linked them to specific brain lesions. Additionally, his applied research on concussion and traumatic brain injury extended beyond academia, influencing real-world practices in sports safety. As a consultant to Ontario Hockey League teams and an advisor to the Ontario Brain Injury Association, he played a key role in shaping concussion protocols and return-to-play guidelines, contributing to a national initiative on concussion awareness and prevention. Beyond his research, Dr. Roy was a devoted mentor and advocate, inspiring the next generation of scientists and clinicians. This symposium honors his lasting contributions, celebrating his profound impact on research, mentorship, and service, and ensuring that his legacy continues to guide the field forward.

**Abstract #1: Eric Roy's academic legacy: The early years**

*Digby Elliott, McMaster University*

In 1967, Eric began his academic journey as an undergraduate student in the Department of Kinesiology at the University of Waterloo. His undergraduate mentor was Ian Williams, and together they published Eric's BSc thesis work in the *Journal of Motor Behavior*. Eric pursued his Master's at UBC where he worked with Bob Schutz and Ron Marteniuk. With Bob, Eric published his classic measurement paper "Absolute error: A devil in disguise", and with Ron, and others, a number of important papers on motor short-term memory – a hot topic in the 1970's. Eric developed his interest in neuropsychology when he returned to Waterloo for his PhD and clinical training in Psychology. Here, he worked with people like Ernie MacKinnon and Phil Bryden. As an assistant professor in Kinesiology at Waterloo, Eric expanded his research repertoire beyond traditional motor control/learning work to include the study of apraxia and neuropsychological issues related to cerebral organization, handedness and lateral performance differences in limb control. Throughout his career Eric's basic and clinical work were complementary. They were driven by the premise that we can learn about typical movement by studying its breakdown. Conversely, movement disorders are best examined in the context of basic models of information and neural processing. His approach is evident in his work on apraxia, stroke, Down syndrome and Parkinson's disease. I will discuss his early studies on manual asymmetries as well as the influence of his apraxia model on our work with Down syndrome.





**Abstract #2: Celebrating Eric Roy's research advances in understanding the performance differences of the two hands: the preferential reaching task.**

*Pamela Bryden, Wilfrid Laurier University*

This talk celebrates Dr. Eric Roy's foundational contributions to motor behaviour and lateralization, focusing on his innovative work on manual asymmetries and the development of the preferential reaching task. The preferential reaching task has become a cornerstone for investigating hand preference and the dynamics of lateralized motor control. By systematically varying object location and observing spontaneous hand choice, the task provides a sensitive and nuanced measure of how spatial, cognitive, and motor factors interact to influence hand selection. Dr. Roy's and his students' work validated the preferential reaching task methodology and approach, demonstrating its versatility across age groups, task complexities, and experimental contexts. His research showed how handedness is not a fixed trait, but one that situational demands and the spatial layout of the environment can modulate. Over the past 25 years, the preferential reaching task has evolved, incorporating advances in motion tracking and neuroimaging. These developments have deepened our understanding of lateralization in typical and atypical populations, including individuals with neurological conditions or developmental differences. As we reflect on Dr. Roy's enduring legacy, this presentation will trace the evolution of the preferential reaching task from its inception to its current applications in developmental psychology, neuroscience, and rehabilitation. Dr. Roy's contributions have shaped a methodological paradigm and inspired generations of researchers to explore the complexities of manual asymmetries with rigour and creativity.

**Abstract #3: Celebrating Eric Roy's research advances in apraxia: uncovering pathways to action and apraxia typologies.**

Matthew Heath, University of Western Ontario

Dr. Eric Roy's apraxia research (i.e., a disorder of learned, skilled purposeful movement) is distinguished and internationally recognized by both basic and clinician scientists. In fact, Dr. Roy's collaborative research with clinician Dr. Sandra Black provided important advancements in the diagnosis and identification of apraxia. This presentation will focus on three facets of Dr. Roy's apraxia research. First, I will discuss how Dr. Roy's understanding of the kinematics of reaching and grasping led to the development of a multi-dimensional scoring system that advanced the resolution of apraxia diagnosis beyond simple gesture recognition systems. Second, Dr. Roy's research employed gesture pantomime and imitation evaluation to understand distinct pathways to action and to better understand apraxia typologies (e.g., ideational vs. ideomotor). Third, Dr. Roy's career-long interest in manual performance and preference asymmetries translated to his apraxia research and provided an evidence-based approach indicating distinct apraxic movement deficits arising from unilateral left and right hemisphere stroke. This approach in movement disorders stimulated interest and continuing discoveries among Dr. Roy's graduate students pursuing research in theoretical, experimental and clinical neuropsychology/neurology.



#### **Abstract #4: The pioneering work of Dr. Eric Roy: Blending clinical and research approaches**

*Dave Gonzalez, Dalhousie University*

Today's knowledge of apraxia and advocacy for better concussion testing/management has been greatly influenced by Dr. Eric Roy. This presentation will describe Eric's clinical influence on the approaches he took to study apraxia, how to better understand concussion management, and lastly how he influenced my personal clinical and academic approaches. Eric, as a neuropsychologist, was part of a team that defined the different forms of apraxia (Waterloo-Sunnybrook Limb Apraxia Battery) alongside Dr. Sandra Black, and he pioneered the collaboration of athletic teams (e.g., Waterloo varsity, OHL teams), therapists, and researchers to create a working model of concussion management. Eric also strived to create opportunities for students to be involved in testing the teams, learn from the experience, and to take initiatives in leading future projects. In addition, Eric worked with the local libraries in creating a fun and interactive opportunity for children to learn more about the safety aspects of helmets and the dangers of head trauma. Eric was also a fundamental part of the faculty at the University of Waterloo and was well liked by the students that took his courses. One of Eric's hallmark traits throughout his years of service was his ability to demonstrate collegiality and a high degree of patience when working with larger teams, as well as the ability to recruit and mentor high level trainees.

#### **Motor Learning and Control Keynote (Friday Oct 3<sup>rd</sup>, 9:30-10:30 AM)**

Dr. Gail Eskes (Dalhousie University)

*Mechanisms of visuomotor learning with prism adaptation to treat spatial neglect post-stroke*

#### **Sessions #2 (Friday Oct 3<sup>rd</sup>, 10:35-11:50 AM)**

##### **Session 2A: Exercise, Body, & Mind**

#### **"It's something that I can be proud of": A narrative analysis of body-related pride and physical activity**

*Sarah E. Ryan, University of Toronto; Catherine M. Sabiston, University of Toronto; Diane E. Mack, Brock University; Kelly P. Arbour-Nicitopoulos, University of Toronto*

The body-related self-conscious emotion of pride has traditionally been understood as positively valenced and multifaceted, and an important correlate and outcome of physical activity. However, the evaluative, appearance-salient nature of these environments may influence affective experiences. Consequently, recent conceptual and empirical challenges have been directed toward pride research. Some researchers have argued that a focus on appearance may undermine a holistic understanding of body image. Broader concerns surround the validity of distinguishing between pride facets given the strong association between authentic and hubristic pride, alongside differing effects when examining body image correlates (e.g., self-esteem, self-compassion, body appreciation). Findings remain mixed, warranting



qualitative exploration into the nuances between facets. To address these challenges, the present study explored the development, experiences, and function of authentic and hubristic pride in the context of appearance and physical activity. Semi-structured interviews were conducted with seven emerging adult women ( $M_{\text{age}}=18.6$  years) and analyzed using narrative thematic analysis. Three overarching themes were identified: (i) adolescence as a starting point for body-related pride, (ii) reclaiming the body through its function, and (iii) authentic pride as a motivator for physical activity. Participants struggled to recall experiences of appearance-related pride, with narratives rooted in body/weight commentary and societal ideals. When exploring temporality, participants' focus shifted from appearance to function. Authentic pride had enduring effects on well-being while hubristic pride was fleeting. These findings highlight the nuanced role of pride in body image experiences and support the need for a more complex model of pride in physical activity contexts.

### **Adolescent appearance and fitness self-conscious emotions are associated with physical activity in young adulthood**

*Kristen Lucibello, Western University; Ross Murray, University of Toronto; Eva Pila, Western University; Catherine Sabiston, University of Toronto*

Body self-conscious emotions, comprising of appearance and fitness domains, are important contributors to physical activity, with nuanced associations depending on the specific emotion and activity modality. Adolescence is a turbulent period where body emotions are heightened, and the long-term impact of these emotions on physical activity is not well understood. This study examined the association between appearance and fitness emotions (shame, guilt, envy, embarrassment, authentic and hubristic pride) and physical activity modalities (moderate-to-vigorous aerobic activity [MVPA], resistance training) from adolescence to young adulthood. Women ( $N = 124$ ,  $M_{\text{age}} = 22 \pm 1.39$  years) were participants from a longitudinal cohort study on adolescent body image and sport experiences. Body emotions were reported annually over four years in adolescence, followed by self-reported physical activity in young adulthood 4-years later. Latent growth curve models for each emotion during adolescence were estimated and used to predict women's MVPA and resistance training. Higher fitness shame, guilt, embarrassment, envy; lower fitness authentic and hubristic pride at baseline, and greater-than-average emotional endorsement throughout adolescence, were significantly related to lower MVPA and resistance training in young adulthood ( $R^2 = .08-.22$ ,  $p < .05$ ). Appearance emotions were only associated with MVPA, demonstrating comparable directionality of effects but smaller effect sizes than fitness emotions. These findings demonstrate that body emotions during adolescence have long-term implications for physical activity, underscoring the need for prevention and emotion regulation supports during this period. Fitness emotions may be particularly important targets to promote engagement in both MVPA and resistance training in young adulthood.

### **From intimidation to empowerment: A critical realist analysis of women's resistance training and body image**



*Maryam Marashi, University of Toronto; Catherine M. Sabiston, University of Toronto; Avery Hinchcliffe, University of Toronto; Kelly P. Arbour-Nicitopoulos, University of Toronto; Diane E. Mack, Brock University*

Resistance training (RT) has been identified as a promising approach to improving women's body image. However, little is known about the contextual and psychological processes that shape this relationship. This study used a critical realist framework to explore women's experiences of RT and identify mechanisms through which RT environments support or hinder positive body image outcomes. Seven online focus groups were conducted with 22 women aged 20–40 with varied RT experience. Data were analyzed using realist thematic analysis, followed by mechanism mapping to identify generative mechanisms and their contextual antecedents. Four themes were generated: (1) Body image as a socially shaped lens on daily life, (2) Starting RT: Surveillance, self-doubt, and support, (3) Shifting motivations: From appearance to functionality, and (4) Empowerment is contextual: Features of RT settings that support body image. Five core mechanisms were identified through retroductive reasoning and mechanism mapping: increased self-efficacy, reduced body-related self-consciousness, functionality appreciation, authentic pride, and social connectedness. These were proposed to be activated by contextual inputs, including inclusive social modelling, beginner-friendly instruction, low-surveillance space design, process-over-appearance climates, and counter-messaging to gendered body ideals. When activated, these mechanisms are proposed to support short-, medium-, and long-term outcomes related to body image, exercise identity, and sustained RT engagement. Findings suggest RT is not inherently body image-enhancing but can become so when specific contextual conditions are met, offering direction for theory-informed RT intervention design.

**“Everything that is done is out of joy and not obligation”: A scoping review of qualitative research on self-compassion and physical activity**

*Sasha Kullman, University of Manitoba; Hannah Vonck, University of Manitoba; Vianney Vega, University of Manitoba; Shaelyn Strachan, University of Manitoba*

Self-compassion is consistently associated with physical activity (PA)-related psychological constructs, yet findings regarding self-compassion's direct association with PA are inconsistent. Knowledge syntheses to date have been quantitative; a synthesis of qualitative research should help provide a nuanced understanding of self-compassion as it relates to PA. The objectives of this qualitative scoping review were to: 1) characterize existing qualitative studies that examine self-compassion and PA, and 2) describe findings that illustrate the conditions or contexts in which self-compassion may be associated with PA. Using a peer-reviewed search strategy, we retrieved qualitative studies published between 2003 and 2024 from MEDLINE and PsycINFO that explored the relationship between self-compassion and PA in any population. At least two reviewers independently screened all studies in duplicate. Of the 4,024 studies retrieved, 14 met the eligibility criteria, representing 380 participants (ages 10–77; 86% women; majority White). A descriptive analysis showed the included studies represented diverse contexts and philosophical perspectives. Our deductive-inductive content analysis generated six themes related to the components and opposing constructs of self-compassion: (1) mindfulness versus



over-identification, (2) self-kindness versus self-criticism, and (3) common humanity versus isolation. Two sub-themes under self-kindness represent the fierce (“Yang”) and gentle (“Yin”) expressions of self-compassion. Each theme illustrates how the components of self-compassion promote PA and how the opposing constructs could detract from PA. This qualitative review adds depth to previous quantitative findings by illustrating how self-compassion may support PA engagement in context-specific and multifaceted ways.

**“It wasn’t like my body wasn’t working....I had to be active to do all the housework, I didn’t have a choice”: Understanding Canadian South Asian Immigrant Women’s Perspectives on Postpartum Physical Activity**

*Mandisa Lau, Brock University; Iris Lesser, University of the Fraser Valley; Harleen Sangha, University of the Fraser Valley; Corliss Bean, Brock University*

The postpartum period is a time of change and challenge for women. Such challenges can be exacerbated for immigrant and minority women due to language and cultural differences, which negatively impact mental well-being. South Asian immigrant women often engage in lower levels of physical activity compared to European counterparts. Moreover, this population tends to have higher levels of postpartum depression, coupled with a knowledge gap in understanding physical activity benefits for well-being. Limited research exists surrounding postpartum physical activity beliefs and practices among immigrant South Asian women. The study purpose was to understand perspectives and beliefs surrounding physical activity and postpartum care in South Asian immigrant women in Canada. Eleven women ( $M_{age}=31.6$ ) who were within their first year postpartum, and had immigrated from India to Canada, engaged in semi-structured interviews in Punjabi. Interviews were audio-recorded and transcribed from Punjabi into English. Inductive thematic analysis was conducted and four themes were developed: (a) tension between self-care as essential for infant caregiving versus prioritizing infant caregiving over self-care, (b) physical activity was important to care for one’s child and the home, but perceptions of what constituted physical activity varied (i.e., domestic responsibilities); (c) lack of time, lack of knowledge, a physically weak body, and exhaustion were barriers to physical activity engagement, and (d) social support was crucial in improving mental well-being and reducing feelings of isolation, particularly for those with live-in family. Findings highlight the importance of cultural alignment in postpartum physical activity promotion, which can inform culturally-relevant postpartum supports.

Session 2B (Sport and Exercise Psychology Symposia): Pratfalls and Pitfalls: The infodemic and misinformation in sport science

**Lead Abstract: Pratfalls and pitfalls: The infodemic and misinformation in sport science.**

*Nick Wattie, Faculty of Health Sciences, Ontario Tech University*

Multiple scientific fields assert that we are in the middle of an ‘infodemic’, characterized by the rapid spread of significant volumes of both accurate and inaccurate information. The inherent challenge of the infodemic is the difficulty of distinguishing accurate information from inaccurate information. Further complicating the navigation of the infodemic is the existence of



misinformation and disinformation, both of which fall under what the philosopher Harry G. Frankfurt formally defined as ‘bullshit’ (i.e., persuasion without regard for the truth). Misinformation is false information, but without a clear intention to cause harm, whereas disinformation contains an intention to manipulate and/or cause damage. In this symposium, we aim to stimulate a critical discussion around the sources and consequences of misinformation in different areas of sport science. This symposium includes three presentations. The first explores the sources, channels, and themes of misinformation on mental performance in sport through content analysis of social media posts. The second presents a case study of misinformation generated by machine learning from third party sport analytic providers, and its influence on performance evaluation and coaching. Third, results of a rapid review will summarize and critique current sport science research using machine learning and deep learning in athlete development contexts (i.e., athlete development, talent identification, and athlete selection). Finally, a renowned researcher in this area will provide their perspective as discussant.

**Abstract #1: Sources and channels of (mis)information on mental performance in sport: A pilot study of Instagram content**

*Bryan McLaughlin, Faculty of Health Sciences, Ontario Tech University*

Social media is a popular and cost-effective means for mental performance consultants (MPCs) to provide information to athletes, coaches, and parents (i.e., followers). Although social media can be useful for disseminating evidence-informed strategies aimed at supporting performance for athletes, little-to-no research has been done to assess the quality of the (mis)information provided. One challenge is that information on social media can be disseminated by various sources (e.g., certified MPCs, and non-certified practitioners), and through channels (i.e. modes or social media platforms) that have their own information constraints. The aim of this pilot study is to explore the quality of (mis)information from Instagram posts from popular North American MPCs within a six-month span through content analyses. Preliminary results demonstrate an array of challenges that relate to the accuracy and oversimplification of information being disseminated. Misinformation in particular can pose a threat to the credibility of the work that MPCs provide for performers. Practitioners should use caution when using social media given the implications that come with oversimplifying context-specific and complex processes into bite sized pieces (i.e., Instagram posts). Similarly, athletes, coaches, and parents should also use caution when navigating sources (i.e., individuals), and using information channels such as social media as the only source of information to inform training.

**Abstract #2: Trained on what? A case study on the misapplication of machine learning in women’s ice hockey**

*Ben Csiernik, Faculty of Health Sciences, Ontario Tech University; Nick Wattie, Faculty of Health Sciences, Ontario Tech University*

With increased awareness around the use of advanced analytics in professional sport, the market for third party providers of video and statistical analysis has grown. Third party providers provide coaches, athletes, and organizations with statistical information, which often





includes outputs from proprietary machine learning models. In ice hockey, one of the most common modelling approaches are expected goal models, which assign a value to each shot attempt, allowing for teams to gather a better understanding of their game play beyond the box score. In this study, an expected goal model was created for use in women's collegiate ice hockey by collecting over 14000 unblocked shot attempts during the 2023 and 2024 Ontario University Athletics (OUA) women's ice hockey season. Using a single team as a case study, our model predicted that a total of 112.43 goals would be scored in games featuring this team, while the third-party proprietary model predicted there would be 179.4 goals. Ultimately, 126 non-empty net goals were scored, indicating an extremely large discrepancy between the third-party model and the team's actual output. The findings from this case study highlight multiple issues surrounding transparency in proprietary models, the overapplication of machine learning to inappropriate populations, and ethical concerns surrounding the implications of incorrect performance evaluations placed on athletes of all ages. Using this case study, we encourage coaches and practitioners to aim to understand the information sources available to them, and to appropriately vet any technologies used in sport before implementation.

**Abstract #3: AI Won't Save You: Limits to the Use of Machine and Deep Learning in Athlete Development Research**

*Joseph Baker, Faculty of Kinesiology & Physical Education, University of Toronto; Antonia Cattle, Faculty of Kinesiology & Physical Education, University of Toronto; Kathryn Johnston, Faculty of Kinesiology & Physical Education, University of Toronto*

The last decade has seen a rapid increase in the use of artificial intelligence (AI) approaches to statistical analysis. The most common of these, machine learning (ML) and deep learning (DL), have become commonly used in the sport sciences. In this presentation, we will discuss a recent rapid review we conducted to summarize and critique current sport science research using these technologies in athlete development contexts (i.e., athlete development, talent identification, and athlete selection). The review indicated that ML and DL approaches were prominent in three areas: improving athlete assessment, athlete selection and classification, and athlete development and training. However, the research questions under investigation and analytical approaches used generally reflect a continuation of established ways of thinking in sport science, rather than new, paradigm-shifting developments. There is considerable potential in the use of ML and DL, since these approaches allow researchers to access more data, more easily, and with greater statistical complexity, than ever before. However, the indiscriminate use of these technologies has the potential to perpetuate well known biases in research designs and analyses. Ultimately, a balanced approach that embraces both innovation and critical evaluation is necessary to ensure these tools enhance, rather than disrupt, the athlete identification, selection, and development landscape.





## Session 2C: Neural & Sensory Basis of Motor Control

### **Increased preparatory excitability suggests a compensatory neuromotor response to cognitive fatigue**

*Kathleen J. Peters, School of Human Kinetics, University of Ottawa; Anthony N. Carlsen, School of Human Kinetics, University of Ottawa*

Cognitive fatigue is a commonly experienced psychobiological state characterized by a sense of mental exhaustion that emerges with prolonged cognitive effort. It has been shown to impair motor performance, including reaction time (RT). However, it remains unclear whether such effects are accompanied by changes in corticospinal excitability, particularly during the preparatory period preceding a rapid motor response. As such, this study used single-pulse transcranial magnetic stimulation (TMS) to probe corticospinal excitability during the foreperiod of a simple RT task. Participants ( $n=23$ ) completed a 60-min cognitively fatiguing task (Math & Memory) and a control task (documentary viewing) on separate days. Pre- and post-intervention measures included subjective ratings of cognitive fatigue and premotor simple RT in a button-press task. Corticospinal excitability was assessed by recording motor-evoked potential (MEP) amplitude from the first dorsal interosseus muscle at 0, 150, and 500ms prior to the go-signal within the RT task, along with threshold TMS intensity to evaluate baseline excitability. As expected, subjective fatigue significantly increased following the cognitive fatigue task ( $p<.001$ ). Contrary to prior findings, simple RT became faster following both interventions ( $p=.003$ ). While no significant change was observed in threshold TMS intensity ( $p>.500$ ), MEP amplitude diverged by condition: it decreased following the control task ( $p=.004$ ) but increased following the cognitive fatigue task ( $p=.019$ ). These findings suggest a compensatory neuromotor adaptation, wherein elevated corticospinal excitability during response preparation may help to preserve simple reaction time performance in the presence of increased cognitive fatigue.

### **Hemispheric Asymmetry for Visual Information Processing in 3D Space**

*Noah Britt, McMaster University; Jim Lyons, McMaster University; Hong-jin Sun, McMaster University*

The ability to process visual information is not the same in the left and right visual fields. Extensive literature has consistently shown that young, healthy human adults exhibit a visuospatial bias towards the left hemifield compared to the right hemifield (pseudoneglect). This leftward bias has traditionally been demonstrated through horizontal line bisection tasks in two-dimensional (2D) setups; however, as line bisection research progressed into three-dimensional (3D) space, where lines are presented further from the observer, the classical leftward bias can reverse into a rightward bias. The precise distances at which the leftward bias, a neutral point, and rightward biases occur remain unclear. Here, we present a meta-analysis to model how bisection performance changes across 3D space quantitatively. In particular, we identified the boundary conditions where patterns of leftward bias reverse into rightward biases and at what distances this change can be predicted using horizontal line bisection. Overall, the analysis revealed a significant leftward bias within near space, followed by a



rightward bias in far space. Three critical ranges for visuospatial asymmetries across depth were revealed in young, healthy adults: (1) significant leftward biases up to 48 cm, (2) no reliable leftward/rightward biases from 49–87 cm, and (3) significant rightward biases beyond 88 cm. In addition, we revealed significant moderating effects of participant age (50+ years old), the use of tools to perform bisection, and the control of retinal size across depth. The findings establish important benchmarks when investigating visuospatial asymmetries, informing clinical assessment using line bisection.

### **Vestibular and Visual Contributions for Movements to Somatosensory Targets**

*Jonathan Pitino, Queen's University; Haddie Oakes, Queen's University; Sadiya Abdulrabba, Queen's University; Gerome Manson, Queen's University*

Movements to body positions, such as clapping or bringing food to the mouth, are completed effortlessly even without visual information about body position. The locations of these positions, also called somatosensory targets, are specified by nonvisual sources from vestibular, proprioceptive, and tactile cues. Disrupting vestibular signals is known to distort perceived body orientation; however, it is unknown whether vestibular perturbations also impair movements toward somatosensory targets. Moreover, it remains uncertain whether concurrent visual feedback of limb position can mitigate any vestibular-related movement errors. The purpose of this research was to explore how vestibular disruption influences reaching to somatosensory targets, and whether providing visual information about body position alters perception during planning. Participants reached to somatosensory targets (i.e., the nose, and the left and right cheek)—indicated by a brief vibrotactile stimulus. Movements were performed with and without concurrent visual feedback of themselves during movement planning. Bilateral-bipolar galvanic vestibular stimulation (GVS) created the perception of illusory tilt to the left (L-GVS) or right (R-GVS) along the frontal plane. Results revealed that reaching error in the direction-axis were biased based on GVS condition, with significantly greater errors during both L-GVS and R-GVS ( $p < 0.05$ ). Although visual feedback did not affect error, participants had longer reaction times with visual feedback available. These findings suggest that disrupting vestibular input degrades reaching accuracy to somatosensory targets and that visual information, while used during planning, does not compensate for vestibular-induced errors. These findings elucidate the role of vestibular and visual systems when making movements to body positions.

### **Mental fatigue differentially impacts implicit and explicit contributions to visuomotor adaptation**

*Emma Peters, University of Ottawa; Erin K. Cressman, University of Ottawa*

The relationship between implicit (i.e., unconscious) and explicit (i.e., conscious strategy) contributions to visuomotor adaptation is currently debated, with evidence supporting both their dependence and independence. We have previously suggested that mental fatigue interferes with the engagement of explicit processes during motor learning, while implicit processes are unaffected, thus supporting an independent relationship between the two. Extending from this work, the current research looked to establish the impact of mental fatigue on visuomotor adaptation, when explicit contributions were absent. Participants trained to



reach with misaligned cursor feedback that was rotated 20° clockwise relative to hand motion in a virtual environment. These rotated training trials were completed following a mentally fatiguing time load dual back task (Mental Fatigue (MF) group) or watching a documentary (Control (CTL) group). The extent of visuomotor adaptation was similar for both groups across all rotated reach training trials and this adaptation was confirmed to have arisen implicitly. Furthermore, no significant difference in implicit adaptation was observed between groups, and the correlation between mental fatigue and implicit adaptation was weak. These results suggest that mental fatigue does not interfere with visuomotor adaptation when it is driven implicitly and supports our proposal that mental fatigue exclusively interferes with the engagement of explicit strategies. Overall, these findings suggest that implicit and explicit processes independently contribute to visuomotor adaptation. Key words: Conscious strategy, visuomotor adaptation, mental fatigue, motor learning, implicit.

### **Linking beta desynchronization to feedback gain modulation in human reaching**

*Dominique Delisle-Godin, Departement de Kinanthropologie, Universite de Sherbrooke; Alain Delisle, Departement de Kinanthropologie, Universite de Sherbrooke; Pierre-Michel Bernier, Departement de Kinanthropologie, Universite de Sherbrooke*

Humans rapidly adjust their movements in response to disturbances, a process thought to involve a feedback controller tuned to task goals and constraints. Supporting this, numerous studies have shown that electromyographic (EMG) responses to mechanical perturbations are modulated by task constraints as early as 60ms post-perturbation. It is assumed that selection of a feedback controller occurs during motor planning. In electroencephalography (EEG), motor planning is commonly associated with beta (13–30Hz) event-related desynchronization (ERD). For instance, stronger ERD is observed for movements involving more elaborate planning. However, the EEG markers of feedback controller selection during motor planning remain unknown, leaving a gap in our understanding of how feedback gains are tuned. To investigate this, we recorded EEG and EMG from 28 healthy adults as they performed a delayed reaching task toward either a wide (80cm) or narrow (2cm) target. On a subset of trials,  $\pm 12\text{N}$  mechanical perturbations were applied to assess feedback responses. We hypothesized that the narrow target condition would be associated with greater EMG responses and stronger beta ERD during planning. As expected, the narrow target led to significantly larger long-latency EMG responses, in the pectoralis for the +12N perturbation ( $p < 0.001$ ), and posterior deltoid for the -12N perturbation ( $p = 0.002$ ). Most importantly, the narrow target was also associated with significantly greater beta ERD over bilateral parieto-frontal regions during planning ( $p = 0.002$ ). These findings replicate known effects of task constraints on feedback responses and provide new evidence linking enhanced beta ERD during planning to the upregulation of feedback gains.

### **Sport and Exercise Psychology Keynote (Friday Oct 3<sup>rd</sup>, 1:30-2:30 PM)**

Dr. Maria Kavussanu (University of Birmingham)

*Toward a happier, healthier, and more ethical sport: Contributions from sport morality research*



## **Poster Session #2 (Friday Oct 3<sup>rd</sup>, 2:45-3:45 PM)**

### **1. Reward and punishment feedback lead to similar implicit visuomotor adaptation**

*Jacob Godard, University of Ottawa; Melissa Chik, University of Ottawa; Emma Peters, University of Ottawa; Erin K. Cressman, University of Ottawa*

Providing feedback that 'rewards' versus 'punishes' performance has been shown to lead to different effects on visuomotor adaptation. In this research, we aim to determine the effects of reward and punishment feedback on implicit (i.e., unconscious) contributions to visuomotor adaptation. Participants trained to reach to targets in a virtual reality environment with cursor feedback that was rotated 40° clockwise relative to their hand motion. Throughout adaptation blocks, participants in the Reward Group earned points for accurate reaches, while those in the Punishment Group lost points for reaching errors. Adaptation was followed by a washout block, in which participants reached with cursor feedback aligned to hand motion. This was succeeded by an immediate retention block and a second retention block (i.e., 24-hours later), in which rotated cursor feedback was reintroduced. Following each block of trials, participants were asked to reach directly to the target, in the absence of any reaching strategy, to assess implicit adaptation. Participants also indicated their level of task enjoyment. Both experimental groups appeared to enjoy the task to a similar extent, with minimal change in enjoyment after receiving reward or punishment feedback. Preliminary results indicate that the Reward Group demonstrated increased adaptation and retention in comparison to the Punishment Group. That said, implicit adaptation was similar between groups across the experiment. Ongoing data collection aims to investigate the contribution of explicit processes (i.e., conscious strategies) to adaptation and the role explicit processes may play with regard to the learning differences observed between groups.

### **2. The Impact of Technology on Training and Performance in Golf: An Experimental Design**

*Conrad Von Palleske, Dalhousie University; Ashton Sheaves, Dalhousie University; Heather Neyedli, Dalhousie University; Malcom Muir, Dalhousie University; Lori Dithurbide, Dalhousie University; Brett Feltmate, Dalhousie University*

The integration of technology into golf training has significantly reshaped how performance is measured, analyzed, and improved. While launch monitors such as Trackman provide real-time feedback, the question remains whether this feedback enhances skill acquisition when used independently of coaching. Although prior research has focused on the accuracy and reliability of such technologies, limited work has explored their learning effects in real-world practice contexts. This study investigated how technology-based feedback influences golf swing performance over time. Ten participants were randomized to either a technology feedback or no-technology control group and completed a four-session indoor training protocol. Trackman data were collected at four key time points: baseline, post-training, retention, and post full-feedback. Performance was measured using two primary metrics: smash factor (impact efficiency) and swing direction (club path control). Linear mixed-effects modeling revealed no significant effects of group or session on smash factor. However, the technology feedback group demonstrated significantly greater improvements in swing direction at post-training ( $p <$



.001), retention ( $p < .001$ ), and the final session ( $p < .001$ ) compared to the control group. These findings suggest that technology-based feedback selectively improves directional control but may not influence impact efficiency. The study highlights how feedback tools like Trackman can support aspects of motor learning in golf and offers applied insight for coaches, athletes, and sport technologists aiming to optimize feedback delivery in performance environments.

### **3.Direction matters: Training in a 2-D racing skill acquisition task improves speed, accuracy, and path efficiency but depends on movement direction**

*Raphael Gastrock, York University; Setayesh Nezakatiolfati, York University; Andrew King, York University; Denise Henriques, York University*

People excel at acquiring and mastering motor skills to move efficiently. While skill acquisition relies on establishing a new sensorimotor mapping, most daily tasks benefit from refining precision towards ideal movements. However, the mechanisms driving improvements from continued practice remain unclear. Here, we investigate continued practice effects, using known measures from skill acquisition tasks. Participants used a stylus on a digitizing tablet to control a racecar through a track as quickly and accurately as possible, across training in two consecutive days. In day 1, participants ( $N = 45$ ) quickly achieved high accuracy, with lap times and path lengths improving throughout the session. In day 2, participants ( $N = 43$ ) re-experienced the same track, and quickly regained prior performance. Moreover, accuracy and path lengths showed further improvements, suggesting offline gains. We then flipped the track by  $180^\circ$ , which initially worsened performance before quickly rebounding. Finally, participants moved through the track in reverse. Although accuracy improved within this block, lap times and path lengths were consistently longer than in previous blocks. This direction effect, however, could be due to movement biases in right-handed participants. Thus, we had a control group of participants ( $N = 16$ ) train on the reverse track. Lap times and path lengths were generally longer, suggesting that performance depends on movement direction. Overall, these findings demonstrate that continued practice in a continuous motor task yields rapid improvements, offline gains, robust retention, and partial generalization, thereby shedding light on mechanisms that support long-term motor skill refinement beyond initial acquisition.

### **4.Preferences for costly cooperation are shaped by social pressure**

*Mikayla Lalli, McMaster University; Nour Al Afif, McMaster University; Shiv Peshwa, McMaster University; Scott Rathwell, University of Lethbridge; Joshua G. A. Cashaback, University of Delaware; Michael J. Carter, McMaster University*

Previous research suggests that humans assign a higher intrinsic social reward value to cooperative actions, fostering a preference for cooperation even when it is more costly than acting alone. We recently found this preference reverses when partners use separate devices rather than working side-by-side on a shared interface. This raises the question of how social pressure—arising from physical proximity and/or the ability to monitor a partner's decisions— influences cooperative behaviour. Here, we investigate whether social pressure created by monitoring a partner's decision results in a preference for cooperation even when partners use separate devices. Twenty-five adult pairs, each composed of a "Decision-maker" and "Helper,"



completed a computerized box-clearing task, with roles switching halfway through the experiment. In 50% of trials, Decision-makers were forced to complete the task alone or with the Helper. In the remaining trials, Decision-makers chose to act alone or cooperatively. During together trials, participants had to clear the same box within 200 ms of each other without communication or visual feedback of one another's movements. To induce social pressure, participants saw whether the upcoming trial was forced or choice-based, allowing the Helper to know whether the Decision-maker included them. Contrary to our earlier work, we found a significant preference for costly joint action over individual action despite faster and more efficient box-clearing when performing alone. These findings suggest that decisions to cooperate may be driven more by social pressure than a greater intrinsic social reward value, highlighting the importance of the social context for cooperation.

#### **5.Look to reach: Exploring gaze and reach behaviour during explicit motor sequence learning**

*Elena M. Broeckelmann, University of Manitoba; Hailey J. Witko, University of Manitoba; Cheryl M. Glazebrook, University of Manitoba*

Most daily activities require humans to perform motor sequences. With practice we use predictive processing to anticipate and perform these routines quickly and accurately. However, little is known about the role of the oculomotor system for the acquisition of explicit motor sequences. Given the coupling between eye and hand movements, a detailed understanding of how gaze and limb movements are coordinated throughout sequence learning will provide insight into how humans acquire motor sequences. Ten participants (19-36 years-old) learned an explicit 12-item motor sequence by performing manual aiming movements to series of visual targets on a touchscreen monitor. Participants sat at a table in front of the touchscreen with their forehead resting in a flexible arm mount of the gaze tracker (EyeLink1000Plus, SR Research). They practiced a 12-item sequence, repeated 10 times per block. Participants completed a series of acquisition, transfer and random sequence blocks across two consecutive days. Sequence acquisition was quantified through sequence completion time, saccade onset time, as well as number of correct/incorrect primary saccades following stimulus onset, in early and late stages of practice. We found sequence completion time and saccade onset time reduced significantly from early to late practice. Notably, the number of incorrect primary saccades increased from early to late stages of practice. Together the results reveal increased temporal efficiency through participants' use of predictive processing. The increased number of incorrect saccades suggest participants prioritized movement speed before accuracy of sequence order. Future research should assess if extended practice mitigates this effect.

#### **6.Investigating the Role of Visual and Kinesthetic Information in Memory Recognition During Active and Passive Movement**

*Obaida Al-Naib, Queen's University; William Steedman, Queen's University; Gerome Manson, Queen's University; Anisa Hassan, Queen's University; Matthew Pan, Queen's University; Tasha Ignatius, Queen's University; Jeffrey Wammes, Queen's University*





Handwriting is a powerful mnemonic tool that has been shown to enhance recognition memory for unfamiliar texts. The motor networks engaged during handwriting are thought to prime the spatial–cognitive circuits later used for retrieval. It remains unclear, however, whether memory benefits arise from the active engagement of the motor system or the processing of visual and proprioceptive feedback obtained as the action unfolds. To dissociate these factors, we compared recognition memory across four different sensorimotor learning conditions. Ten participants, with no prior knowledge of Arabic studied 48 Arabic words (12 per condition) either by (i) static viewing of printed words, (ii) viewing a dynamic animation of each word’s stroke sequence, (iii) robot-guided passive tracing of the strokes, and (iv) active self-paced handwriting. After participants completed a recognition test, wherein accuracy (i.e., the number of correct words) was assessed. Results showed that active writing (93%) significantly outperformed static viewing (69%) ( $p = .044$ , one-way ANOVA). Although not statistically significant, dynamic viewing (84%) and passive robot-guided writing (86%) also showed higher accuracy than static viewing, suggesting a graded benefit of increased sensorimotor engagement. These findings support the idea that motor involvement, especially active movement, can play a meaningful role in supporting memory encoding. These insights are especially relevant for designing assistive tools for individuals with motor or cognitive impairments, including stroke survivors and those with mild concussions.

## **7.The Influence of Error Magnitude, Signal Type, and Timing on Early Implicit Contributions in Visuomotor Adaptation**

*Zacchary Nabaee-Tabriz, York University; Parmin Rahimpour-Marnani, York University; Alina Khan, York University; Kimer Bassi, York University; Bernard Marius ‘t Hart, York University; Denise Henriques, York University*

Implicit adaptation plays an unconscious yet key role in maintaining precise motor control when faced with changes in the body or environment. While models suggest this process is constrained by a hard-wired limit or modulated by error attribution, most insights come from prolonged training, leaving the sensitivity of initial implicit adaptation to error size, type, and timing poorly understood. To address this, we conducted movement-contingent Single-Trial Learning (STL) adaptation experiments with visuomotor rotations. Participants performed reaching movements under rotated cursor feedback ( $1^{\circ}$ – $90^{\circ}$ ) in trials preceded and succeeded by aligned trials. By manipulating task error (dot vs. arc targets) and feedback timing (terminal vs. delayed), we captured how these variables modulate early adaptation. Additionally, a long-exposure block using a  $20^{\circ}$  rotation allowed us to compare STL-derived predictions to initial rates of change for prolonged adaptation. Our findings show initial implicit aftereffects remain stable across perturbation sizes, ramping up between  $1^{\circ}$  to  $15^{\circ}$  rotations and remaining at  $\sim 6^{\circ}$  for larger rotations of  $15^{\circ}$  to  $90^{\circ}$ , suggesting a capped response rather than attenuation with error size. Task error removal reduced aftereffects (to  $\sim 4^{\circ}$ ), as did terminal and delayed feedback (to  $\sim 2^{\circ}$ ). STL-derived predictions correlated modestly with early adaptation during prolonged exposure. These results suggest that initial implicit adaptation is highly sensitive, saturates at a fixed limit, is modulated by task error, feedback timing, and can be meaningfully probed through STL, offering a potential proxy for predicting long-term learning outcomes.





### **8. Investigating the effects of cortico-cortico paired associative stimulation on motor control**

*Faith Adams, McMaster University; Nour Al Afif, McMaster University; Mikayla Lalli, McMaster University; Michael J Carter, McMaster University; Aimee J Nelson, McMaster University*

Transcallosal projections extend through the corpus callosum and facilitate communication between right and left hemispheres, a critical function for many coordinated unimanual and bimanual movements. Transcallosal circuits are linked to impaired movement in clinical populations, making the circuit a valuable target for neuromodulation. Cortico-cortico paired associative stimulation (cc-PAS) is an emerging dual-site transcranial magnetic stimulation (TMS) technique in which pairs of pulses are delivered to two connected cortical areas to modulate brain function. In previous research, cc-PAS has been shown to influence corticospinal excitability, and reaction time of the first dorsal interosseous (FDI) muscle (Rizzo et al., 2009), demonstrating the ability to elicit behavioural changes. This study aimed to examine the effect of cc-PAS on movement kinematics using the KINARM end point lab. Thirty healthy young adults attended two sessions, separated by a minimum of one week apart. During one session, cc-PAS was administered over the FDI muscle representation of both motor cortices. Cc-PAS consisted of 180 pairs of pulses delivered 10ms apart, with the first pulse of the pair delivered over the right M1. During the other visit, participants contracted their left FDI during the delivery of cc-PAS to determine if the addition of a physiological stimulus would modulate motor control. Participants completed a visually guided and reverse visually guided reaching task before and after the intervention. Results suggest whole limb movement kinematics may be altered by cc-PAS during the addition of a physiological stimulus.

### **9. Reevaluating Strategy Development as a Discrete Step Process in Visuomotor Adaptation**

*Elysa Eliopoulos, York University; Bernard Marius 't Hart, York University; Denise Henriques, York University*

In response to a changing environment, humans can adapt their movement with contributions from both implicit, or unconscious and explicit strategies. Explicit visuomotor adaptation is thought to develop gradually in a series of small incremental steps (McDougle et al. 2015). However, in some of our individual data we observed large, sudden changes in strategy comparable to insight learning. Here we investigate the timecourse of explicit learning in motor adaptation following the introduction of 5 perturbation sizes. To do so, we asked participants to report where they planned to move their hand throughout a visuomotor rotation task. This project will aim to test if 1) strategies develop in one or two discrete steps, and 2) the likelihood and magnitude of participants' aiming strategy will increase as the rotation size gets bigger. Our findings show that most participants across all rotation groups develop an aiming strategy in discrete steps. A higher proportion of participants in the largest perturbation group adopt an explicit strategy and show greater mean aiming deviations compared to explicit learners with a small perturbation. Analysis of our previous explicit data shows that step functions provide a better fit to aiming behaviour. Investigating strategy-use at the individual level may reveal the nature of cognitive processes in a visuomotor rotation task. Having a better understanding of



cognitive strategy development in motor tasks may guide future work on motor learning, and applications for support in skills training and rehabilitation.

#### **10. Linking Action to Cognition: Short-Term Motor Training Improves Mental Rotation Ability**

*Daniela E. Aguilar Ramirez, University of Lethbridge; MaKenna Corson, University of Lethbridge; Claudia L.R. Gonzalez, University of Lethbridge*

Mental rotation, the ability to internally manipulate spatial representations of objects, is a fundamental cognitive skill closely associated with executive function, spatial reasoning, and proficiency in mathematics and STEM-related domains. Prior research has consistently shown that individuals with stronger mental rotation abilities tend to achieve higher levels of academic and professional success. Behavioral and neuroimaging evidence further indicate that mental rotation engages distributed neural networks, including the parietal and frontal cortices, as well as premotor and sensorimotor regions. This overlap suggests that sensorimotor processes and visuospatial cognition share common neural substrates, particularly in tasks that require the coordination of perception, motor planning, and spatial transformation. Building on this evidence, the present study investigated whether a visuomotor training task could effectively enhance mental rotation performance. Undergraduate participants engaged in a 20–30-minute Lego brick-building task involving the construction of complex three-dimensional models. This task was designed to tax motor planning, mental rotation, and visuomotor coordination. Mental rotation ability was assessed immediately before and after the intervention using the standardized Mental Rotation Test (MRT; Shepard & Metzler, 1971). Results revealed a significant improvement in MRT scores following the training, indicating that even brief visuomotor engagement can produce measurable gains in spatial ability. These findings underscore the potential of object-based, sensorimotor interventions for enhancing cognitive skills related to spatial reasoning. Future research should explore if these effects are long-lasting and whether repeated or prolonged training leads to sustained or generalized improvements in visuospatial cognition.

#### **11. When Practice Pays Off: How Practice Schedule and Learning Context Shape Motor Performance in Golf Putting**

*Sara A. Thompson, University of Toronto; Martina Kacan, University of Toronto; Xiaoye Michael Wang, University of Toronto; Luc Tremblay, University of Toronto; Nicola J. Hodges, University of British Columbia; April Karlinsky, California State University San Bernadino; Matthew W. Scott, University of British Columbia; Judith Bek, University of Toronto; Ross Murray, University of Toronto; Timothy N. Welsh, University of Toronto*

Motor learning in social settings allows learners to potentially benefit from both the execution and observation of the to-be-learned skill. The present study investigated the outcomes of a specific type of social motor learning in which pairs of individuals (dyads) alternate between performing and observing the skill. The study focused on the impact of constant and variable practice schedules within dyadic practice of a golf-putting task. Given previous research that variable practice aid learning compared to constant practice, we investigated if dyadic learners practicing in a constant practice schedule ( $n=20$ ; 1-distance) gained from observing their



partner practicing in the variable schedule ( $n=20$ ; 4-distance) compared to individuals practicing alone (i.e., no observation) in a constant schedule ( $n=20$ ). Participants completed: pre-tests; acquisition (50 physical trials [plus 50 observation trials for dyads]); immediate post-tests; and 24-hour retention and transfer tests. Preliminary analyses revealed radial error (absolute distance between ball location and target) decreased from pre-test to retention ( $p<.001$ ), though there were no significant group differences at any testing phase ( $p>.05$ ). These preliminary analyses also revealed no significant differences in radial error in the transfer tests ( $p>.05$ ). The absence of variable vs. constant practice differences do not replicate a practice variability effect. These null results may reflect inherent variability in novice putting or the impact of observing the partner's performance which moderated the influence of the different practice schedules. Future analyses of other performance measures and psychosocial factors are needed to clarify the impacts of dyad practice.

## **12.Enhancing Movement Initiation Through Sensory Cue–Feedback Pairings in Sequential Reaching Tasks**

*Peyton R. Clark, Faculty of Kinesiology and Recreation Management, University of Manitoba, Winnipeg, Manitoba; Saba Mohammadalinezhad Kolahehdouz, Faculty of Kinesiology and Recreation Management, University of Manitoba, Winnipeg, Manitoba; Cheryl M. Glazebrook, Faculty of Kinesiology and Recreation Management, University of Manitoba, Winnipeg, Manitoba*

Based on findings that augmented sensory inputs can enhance motor performance, this study investigated how brief auditory and vibrotactile stimuli influenced planning and control of one and two-target movements. Specifically, augmented sensory cues and feedback were manipulated at movement initiation (as the go-signal) and at target one acquisition (as feedback). Eleven young adults (20-32years-old) used a custom stylus to perform goal-directed reaching movements to one (OT) or two targets (TT) displayed on a touchscreen. Participants completed 20 trials per condition in a counterbalanced order. Each block consisted of OT or TT movements and one sensory condition (Auditory-Auditory-AA; Auditory-Vibrotactile-AV; Vibrotactile-Auditory-VA; Vibrotactile-Vibrotactile-VV). Stylus position was recorded using optical motion capture at 400Hz. Data were analyzed using a 2 Task by 2 Cue Modality by 2 Feedback Modality repeated measures ANOVA. A significant main effect of Task,  $F(1,9)=5.98$ ,  $p<0.03$ ,  $\eta_p^2=.40$ , revealed shorter RTs in the TT task. A main effect of Cue,  $F(1,9)=6.33$ ,  $p<0.03$ ,  $\eta_p^2=.41$ , revealed auditory cues led to shorter RTs compared to vibrotactile. A main effect of Feedback,  $F(1,9)=6.14$ ,  $p<0.03$ ,  $\eta_p^2=.40$ , revealed vibrotactile feedback led to shorter RTs compared to auditory. No statistically significant differences were found for movement time. Thus, auditory stimuli decreased RT when presented as a cue, whereas vibrotactile stimuli reduced RT when presented as feedback. These findings underscore the importance of optimizing cue-feedback pairings to support efficient performance, with applications in human-computer interaction, including assistive technologies and warning systems in semi-autonomous vehicles.



### **13.A weak prepulse stimulus decreases the incidence of startle but reaction time facilitation by startle is preserved**

*Leo Dolenko, University of Ottawa; Dana Maslovat, University of Ottawa; Anthony N Carlsen, University of Ottawa*

The StartReact effect is a phenomenon whereby a prepared response is involuntarily initiated/triggered with dramatically shortened reaction time (RT) by an intense startling acoustic stimulus (SAS) that also elicits a startle reflex. Previous research has shown that when a low-intensity “prepulse” stimulus was presented shortly before the SAS, the startle reflex was attenuated (i.e., decreased probability and magnitude of sternocleidomastoid (SCM) activation), yet the RT facilitation versus control remained intact. However, a potential confound in these results is that data were not dichotomized based on the presence/absence of a startle reflex in SCM and only included for participants who “consistently” startled. The current study employed similar prepulse methods but included data from *all* participants, regardless of SCM activation or RT latency on SAS trials. Participants performed a simple RT task requiring a targeted wrist extension as soon as possible following a visual go-signal. On 25% of trials a 120dB SAS was presented, half of which included an 80dB prepulse tone, 100ms prior to the SAS. Results showed that the prepulse stimulus led to a decrease in the probability and magnitude of the startle reflex, replicating previous studies. Notably, when a startle reflex was observed, RT was significantly shorter than when no reflex was observed, irrespective of whether a prepulse preceded the SAS or not. These results support previous studies indicating that a startle reflex in SCM is a valid and robust indication of whether a StartReact response is elicited, and extend this relationship to include prepulse paradigms.

### **14.Modulating Sequential Reaching in Younger Adults: The Role of Task Complexity, Vibrotactile and Auditory Feedback**

*Saba Mohammadalinezhad Kolahehdou, Applied Health Sciences, Faculty of Kinesiology & Recreation Management, University of Manitoba; Quinn Malone, University of British Columbia: Okanagan, Kelowna; Steven R. Passmore, University of Manitoba, Winnipeg; Jonathan J. Marotta, University of Manitoba, Winnipeg; Cheryl M. Glazebrook, University of Manitoba, Winnipeg*

Augmented sensory feedback can support motor control in complex actions, yet its effects during multi-phase sequential reaching in younger adults remain underexplored. This study investigated how auditory and vibrotactile feedback influence performance across varying task complexities of one- and two-target tasks. Twenty-four younger adults (aged 19-35 years) participants performed five target tasks under three feedback conditions: no feedback (NF), auditory (A), and vibrotactile (VT). Position data were captured via an Optotrak 3D motion-tracker and analyzed using repeated measures ANOVAs. Reaction time (RT) was significantly influenced by sensory condition ( $F_{2,46}=6.67, p=.00$ ), with shorter RTs in the NF condition compared to the A or VT conditions. Task type also affected RT ( $F_{4,92}=6.94, p=.00$ ), with the shortest initiation time in the two-target single-hand extension (2T1He) condition. Movement time to the second target was shortest in the two-target single-hand reversal task (2T1Hr) and longest in the two-target two-hand extension task (2T2He) ( $F_{3,69}=17.67, p=.00$ ). Importantly, VT



feedback significantly shortened time after peak velocity during the second movement (TAPV2;  $F_{2,46}=4.23$ ,  $p=.02$ ), supporting faster movement termination. However, during the first movement segment, TAPV1 was longer in the VT condition than in NF, specifically in the 2T1Hr task ( $p = .05$ ), suggesting greater reliance on feedback to guide deceleration. Constant error also increased in more complex movements ( $p = .001$ ). These findings suggest that vibrotactile (VT) feedback enhances motor control in complex tasks, highlighting its potential to support performance in human-computer interaction, as well as in everyday reaching movements and activities of daily living.

### **15. Distributing practice via short breaks during acquisition facilitates performance of a rhythmic key-press task**

*Alexander Walker, Washington State University; Tristan Loria, Washington State University; Shikha Prashad, University of Texas at Arlington; Gracie Stockert, Washington State University; Gianna Bratcher, Washington State University; Jalen Hang, Washington State University; Gabriel McNichols, Washington State University*

Optimizing practice schedules within rhythmic tasks remains underdeveloped. Fifty-nine participants practiced a rhythmic task wherein four fingers were used to depress keyboard keys in synchrony with sequential visual prompts paired with an auditory metronome. Participants were assigned to one of three groups. The unstructured break group took two-minute breaks between acquisition blocks. The patterned break group took two-minute breaks between acquisition blocks with the auditory metronome playing continuously to provide augmented feedback of the rhythmic aspect of the task. The no-breaks control group completed all acquisition trials in rapid succession (massed practice). The primary dependent variables were temporal error and temporal error variability. We hypothesized that both break groups would have lower temporal error and temporal error variability for each finger at the post-test vs. the control group. If providing augmented auditory feedback during breaks enhances the effectiveness of distributed practice, there may be lower temporal errors and temporal error variability in the post-test for the patterned vs. unstructured break groups. For temporal errors, the middle, ring, and pinky finger improved from pre-test to post-test irrespective of group. Compared to the control group, the unstructured breaks group had lower middle and pinky finger temporal error variability. Middle, ring, and pinky finger temporal error variability was also lower in the unstructured breaks vs. the patterned breaks group. No differences were found between the control vs. the patterned breaks groups. These results suggest that taking short breaks may facilitate performance over augmented (patterned) and no-breaks when practicing a sequential rhythmic task.

### **16. Probing the influence of future reaches on present ones.**

*Brett Feltmate, Dalhousie University; Lindsay Noiles, Dalhousie University; Heather Neyedli, Dalhousie University*

Many daily activities are comprised of sequences of smaller motions, but how actions influence those preceding them remains unclear. Behaviourally, the end-state comfort effects reveals that costly actions are undertaken if they terminate in an ideal state for subsequent action.



Beyond motivating their selection, subsequent actions appear to interfere in planning of prior ones, e.g., when reaching to the first of two dowels, wrist orientation is biased toward that of the latter dowel (Hesse & Deubel, 2010). This interference might not be limited to anticipated follow-ups, but also those representing possible present actions: when begun prior to target reveal, reach trajectories reliably vector toward the “average” target location until the actual target is signaled (Chapman et al., 2010, 2014). Herein we explored whether future reaches might similarly interfere with present ones. Participant made two reach-to-touch motions: first, from a start circle to a central circle directly ahead, then to either a left or right circle placed further ahead. Between blocks, we varied whether the final target (left or right) was visibly present during the initial centre-out reach, or revealed upon touching centre. Across “delayed” blocks, we varied to which side targets would likely appear, for “immediate” blocks location was equiprobable. Our key metric was left/right deviation in initial centre-out reaches. Generally, reliable deviations were observed toward delayed targets’ likely location, whereas immediately visible targets’ actual position exerted little influence. Results are related to an ongoing debate within GBYK literature, regarding whether trajectory “averaging” is a result of interference, or strategy.

### **17.Motor Adaptation and Generalization in a Virtual Throwing Task Under Simulated Environmental Perturbation**

*Jacob Boulrice, York University; Andrew King, York University; Bernard Marius t’ Hart, York University; Denise Henriques, York University*

Motor adaptation under naturalistic perturbations remains understudied. Most paradigms use simplified tasks constrained to a single dimension solution space—such as guiding a rotated cursor onto a target. In contrast, many real-world motor behaviors involve adapting to external forces in tasks with high-dimensional solution spaces, such as throwing objects under wind or water resistance. To address this gap, we developed a VR paradigm in which participants adapted to a constant lateral water current while performing a throwing task. Participants threw a virtual ball toward four distributed targets—two upstream, two downstream—across alternating training phases with and without the perturbation. Targets were presented in a blocked design (one of each type per phase), allowing us to assess generalization to novel target sets. A physics model was used to derive each target’s solution space, defined as the set of launch angle–speed combinations that result in a hit. Upstream targets exhibited narrower solution spaces, imposing performance constraints, while downstream targets permitted a broader range of successful strategies. To evaluate learning, we compared mean endpoint errors between early and late training trials for each target. Only the upstream targets—associated with the largest initial error and narrowest solution space—showed a reduction in endpoint error with training. Likewise, throws to these targets appeared to benefit the most from training, suggesting some degree of generalization. These results suggest that naturalistic motor adaptation may emerge more readily under constrained conditions, and that prior experience with similar constraints can facilitate partial generalization to new contexts.





## **18. Investigating Task-Dependent Improvements of Motor Imagery Training on Force Steadiness After Stroke**

*Marlo Spence, University of British Columbia; Justine Magnuson, University of British Columbia; Jennifer Jakobi, University of British Columbia; Sarah Kraeutner, University of British Columbia*

Motor imagery training (MIT; the mental rehearsal of movement without physical execution) shows promise for enhancing motor recovery after stroke. Previous studies suggest MIT can improve force steadiness, which could aid post-stroke motor control. However, whether benefits are task-dependent remains untested. Here, we examined the impact of MIT on a force steadiness task under two conditions: congruent (i.e., matching the task during MIT) and incongruent (opposing the task during MIT). Individuals with upper-limb impairment  $\geq 3$  months post-stroke ( $N = 12$ ) and healthy older adults (HOA;  $N = 12$ ) completed four MIT sessions of an everyday task involving an isometric elbow flexion. Before and after MIT, participants performed ramped elbow flexion and extensions in an isometric myograph. Force steadiness was quantified as the coefficient of variation of torque (CVtorque; primary outcome), and Cohen's  $d$  effect sizes were calculated to quantify change in CVtorque (post vs. pre) separately for each group. Preliminary results ( $n = 5$  stroke,  $n = 7$  HOA) suggest that following MIT ( $\Delta$ CVtorque; post minus pre) elbow flexion CVtorque decreased in both groups (HOA:  $\Delta$ CVtorque =  $-2.60 \pm 3.50$ ,  $d = -0.74$ ; stroke:  $\Delta$ CVtorque =  $-0.95 \pm 0.38$ ,  $d = -2.48$ ). Conversely, elbow extension CVtorque increased (HOA:  $\Delta$ CVtorque =  $1.55 \pm 1.80$ ,  $d = 0.86$ ; stroke:  $\Delta$ CVtorque =  $3.16 \pm 7.85$ ,  $d = 0.40$ ). In showing that CVtorque only improved in the congruent condition (i.e., elbow flexion), findings suggest that improvements observed after MIT are task-dependent, and may not generalize across movements. Overall, findings inform the application of MIT for motor recovery after stroke.

## **19. Vibrotactile feedback for postural adjustment during fine sensorimotor tasks: Two studies investigating optimal algorithms and stimulus parameters**

*Alice Elizabeth Atkin, York University; William Bonin, Queen's University; Samuel Brost, Queen's University; Bernard Marius 't Hart, York University; Sebastian Tomescu, Sunnybrook Health Sciences Centre; Bradley Strauss, Sunnybrook Health Sciences Centre; Cari Whyne, Sunnybrook Health Sciences Centre; Qingguo Li, Queen's University; Denise Henriques, York University*

Healthcare workers experience high musculoskeletal injury rates due to frequent bending and lifting while wearing heavy attire. In a series of studies, we aim to develop wearable vibrotactile feedback devices which will reduce maladaptive posture without interfering with simultaneous cognitive and sensorimotor tasks. We report two such studies here. Study 1 tested two algorithms for delivering timely feedback, while Study 2 investigated optimal stimulus parameters. In Study 1, two algorithms for characterizing maladaptive posture were tested – one based on Rapid Upper Limb Assessment (RULA) thresholds, and one using exposure variation analysis (EVA), which accounts for cumulative posture risk. Participants received feedback while performing a modified hand-tool dexterity task. Relative to a control condition, EVA feedback reduced average time spent in maladaptive postures (Control = 74.2s, RULA = 20.4s, EVA = 5.5s), and also required less stimulation than RULA-based feedback (RULA = 10.4 cues, EVA = 4.6 cues) without increasing task duration or perceived cognitive workload.





Feedback was high-strength and long-duration, however, which may not be optimal for real-world use. In Study 2, we stimulated participants at three short durations using staircasing so that strength converged on absolute threshold. Psychometric functions showed that longer-duration stimuli were detectable at lower strength. Feedback strength can therefore be lowered without reducing detection rates. Future studies will use this Study 2 data to control the detectability of stimuli during simultaneous cognitive and sensorimotor tasks, thus manipulating attentional load. Ultimately, our aim is to find the ideal stimulus properties which balance detectability, non-interference, and user comfort.

## **20.Sedentary Time and Physical Activity in Cardiac Rehabilitation Patients and Their Partners Extends Beyond Their Neighborhoods**

*Jodi Langley, Dalhousie University; Chloe Cyr, Dalhousie University; Nick Giacomantonio, Nova Scotia Health; Wanda Firth, Nova Scotia Health; Scott Grandy, Dalhousie University; Melanie Keats, Dalhousie University; Laurene Rehman, Dalhousie University; Daniel Rainham, Dalhousie University; Olga Theou, Dalhousie University; Robin Urquhart, Dalhousie University; Ryan Rhodes, University of Victoria; Chris Blanchard, Dalhousie University*

**Background.** Research in cardiac rehabilitation (CR) patients has shown that a significant proportion of sedentary time (ST), light physical activity (LPA) and moderate to vigorous physical activity (MVPA) occurs beyond their neighborhoods. However, as romantic partners play a role in changing patients' ST and PA, it is important to delineate if they have similar behavioral patterns. **Purpose.** Determine how much ST, LPA and MVPA was spent at home and inside versus outside the neighborhood for patients and their partners. **Methods.** Patient-partner dyads (recruited from outpatient and maintenance CR classes) completed a survey and wore an accelerometer and GPS unit for 7 days. The accelerometer / GPS data was combined at the minute level and imported into ArcGIS Pro. Each minute was coded as being at home or inside (road network distance  $\leq 1600\text{m}$  from home) versus outside ( $> 1600\text{m}$ ) the neighborhood and the percentage of time engaged in ST, LPA, and MVPA across the 3 contexts was calculated. **Results.** To date, 44 dyads (patient mean age = 67.46; partner mean age = 65.85) had  $\geq 2$  valid accelerometer + GPS days. The majority of ST (66.29%), LPA (64.69%) and MVPA (46.10%) was spent at home or outside the neighborhood (ST=28.18%; LPA=29.64%; MVPA=44.19%) for patients. For partners, ST (74.29%), LPA (71.95%) and MVPA (57.80%) was primarily spent at home or outside the neighborhood (ST=20.80%; LPA=23.39%; MVPA=33.05%). **Discussion.** When CR patients and partners were not home, they were more likely to engage in ST, LPA, and MVPA outside of their neighborhoods.

## **21.Help-seeking among Canadian student athletes: Do those who need mental health support know where to find it?**

*Isabella L. Tremonte, University of Toronto; Michael P. Jorgensen, University of Toronto; Danika A. Quesnel, University of Toronto; Catherine M. Sabiston, University of Toronto*

Within Canada, there are varying degrees of mental health (MH) support for university student athletes (SA). Although researchers have explored help-seeking among SA, it remains unclear if SA with MH challenges know where to find support. This study examined discrepancies in help-



seeking knowledge among SA based on their level of MH challenges. A cross-sectional design included 247 SA ( $M_{\text{age}} = 20.91$ ,  $SD_{\text{age}} = 2.39$  years) who completed the Canadian Campus Wellbeing Surveys in 2020 or 2022 from a large metropolitan university. Self-reported well-being and psychological distress were used to characterize three distinct MH profiles (i.e., flourishing, moderate, and languishing). SA were most likely to seek help from non-clinical sources (e.g., peers, family; 62%). Help-seeking sources did not differ based on profile membership ( $p = .62$ ). Help-seeking knowledge on-campus was significantly different between profiles ( $\eta^2 = .08$ ) with the languishing profile reporting the least knowledge ( $M = 3.23$ ,  $SD = 1.48$ ) compared to moderate ( $M = 4.03$ ,  $SD = 1.37$ ;  $p = .01$ ) and flourishing ( $M = 4.52$ ,  $SD = 1.28$ ;  $p < .001$ ) profiles. There were no statistically significant differences between profiles on help-seeking knowledge off-campus ( $\eta^2 = .01$ ). Findings highlighted an unfortunate disparity in help-seeking knowledge whereby SA reporting the highest MH challenges (i.e., languishing profile) lacked critical knowledge regarding where to seek professional help, specifically on-campus, when compared to SA with better MH. Further discussion expands on how university settings can improve help-seeking pathways and early support for SA experiencing varying degrees of MH challenges.

## **22. When Satisfaction and Frustration Coexist: Effects on Mental Health and Accelerometer-Assessed Exercise**

*Katie Gunnell, Carleton University; Marina Milyavskaya, Carleton University; Rachel Burns, Carleton University; Tyler Thorne, Carleton University; Ahmed Al-Zehhawi, Carleton University; Benjamin Hives, University of British Columbia*

Few studies have tested theoretical contentions about the uniqueness and co-occurrence of satisfying and frustrating psychological needs while exercising. We examined the combined influence of exercise-need satisfaction and frustration on exercise and mental health. Undergraduate students ( $N=298$ ;  $M_{\text{age}}=19.53$  years,  $SD=3.79$ ; 68.5% woman) completed self-report assessments at one time and wore an accelerometer for the next 6 full days. Confirmatory factor analysis supported a hierarchical structure with higher-order factors of exercise-need satisfaction and exercise-need frustration ( $CFI=.97$ ,  $RMSEA=.04$  [90%CI(.03, .05)  $r_{\text{needsat, needfrus}} = -.35$ ,  $p < .01$ ]). Four polynomial regression analyses (outcomes: symptoms of depression, flourishing, MVPA in bouts  $\geq 10$  minutes, and unbouted MVPA) with response surface analysis using manifest variables were estimated. Exercise-need satisfaction was independently associated with flourishing, symptoms of depression, and unbouted MVPA, whereas exercise-need frustration was independently associated with symptoms of depression only. Response surface analysis suggested that flourishing was highest when both satisfaction and frustration were high, but optimal mental health (lower depression and higher flourishing) was most consistently observed when satisfaction exceeded frustration. Unbouted MVPA increased when both need satisfaction and frustration were high simultaneously, yet there was no indication that activity levels changed depending on which was higher. Models explained a small-to-moderate proportion of variance ( $R^2=.01-.23$ ). Overall, these results show some support for the conceptual distinction between exercise need satisfaction and frustration. Although the two experiences can co-occur, better mental health occurs when satisfaction



outweighs frustration. More research is needed to understand the null findings for bouted MVPA.

### **23.Meeting Families Where They Are: Lessons Learned from the Health On the Move for Equity (HOME) Program**

*Erin Pearson, Lakehead University; Delaney Johnson, Lakehead University; Aislin Mushquash, Lakehead University; Rachel Globensky Bayes, Thunder Bay District Health Unit; Jackie Knough, Our Kids Count; Joanna Carastathis, Thunder Bay District Health Unit; Kim Begin, City of Thunder Bay*

Many Canadian children and families face disproportionate access to the social determinants of health leading to persistent health inequities. In response, *Healthy Kids HOME (Health On the Move for Equity)* was developed as a place-based, community-driven health promotion program aimed at reducing systemic barriers by bringing services directly into equity-deserving Thunder Bay, Ontario neighbourhoods. Guided by a multi-sectoral steering committee and grounded in a Participatory Action model, HOME delivered resident-informed programming through local Healthy Kids Sites, targeting four pillars: physical activity, nutrition, mental health, and smoking cessation. Strong community partnerships underpinned program delivery, with a central goal of increasing resident engagement while supporting behaviour change and other self-identified needs. Between 2020 and 2025, HOME delivered more than 2,000 program offerings, reaching 20,000+ unique and repeat participants. A flagship initiative, *I Love To...*, focused on physical activity and was implemented in collaboration with the City of Thunder Bay. This component encompassed 36 unique programs delivered across three neighbourhoods, ranging from hockey and soccer to archery and cultural games, emphasizing accessibility and inclusion. This presentation will highlight key program outcomes, enabling factors (e.g., neighbourhood-based delivery, no-cost participation, resident co-design), and persistent challenges (e.g., staffing, complex funding structures, infrastructure limitations) associated with developing, implementing, and evaluating a multi-faceted community-based health promotion initiative. The HOME model demonstrates a scalable, partnership-anchored approach to improving health behaviours among children and families who are historically excluded from mainstream opportunities. Its success reinforces the value of culturally responsive, low-barrier, and locally tailored programming in advancing health equity.

### **24.Young athletes' social goals during the children-to-youth sport transition: A latent profile and latent transition analysis**

*Thomas Mangor Jørgensen, Norwegian School of Sport Sciences; Siv Gjesdal, Norwegian School of Sport Sciences; Frank Eirik Abrahamsen, Norwegian School of Sport Sciences*

While the social aspect of sports is considered crucial for participation, the influence of social goals in motivating young athletes remains relatively unexplored. This study examined social goal profiles and their stability during Norway's children-to-youth sport transition (CYT). This transition represents a shift toward a more performance-driven environment (Jørgensen et al., 2024), which may cause changes in athletes' motivation. We explored associations between social goal profiles and gender, expectations of success, and intention to continue. 329 athletes,



aged 11–13, completed questionnaires before and after the transition. Using latent profile analysis, we identified three distinct social goal profiles: low, moderate, and high motivation through social goals. Latent transition analysis revealed substantial instability in profile membership across CYT. However, athletes in the high social goals profile demonstrated the greatest stability (39%), membership turnout (T1 = 68.8%, T2 = 44%), and higher expectations of success across both time points ( $X^2 p < .05$ ). Notably, gender did not predict membership in any profile, suggesting that social goal patterns are similar for boys and girls. No differences in intentions to continue were found across profiles. These findings enhance our understanding of social motivation in young athletes, emphasizing the dynamic nature of social goals during CYT.

## **25.Using AI-generated Images to Minimize Researcher Bias and Enhance Participant Insight in Qualitative Interviews**

*Alexa Fowler, University of Lethbridge; Alex Engel, University of Lethbridge; J. Paige Pope, University of Lethbridge*

Visual elicitation methods are used in qualitative research interviews to prompt discussion among participants and enhance researcher understanding. These methods involve the use of photographs or other visual stimuli to guide research interviews. With advancements in artificial intelligence, AI-generated images offer a promising way to enhance consistency and ensure ethical compliance with photo elicitation techniques. The purpose of this study was to explore the use of AI-generated images as a visual elicitation method in qualitative interview guides. In our study, researchers used the online platform DALLE-E to create 36 AI-generated images depicting men and women across six ethnicities with characteristics previously found to be intimidating in exercise environments; ‘fit’, ‘muscular’, and ‘lean’ individuals (2 gender x 6 ethnicities x 3 characteristics). Image prompts were created using various filters and control words to ensure consistency. During qualitative interviews, participants were asked a series of questions regarding the factors that contributed to them being intimidated by others in fitness facilities and the specific characteristics of others that they perceived as most intimidating. Near the end of the interview, participants were asked to pick out which images appeared visually intimidating and explain why they perceived the images as intimidating. The use of AI-generated visuals provided participants with an opportunity to clarify their perspective and distinguish between characteristics they did and did not perceive as intimidating, thereby reducing researcher bias. Additionally, the images facilitated deeper participant responses and insights by allowing comparisons between images and expansion of their initial verbal responses.

## **26.Leave no one behind: A rapid review for recruiting persons experiencing disabilities in research**

*Rayona Silverman, Queen’s University; Michele Chittenden, Queen’s University; Mahadeo Sukhai, Accessibility Standards Canada; Alanna Shwed, University of British Columbia - Okanagan; Heather L Gainforth, University of British Columbia - Okanagan; Amy Latimer-Cheung, Queen’s University; Jennifer R Tomasone, Queen’s University*



Engaging participants experiencing disabilities in all phases of research can lead to feasible study designs for research teams, improved study uptake, and more readily utilized findings. Unfortunately, many barriers persist for persons experiencing disabilities looking to participate in research processes focused on sport and exercise. While barriers to research participation exist at all stages of the research, research participation often begins with research recruitment, which invites participants to participate based on specific inclusion and exclusion criteria. The purpose of this project was to understand how researchers can make research study participation more appealing, feasible, and accessible for persons experiencing disabilities. We conducted a rapid review of the peer-reviewed literature, adhering to rapid review guidelines. An engagement team was formed with three community members experiencing disabilities who helped co-create the review protocol. Three library databases were searched: CINAHL, Sociological Abstracts, and Web of Science. Studies were screened by two reviewers. Included research studies ( $n=14$ ) focused on community-based studies, interventions, or research reflections and included three disability groups (intellectual, physical, and sensory disabilities). A total of 26 recruitment strategies (e.g., actions to help promote recruitment success) were extracted and mapped onto participant, research team, institutional, and societal levels of the Social Ecological Model (SEM) and situated by barrier category (e.g., physical, attitudinal, systemic, expertise related). Identified strategies highlighted the importance of disability-specific training and flexibility for research teams, trust building with participants, and appropriate ethical policies. Findings will help improve recruitment efforts for engaging individuals experiencing disabilities in sport and exercise research.

## **27. More Ready than Willing: Leadership Self-Efficacy as a Key Predictor of Athlete Leadership Behaviours**

*Mason Sheppard, University of Windsor; Todd Loughead, University of Windsor; Nathan Clark, University of Windsor*

Athletes are typically appointed by coaches or teammates to fulfill formal leadership roles (i.e., captain or assistant captain; Loughead et al., 2006). While these athletes are thrust into leadership roles, a question remains as to their preparedness to assume such roles. The Ready, Willing, and Able (RWA) framework (Keating et al., 2014) provides a framework of leadership preparedness by viewing capable leaders as exhibiting leadership self-efficacy, possessing the ability to motivate others, and demonstrating proficient leadership behaviours. The purpose of this study was to examine the relative contributions of leadership self-efficacy (Ready) and motivation to lead (Willing) in relation to athlete leadership behaviours (Able) across formal, informal, and non-leader athletes. A sample of 130 athletes completed a questionnaire package to measure the RWA framework operationalized as athlete leadership behaviours (Callow et al., 2009; Chelladurai & Saleh, 1980), motivation to lead (Chan & Drasgow, 2001) and leadership self-efficacy (Murphy, 1992). Multi-group SEM and multiple linear regression examined predictive relationships. The SEM model exhibited excellent fit ( $CFI = 1.00$ ;  $RMSEA = 0.000$ ). Self-efficacy significantly predicted athlete leadership behaviours in both formal ( $\beta = .69$ ) and informal ( $\beta = .55$ ) athlete leaders. Regression analyses confirmed these findings that self-efficacy was a robust predictor ( $\beta = .57$ ,  $p < .001$ ) of athlete leadership behaviours. These



findings highlight self-efficacy as a key determinant of athlete leadership readiness, outweighing the influence of motivational factors. This underscores the importance of prioritizing athletes' leadership self-efficacy within leadership development programs to help athletes feel prepared to fulfill leadership roles.

## **28. Physical activity and physical activity adequacy as possible predictors of generalized anxiety disorder in female university students**

*Bailey Gitzel, University of Saskatchewan; Darren Nickel, University of Saskatchewan; Kevin S. Spink, University of Saskatchewan*

Anxiety has been identified as a significant issue for university students (Woodgate et al. 2020). Higher levels of physical activity (PA) appear to be protective against the emergence of anxiety (Wanjau et al., 2023). Regarding dosage, guidelines suggest that 150 minutes of weekly MVPA (150MVPA) are required for health benefits (CSEP, 2025). As such, one might expect that attaining 150MVPA would be associated with lower anxiety. However, emerging research indicates that perceived activity adequacy (PAadeq) may also influence anxiety. In one study, PA levels were less related to anxiety when PAadeq was included (Sawatsky, 2024). The study purpose was to examine whether attaining 150MVPA or holding perceptions that one's activity was adequate for health would be associated with screening probable cases of generalized anxiety disorder or not. Female university students (N=377) completed an online questionnaire assessing MVPA (Fowles et al, 2017), PAadeq (Zahrt & Crum, 2020), and generalized anxiety symptoms (GAD-7, Spitzer et al., 2006). MVPA and GAD-7 were split into binary variables – achieving 150MVPA or not, and scoring  $\geq 10$  (n=220) or not (n=157) on GAD-7, respectively. A binary logistic regression revealed that only PAadeq was related to GAD-7 screening scores ( $p=.01$ ). Those perceiving their PA was adequate for health were more likely to report frequencies of anxiety symptoms that fell below the cutoff score of 10 for screening for an anxiety disorder. This suggests that PA adequacy perceptions may be a variable to consider when examining protective factors for generalized anxiety disorder in female students.

## **29. Unpacking the relative age effect in action sports: Methodological challenges and novel insights**

*Christopher J. Coady, University of Windsor; Krista J. Munroe-Chandler, University of Windsor*

The relative age effect (RAE; when one's birthdate leads to participation or performance advantages over their peers) has been widely examined across traditional sports, but remains underexplored in action sports. Additionally, limited research has evaluated how methodological decisions—particularly the choice of expected birthdate distribution—influence RAE detection, particularly amongst international samples. The purpose of this study was to investigate RAEs in X-Games athletes and to examine how different methods of determining expected birthdate distributions influence RAE findings. The sample included 310 X-Games athletes across five sports: skateboarding, BMX, motocross, skiing, and snowboarding. Chi-square goodness-of-fit tests were used to compare observed birth quartile distributions to four different expected distribution methods: (1) assumed equal distributions, (2) weighted average birthrate distributions based on athlete country of origin, (3) expected birthrate distributions





based on a country's general population, and (4) the birthrate of a single country representing a broader region (e.g., France representing Europe). Results showed that RAE detection varied depending on the method used. Using equal distributions, RAE was identified in summer athletes and male skateboarders. Using weighted averages, additional RAE findings emerged in the overall sample and male summer athletes. A RAE was also observed for USA athletes when using equal distributions; however, this effect disappeared when recorded national birthrate distributions were used. No significant effects were found when using single-country birth distributions to represent a continent. These findings suggest that the choice of expected distribution method meaningfully influences RAE detection and may contribute to inconsistencies across the broader RAE literature.

### **30. Behind the Scenes of Supporting Women Coaches' Reflection and Storytelling through Narrative Research Approaches**

*Sara Kramers, The University of British Columbia; Corliss Bean, Brock University; Thierry Middleton, University of Portsmouth; Andrea Bundon, The University of British Columbia*

Opportunities for women coaches in Canada to enhance their coaching skillsets are increasing through developmental and mentorship programs. However, many women continue to face barriers to securing and staying in coach positions within competitive sport. Grounded in narrative inquiry, this study involved eight women coaches who are navigating gendered sport spaces and had a story they wanted to share. The participants took part in individual interviews and then met in small groups for virtual meetings designed to foster reflection on their coaching journeys using narrative and creative methods (e.g., crafting short stories about belonging as coaches, writing letters to their younger/future selves, discussing examples of creative non-fictions from relevant research). The overarching purpose of the meetings was to support the participants in creating a digital story (i.e., a short, personal multi-media video) about their coaching experiences. Digital storytelling offers a powerful and participatory method to share women coaches' realities of (in)equity in competitive sport and to connect with various knowledge users across the sport sector. This presentation explores the process of facilitating a social learning space and how digital storytelling was supported within it. It also examines the participants' experiences, including learning from others' stories and developing awareness of sociocultural issues in their sport contexts. Practical insights will be shared on how creative analytical practices and narrative approaches may be used to foster collaborative reflection and storytelling in sport psychology research and practice.

### **31. The Co-Development of Indigenous Health Certificate for Students in Health & Exercise Sciences**

*Tanya Forneris, UBC Okanagan; April Coulson, UBC Okanagan and First Nations Health Authority; Meagan MacNutt, UBC Okanagan; Mary Jung, UBC Okanagan*

This project aimed to co-develop an Indigenous Health Certificate for students in Health & Exercise Sciences through a collaborative partnership between Indigenous community members. An Indigenous Advisory Committee was created with over 30 members including Elders, Knowledge Keepers, Indigenous leaders, individuals working within Indigenous focused



organizations, as well as Indigenous students and faculty members. The Advisory Committee has and will continue to guide all decisions regarding the learning outcomes, structure, development, and implementation of the certificate. To date, an environmental scan of Indigenous learning activities at UBC has completed, the learning outcomes have been finalized, and a certificate framework has been developed. It is proposed that students will begin the process of obtaining the certificate by completing introductory Indigenous courses. These courses are then followed by learning activities focused on Indigenous health and cultural safety grounded in Indigenous approaches and land-based learning. As a final step, students will engage in a community or project-based circle learning initiative to complete the certificate. Overall, the development of the Indigenous Health Certificate will advance several actions of UBC's Indigenous Strategic Plan, actions from Canada's Truth and Reconciliation Commission and will foster the ability for students to engage with Indigenous individuals and communities in a culturally-safe and respectful manner. The project will also contribute to broader strategic actions including Indigenization of programming, increased experiential learning opportunities, and strengthened partnerships with the Indigenous community. Secondary outputs included an inventory of existing Indigenous learning activities and a replicable blueprint for other institutions.

### **32. One-on-one and group-based physical activity intervention compared to a wait-list control for post-secondary student mental health and social well-being: A 3-arm parallel randomized controlled**

*ML deJonge, University of Toronto; DE Thibodeau, University of Toronto; DA Quesnel, University of Toronto; S Yuen, University of Toronto; CM Sabiston, University of Toronto*

Post-secondary students face elevated mental health risks, yet scalable, evidence-based prevention strategies remain limited. Physical activity (PA) is a promising intervention, yet implementation factors to support scalability are underexamined. Guided by the COM-B model, this three-arm parallel randomized controlled trial (hybrid effectiveness-implementation design), evaluated the effects of 6-week supervised one-on-one (1:1) and group PA, compared to a waitlist control, on mental health, social well-being, and PA behaviour. Outcomes were assessed at baseline (T1), 6-weeks (T2), and 1-month-follow-up (T3) using linear mixed-effects models. A mixed-methods process evaluation assessed implementation factors including acceptability (e.g., enjoyment), fidelity (e.g., COM-B processes), reach, and adherence. Quantitative outcomes were analyzed using descriptive statistics, t-tests, or chi-square tests, and qualitative data were analyzed thematically. Physically inactive students experiencing poor mental health were randomized ( $N = 115$ ;  $M (SD)_{age} = 25.42 (6.14)$ ; 76% women; 60% diagnosed mental illness) to 1:1 PA ( $n = 40$ ), group PA ( $n = 41$ ), or waitlist ( $n = 34$ ). Relative to the waitlist, both PA formats reduced depression and psychological distress while improving well-being and social connectedness at post-intervention (T1–T2) and at follow-up (T1–T3). The 1:1 delivery reduced anxiety at both timepoints and improved social support at follow-up. Group delivery showed anxiety reductions at follow-up. All improvements were maintained (T2 to T3). 1:1 delivery showed higher adherence, acceptability, and greater fidelity to supporting students'



capability for physical activity. The findings highlight how delivery format, a key contextual factor in the PA–mental health relationship, influences both effectiveness and implementation.

### **33. “We Understood Each Other Better”: Evaluating the Together for Us (T4Us) Intervention in Competitive Youth Soccer Teams**

*Mark Bruner, Nipissing University; Meredith Schertzing, Nipissing University; Colin McLaren, Cape Breton University; Sophia Milner, Nipissing University; Cassidy Brooks, Nipissing University; Ian Boardley, University of Birmingham; Luc Martin, Queen’s University; Stewart Vella, University of Wollongong; Richard Slatcher, University of Georgia; Rebecca Misiaz, Nipissing University; Justin Carré, Nipissing University; Katrien Fransen, KU Leuven*

Together for Us (T4Us) is an athlete-led intervention designed to strengthen team identity in youth sport (Bruner et al., 2025). The purpose of this study was to evaluate the implementation of T4Us across a competitive youth sport season. Five competitive youth soccer teams completed T4Us as a part of a larger cluster randomized controlled trial. At the conclusion of the season, thirteen focus groups were conducted with 53 athletes ( $M_{age} = 13.15$  years), and individual interviews were conducted with 6 coaches ( $M_{age} = 43.88$  years). Thematic analysis generated three broad themes involving T4Us workshop and booster experiences, team outcomes, and areas of future improvement. Youth enjoyed the hands-on and creative T4Us activities, which encouraged full team participation and reflection. Coaches found the booster session valuable for reinforcing concepts and maintaining momentum, particularly the athlete-led focus which empowered athletes to set and pursue their own team goals. In terms of the outcomes of T4Us, athletes and coaches reported a shift towards a stronger team identity through enhanced communication, leadership, and accountability. Teams that regularly applied the workshop concepts (e.g., trademark and action plan) experienced deeper connection, and greater ownership and accountability of team values and behaviours both on and off the playing field. For suggested improvements, athletes recommended clearer instructions on T4Us activities, an earlier intervention timing in the season, and more consistent follow-up to promote behaviour change. Coaches asked for support tools (e.g., implementation guide) to understand how to better embed team values more consistently and practically into daily practices.

### **34. Sex differences in the impact of concussion on complex visuomotor skill performance in working-aged adults with persisting post-concussion symptoms.**

*Madison Reiter, York University; Tooba Shahzad, York University; Kiran Bumra, York University; Miracle Ozzoude, York University; Nicole Smeha, York University; Sara Weinberg, York University; Lauren Sergio, York University*

Background: Everyday tasks, such as driving, often require cognitive-motor integration (CMI), whereby guiding visual information and motor action are decoupled. Concussion can disrupt the neural networks underlying CMI, resulting in impaired motor performance. Previously, our group has found sex-related differences in the pattern of brain activity controlling CMI in healthy adults, as well as in the pattern of visuomotor skill recovery following concussion. Purpose: Here we examine possible sex differences in concussion symptom impact



on rule-based visuomotor performance, accounting for factors such as age and time since injury. Methods: 41 adults (24 female; 29-64 years old, mean  $47.2 \pm 9.8$ ) having persistent post-concussion symptoms completed symptom questionnaires (RPQ,DHI) and two visuomotor tasks. One direct task involved sliding a cursor into a target on a touchscreen, and one indirect/CMI task involved displacing a cursor on a monitor by moving their hand in a different plane, with reversed cursor visual feedback. Results: We observed a significant main effect of sex on early physical symptom burden (RPQ-3,  $p < 0.01$ ) and CMI timing performance (reaction time/movement time/peak velocity composite score,  $p < 0.05$ ). Further, a blocked hierarchical linear regression revealed that RPQ-3, time since concussion, age, and sex all accounted for a significant amount of variance in CMI performance timing ( $p < 0.05$ ). Discussion: A variety of factors impact one's recovery from concussion with respect to movement control important for activities of daily living. These data emphasize the importance of accounting for sex in understanding an individual's experience of persisting symptoms following brain injury.

### **35.Examining Motivational Climates and Developmental Experiences in Adolescent Girls' High-Performance Soccer in Canada**

*Valentina Nivicki, York University; Jessica Fraser-Thomas, York University*

Youth sport offers an optimal context to foster positive youth development (PYD), with intentionality in program design and coach approach considered integral to youth's positive experiences and outcomes. Specifically, mastery-oriented climates that promote effort, task mastery, and personal improvement have been associated with improved self-efficacy, athlete satisfaction, and positive experiences (Strachan et al., 2011). Despite this, current trends suggest high-performance sport often adopts a performance-oriented climate, which may be counterintuitive in fostering PYD outcomes. As limited research has explored motivational climates in high-performance youth sport, specifically among girl populations, this study examined (a) the nature of motivational climates in high-performance girls' soccer in Canada, and (b) the relationship between motivational climates and PYD experiences in high-performance girls' soccer in Canada. Girl athletes ( $N=46$ ) ages 16-18 ( $M=16.5$ ) that actively took part in high-performance soccer programs across Canada completed online surveys (i.e., Perceived Motivational Climate in Sport Questionnaire, PMCSQ-2; Peer Motivational Climate in Youth Sport Questionnaire, PeerMCYSQ; Youth Experience Survey for Sport, YES-S). Results suggest that high-performance girls' soccer environments adopted elements of mastery- and performance-oriented climates. While coaches and team structures often promoted both outcome-focused and effort-based values, peer-created climates were perceived as more strongly mastery-oriented, suggesting that athletes may have fostered a more supportive, improvement-focused atmosphere among themselves, than the atmosphere fostered within the broader coach-led team environment. Further, findings revealed that peer-created mastery-oriented climates were a predictor of personal and social skill development. Implications for practice within girls' high-performance sport environments, and areas for future research are discussed.



### **36. Perceived Coaching Style of Youth Basketball Coaches and Players' Mental Toughness: A Comparison between Germany and Japan**

*Maïke Tietjens, University Münster; Eleni Koutsouki, former Student University Münster; Souchi Ichimura, no affiliation*

Drawing on the mediational model of leadership in sport (Smith & Smoll, 1989), the perception and recall of coach behavior are viewed as key mechanisms influencing athlete development. These perceptions are shaped by individual characteristics and culturally embedded expectations. Additionally, mental toughness is considered a significant predictor of athletic success (Clough et al., 2002). Given that coaches operate in diverse cultural contexts, culturally sensitive leadership is of growing relevance. This study examines the relationship between adolescents' mental toughness and their perception of transformational and servant leadership, with a focus on cultural and gender-related differences. Data were collected from 237 youth basketball players across 24 teams (Germany:  $n=111$ , 40% female,  $M_{age}=15.00$ ,  $SD=.14$ ; Japan:  $n=126$ , 34% female,  $M_{age}=16.00$ ,  $SD=.52$ ). Participants completed the Differentiated Transformational Leadership Inventory (Vella et al., 2012), the Revised Servant Leadership Profile for Sport (Rieke et al., 2008), the Mental Toughness Questionnaire 18 (Clough et al., 2002), and selected scales from the Dimensions of Culture Questionnaire (House et al., 2004). A forward-backward translation procedure was used. Confirmatory factor analyses supported the model structures; reliability coefficients ranged from .49 to .91. Results revealed general cross-cultural similarities, with Japanese players rating servant leadership higher, while German players reported higher values for acceptance of group goals, role modeling, and contingent reward. Notably, associations between mental toughness and transformational leadership emerged only among German male athletes. These findings highlight the practical value of culturally informed coach education that addresses both leadership styles and the development of mental toughness.

### **37. Examining social imaginaries of the “hockey parent” as represented in Canadian media**

*Juliana LeBlanc, Acadia University; Marianne Clark, Acadia University; Christopher Shields, Acadia University*

Minor hockey is a touchstone within Canadian culture with parents' support and dedication traditionally placed at the heart of the sport experience. However, parental sport involvement is not uncomplicated and recent attention has been paid to problematic or disruptive parental behaviour within the hockey context. Media framings play a salient role in shaping our understandings of specific groups and social roles and both reflect and contribute to current understanding of the ‘hockey parent’ in the Canadian imaginary. Therefore, the purpose of this study was to examine how “hockey parents” have been portrayed in Canadian print media. A Newsbank [search](#) for instances of hockey, parent, Mom or Dad in the headlines in major Canadian newspapers between 2013-2023, yielded 268 unique articles. Headlines were categorized by the research team (84% agreement) as either a positive, negative, or neutral portrayal of a hockey parent. While 41% of headlines were categorized as neutral (e.g., More driving for Mountain hockey parents?), 33% of headlines depicted parents in a positive light (e.g., Hockey parents shouldn't be taken for granted), with 26% highlighting something negative



about the parents (e.g., Bullying by hockey parents not Canadian way). Portrayals often overlapped with other social narratives (e.g., idealized motherhood/fatherhood) and drew upon a collective imaginary of what a hockey parent ‘ought’ or ‘ought not’ to be. We argue the figure of the hockey parent is imagined, constructed and represented in mainstream media in ways that leverage emotional and value-laden connections to idealized social roles.

### **38.Enhancing Quality Participation: The Adapted Bingocize® Leader Training for Autistic Children and Youth**

*Sepehr Rassi, York University; Lauren Tristani, York University; Jason Crandall, Western Kentucky University; Jonathan Weiss, York University; Rebecca Bassett-Gunter, York University*

Adapted Bingocize® combines bingo with movement-based activities to introduce autistic children and youth to physical activity (PA) in a fun, community-based format. Effective training of coaches and PA leaders is essential for optimizing implementation and ensuring high-quality PA experiences. Grounded in the Quality Parasport Participation Framework, this study aimed to develop and evaluate an online facilitator training program designed to prepare community leaders to deliver inclusive PA programs such as Adapted Bingocize®, with an emphasis on autonomy, belonging, challenge, engagement, mastery, and meaning. The self-paced program consisted of five modules with instructional videos, documents, and end-of-module quizzes. Seven participants completed the training. Data were collected through an online questionnaire and semi-structured interviews and analyzed thematically. Participants valued the flexibility of the self-paced structure and the concise and digestible video content. However, they expressed interest in more interactive elements and recommended adding an ice-breaker activity to promote belongingness. A key recommendation specific to Adapted Bingocize® was to add a demonstration video showing room setup and gameplay to increase preparedness. Findings indicate that a flexible, modular training format is a feasible and acceptable strategy for preparing community leaders to deliver inclusive PA programs. Future studies should examine the potential of interactive and community-building features to enhance facilitator engagement and readiness. This study provides practical insights for scaling inclusive PA opportunities for autistic children and youth.

### **39.The Relative Influence of Coaches’ Interpersonal and Technical Skills on Perceptions of Team Dynamics and Performance in University Sport Teams**

*Mitchell C. Profeit, Queen’s University; Stuart G. Wilson, Queen’s University; Cailie S. McGuire, The University of British Columbia; Alex Murata, Queen’s University; Jordan D. Herbison, Vancouver Island University; Jean Côté, Queen’s University; Luc J. Martin, Queen’s University*

Effective coaches must demonstrate skills across technical, interpersonal, and intrapersonal domains. However, these skills are typically considered separately, and their respective impacts on the same outcomes have not been explored. We compared the relative influence of coaches’ technical (TC) and interpersonal (IP) skills on performance and cohesion. We collected 1048 end-of-season questionnaires over three seasons from 709 athletes (63.2% male;  $M_{age}=20.2$ ) representing 15 teams (17 head coaches). Participants provided perceptions of their head coach’s TC and IP skills, their individual and team’s performance, and their team’s task and





social cohesion. Using multi-level linear models nested by athlete and coach, perceptions of coaches' TC and IP skills were positively related to their influence on individual (TC:  $B = 0.71, p < .001$ ; IP:  $B = 0.80, p < .001$ ) and team performance (TC:  $B = 0.47, p < .001$ ; IP:  $B = 0.46, p < .001$ ), and task (TC:  $B = 0.35, p < .001$ ; IP:  $B = 0.40, p < .001$ ) and social cohesion (TC:  $B = 0.46, p < .001$ ; IP:  $B = 0.50, p < .001$ ). Despite both skills remaining significant predictors of all outcomes when entered simultaneously ( $p < .001$ ), IP skills were more strongly related to individual performance ( $B = 0.59$  vs.  $0.31$ ) and task ( $B = 0.35$  vs.  $0.22$ ) and social cohesion ( $B = 0.29$  vs.  $0.16$ ), whereas TC skills were more strongly related to team performance ( $B = 0.29$  vs.  $0.26$ ). These findings underscore the importance of evidence-based training that encompasses all dimensions of coaching, including developing coaches' interpersonal and technical skills.

#### **40. Supporting Exercise Adherence and Mental Health: Baseline Trends from a University Buddy System Pilot**

*Darcee J. Hall, University of Windsor; Melissa A. Paré, PhD, University of Windsor; Krista J. Munroe-Chandler, PhD, University of Windsor; Todd M. Loughhead, PhD, University of Windsor; Chad A. Sutherland, PhD(c), University of Windsor; Irene L. Muir, PhD, Penn State, Altoona*

University students are at risk for psychological distress and sedentary behaviour due to academic and lifestyle-related stressors (e.g., living away from home and academic pressure; Gyurcsik et al., 2004). Exercise is an effective mental health intervention, particularly for adults experiencing anxiety and depression (Stonerock et al., 2015). UWorkItOut UWin is a 6-week supervised exercise training and counselling program that has reduced symptoms of anxiety and depression in sedentary university students (Muir et al., 2020). Social support is a key determinant of physical activity and a protective factor against psychological distress (Barber et al., 2012; Merianos et al., 2013). The Buddy System pilot intervention was implemented to support exercise adherence through social support among university students. The purpose of the current study was to examine baseline characteristics of referred students and explore associations between physical activity (PA) and mental health. The sample included  $N = 89$  students, primarily female (67%), unemployed (56%), in fourth year or below (67%), and reported moderate levels of PA (64%). One-way ANOVAs indicated students in 5th year undergraduate or above reported significantly higher scores on the mental health subscales of depression ( $p = .024$ ) and loss of behavioural and emotional control ( $p = .019$ ), indicating greater psychological distress. These findings align with research suggesting distress worsens across the degree course, with depression peaking in the final academic year (Bewick et al., 2010; Szepe et al., 2024). Contributing factors include increased academic and non-academic demands, financial stress, isolation, and reduced autonomy over schedules (Javadizadeh et al., 2025).

#### **41. The Relative Age Effect in Elite Youth Lacrosse: A Bayesian Hierarchical Analysis of Selection Cascades in the USA Lacrosse National Team Development Program**

*Yiru Wang, Tanenbaum Institute for Science in Sport, University of Toronto; Joseph Baker, Tanenbaum Institute for Science in Sport, University of Toronto; Jason D Vescovi, USA Lacrosse*



*High Performance Department; USA Lacrosse Center for Sport Science & Safety; Bailey Speight, USA Lacrosse Center for Sport Science & Safety; Amy Markwort, USA Lacrosse National Teams Development Program*

Relative age effects (RAE), usually reflected in overrepresentations of athletes born early in the selection year, have been documented in physically demanding sports. While theoretical models suggest RAE depend on interactions between individual, task, and environmental constraints, evidence in lacrosse remains limited. We analyzed birth distributions of 6,545 youth lacrosse players (2,476 men, 4,069 women) from the USA Lacrosse National Team Development Program (NTDP) (2019-2024 U15/U17 in 2019, 2021–2024 U16/U18). The NTDP is an annual cycle consisting of three stages: regional ID clinics, combine, and Youth National Team selection. Bayesian hierarchical logistic regression models examined binary outcomes (made the combine, made the Youth National Team) predicted by relative age (days from cutoff date), gender, and their interaction. Models included year-specific intercepts and RAE effects to account for temporal variation. Quartile 1 (September-November) players were overrepresented in regional ID clinics (1.20x expected). However, relative age provided no advancement advantage for either gender. Gender-specific analyses revealed minimal effects for both women (ID to combine:  $\beta = -0.017$ , 95% HDI: [-0.309, 0.280]; combine to team:  $\beta = 0.014$ , 95% HDI: [-0.400, 0.406]) and men (ID to combine:  $\beta = 0.138$ , 95% HDI: [-0.183, 0.460]; combine to national team:  $\beta = 0.060$ , 95% HDI: [-0.310, 0.434]) with all intervals including zero. RAE within the USA Lacrosse NTDP appears limited to players attending regional ID clinics. Once players enter the system, selection shows no bias toward relatively older athletes. Therefore, relatively younger players should be encouraged to attend ID clinics.

#### **42. How mental performance consultants act on self-regulated sport practice: Extending survey scores to lean into metacognitive learning narratives**

*Bradley W. Young, University of Ottawa; Sharleen Hoar, Canadian Sport Institute - Pacific; Lisa Bain, University of Ottawa; Joe Baker, University of Toronto*

Self-regulated sport practice is a topic of interest to mental performance consultants (MPCs) working on adolescents' psychology of practice (Young et al., 2025). Its application entails supporting athletes' use of psychological processes to optimize self-directed facets of skill acquisition. This study explored how MPCs would develop their case conceptualization for competitive adolescent athletes based on interpretations of the Self-Regulation of Sport Practice (SRSP) survey (Wilson et al., 2021). Twelve Canadian MPCs completed mock SRSPs for a client. They were interviewed about client scores assigned and implications for client application regarding the SRSP's three metacognitive scales: planning; checking-in; evaluating-reflecting. Using a pragmatic paradigm, reflexive thematic analysis initially characterized the 'survey as discussion tool', wherein the 'scores matter, as long as they serve dialogue'. For each scale, engagement themes addressed what MPCs: (i) needed to further figure out in their consulting role; (ii) wished to act on to enhance athletes' proficiencies. For planning, MPCs wanted to act on various subthemes: incentivizing planning; 'just ahead planning'; preparing for practice; complementing goals with intentions; types of targets; cognitive load; 'planning times and places'; reminder strategies. For checking-in, they wished to aid athletes with identifying



productive attentional targets, ‘on balance checking-in’, and mindfulness of checking. For evaluating-reflecting, they wanted to address awareness, projecting to higher scores and future practice, ‘setting a neutral’, deflecting time-based performance outcomes, interpolating process elements that constitute practice tasks, and reinforcing strengths. Finally, the MPCs noted intersections between scales by encouraging athletes to effectively align evaluating-reflecting with planning and checking-in.

#### **43. Belonging Builds Strength: The Role of Social Identity in Youth Resilience and Well-being**

*Colin McLaren, Cape Breton University; Meredith Schertzinger, Nipissing University; Rebecca Misiaz, Nipissing University; Brenda Bruner, Nipissing University; Barbi Law, Nipissing University; Marika Warner, MLSE LaunchPad; Jackie Robinson, MLSE LaunchPad; Ben Arhen, MLSE LaunchPad; Bruno da Costa, McGill University; Mark W. Bruner, Nipissing University*

Social identity is a critical factor in shaping mental health among youth engaged in extracurricular activities, including sport and physical activity (Vella et al., 2021). This longitudinal study examined the relationship between the sub-dimensions of social identity (i.e., ingroup ties, cognitive centrality, ingroup affect) and two mental health outcomes: resilience and well-being. Grounded in social identity theory, the research aimed to understand how increased identification with a youth center during the 2-year post-COVID-19 social restriction period may have served as a psychological resource for youth to foster positive mental health. Ninety-seven participants ( $M_{\text{age}} = 12.19$ ) from an urban youth center in Toronto, Ontario completed surveys at a total of four time points across two years. Controlling for gender, age, and ethnicity, results of two linear mixed-effects models highlighted significant within-subject effects for ingroup ties as a predictor of resilience ( $b = .25, p = .01$ ) and well-being ( $b = .28, p = .02$ ), and ingroup affect as a predictor of well-being ( $b = .25, p = .03$ ). In addition, significant between-subject effects were found wherein ingroup ties was a predictor of resilience ( $b = .33, p = .01$ ) and well-being ( $b = .32, p = .01$ ). These findings support the growing body of literature highlighting the protective role of social identity in youth mental health. By identifying increases to social identity as a salient factor in promoting resilience and well-being, the results offer important implications for youth programming, particularly those aimed at fostering connection, belongingness, and positive affect.

#### **44. Social Support in Youth Sport: An Updated Systematic Review**

*Shannon R. Pynn, Utah State University; Danielle L. Cormier, University of Alberta; Helene Jørgensen, University of Calgary*

Sheridan and colleagues’ (2014) systematic review offered a valuable and comprehensive overview of the youth sport social support literature published prior to 2014. Given the rapidly changing landscape of youth sport, it is reasonable to suggest that the literature has expanded since that time. This review aimed to provide an update on the state of social support research in youth sport since 2014 by synthesizing research characteristics, conceptualizations, measurements, associated factors and outcomes, intervention effects, study quality, and future research directions. Guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; Page et al., 2021) and Pollock and Berge (2018), we identified peer-reviewed



articles through database searches (i.e., PsycINFO, Scopus, SportDiscus, Web of Science, CINAHL) using relevant keywords (e.g., youth, athlete, social support, teammate, coach, parent). Eligible records were included if they contained empirical data concerning youth ( $M_{age} \leq 20$  years) in organized sport, were centered on athlete-received social support, and were written in English. Screening and data extraction were performed using Covidence. We identified 57 records that met our inclusion criteria. Common areas of research focus included gender- or sex-based differences; variations in support from teammates, coaches, and parents; links to performance and well-being; and developmental stages and career transitions. Suggestions for future researchers include refinement and consistency in theory development, concerns over measurement, and further development of interventions. Overall, our review shows that the research output focused on social support in youth support has evolved over the last eleven years, though several questions still remain.

#### **45.Exploring Women’s Experiences in a YMCA Health and Wellness Program for Mothers of Newborns**

*Abby Shimmerman, York University; Meghan Harlow, York University; Jessica Fraser-Thomas, York University*

Postpartum is a transformative and challenging period marked by significant physiological, emotional, and psychosocial changes. Extensive research supports the benefits of physical activity (PA) for physical recovery and psychological well-being among new mothers, yet many face barriers including time constraints, fatigue, lack of childcare, and financial limitations - challenges intensified by the COVID-19 pandemic, and recent social and economic pressures. YMCA Northumberland’s Mothers of Newborns (MON) health and wellness program aims to address some of these challenges by offering free YMCA facility access, flexible fitness programming, childcare, and community support to new mothers. This research explores the experiences of women within the YMCA MON program, guided by Self-Determination Theory (SDT) and Becoming a Mother (BAM) framework. Current and past MON program participants engaged in a semi-structured virtual interview exploring their experiences. Findings highlight mothers’ shared positive experiences, with mothers emphasizing the program’s role in helping them overcome common postpartum challenges. Key themes emerged in the areas of reclaiming identity (i.e., reconnecting with and prioritizing themselves beyond their caregiving role), building community (i.e., fostering connection, emotional support, and belonging, rather than isolation), and sustaining physical health (i.e., regaining confidence in their bodies and maintaining PA routines). Collectively, findings highlight the role of MON programming in supporting mothers’ psychological needs (i.e., autonomy, competence, relatedness; SDT) and evolving maternal identities (i.e., navigating role changes, developing a maternal self-concept, rebuilding social supports and connections; BAM), signaling the value of expanding programs to other YMCAs/communities to better support postpartum well-being across diverse settings.

#### **46.Differences in body-related self-conscious emotions and compensatory behaviours across categories of self-rated mental health**



*Avery Hinchcliffe, University of Toronto; Catherine Sabiston, University of Toronto; Kristen Lucibello, Western University & Brock University; Erin O'Loughlin, CHUM Research Centre; Jennifer O'Loughlin, University of Montreal; Marie-Pierre Sylvestre, University of Montreal*

Many Canadians experience eating disorders (ED: persistent eating/eating-related behaviour disturbance impairing physical/psychosocial health), with incidence rates rising since the COVID-19 pandemic. Physical activity is a common compensatory behaviour (CB) to offset/counteract (over)eating among this population. Although ED theory links body-related self-conscious emotions (BRSCE) with CB, and both are associated with poor mental health (MH), the extent to which CB and BRSCE are experienced by MH status is understudied. This study explored differences in BRSCE and CB based on MH. Participants ( $N=565$ ; 61% female, 46% university educated,  $M_{age}=35$ ,  $SD=1.0$ ) completed a self-report survey assessing MH (poor to excellent), BRSCE (shame, guilt, envy, embarrassment, authentic pride, hubristic pride) and CB (never to very often). Group differences were analyzed with multivariate analysis of variance. BRSCE and CB differed significantly based on MH,  $F(4, 590)=2.78$ ,  $p<.001$ ,  $\eta^2=.08$ . Participants with poor-fair MH reported higher shame, guilt, envy, and embarrassment and lower authentic pride than those with very good-excellent MH ( $d=.58$  to  $-2.62$ ). Compensatory physical activity was reported more frequently by participants with good-excellent MH than those with poor MH ( $d=.67$  to  $.80$ ). Findings highlight that participants with poorer MH experience heightened negative and diminished positive BRSCE. Participants with better MH report heightened engagement in physical activity as a CB compared to those with poor MH. MH is an important risk factor for ED prevention efforts, but further research is needed to clarify understandings of the nuanced relationships between emotions, CB, and MH.

#### **47.Examining the Influence of Coach Behaviour on Athlete Moral Behaviour Toward Officials in Youth Competitive Ice Hockey**

*Rebecca Misiasz, Nipissing University; Meredith Schertzinger, Nipissing University; Colin D. McLaren, Cape Breton University; Jordan Sutcliffe, Royal Military College of Canada; Mark W. Bruner, Nipissing University*

Sport officials are vital to organized youth sport; yet, abuse and lack of respect are major stressors that contribute to officials exiting sport (Hancock et al., 2015). Recent literature cited coaches and athletes as primary sources of official abuse across a variety of sports in Canada (Hancock et al., 2024). Youth athletes' actions often parallel those displayed or encouraged by their coach (Bolter & Kipp, 2018); however, whether and how this relationship translates to behaviour toward officials is unknown. The purpose of this study was to investigate the influence of coach behaviour on athlete moral behaviour toward officials. A total of 243 competitive youth ice hockey athletes ( $M_{age} = 13.61$  years) read one of two vignettes in which coach behaviour was manipulated (i.e., antisocial or neutral response) and indicated their subsequent behavioural response. Open-ended questions assessed participants' emotional and behavioural responses to the vignette. A one-way MANOVA with 204 participants who passed the attention check revealed a non-significant effect of condition (i.e., coach response) on athlete's likelihood to engage in direct and indirect antisocial behaviour toward officials ( $F(1, 202) = .823$ ,  $p = .44$ ). A content analysis of the open-ended questions indicated mixed emotional



responses regardless of condition that supported (e.g., felt proud of coach for protecting team) or disproved of (e.g., disappointed, scared, felt unsafe) the coach's behaviour. Future research should continue exploring alternative methodologies to understand the social dynamics of youth sport and their influence on athletes' moral behaviour toward officials.

#### **48. Using trending norm messages to affect on-campus movement intentions: Examining mind-body beliefs as a moderator**

*Bailey Gitzel, University of Saskatchewan; Ami Klinger, University of Saskatchewan; Lauren Hinz, University of Saskatchewan; Kevin S. Spink, University of Saskatchewan*

While trending norm messages (Mortensen et al., 2019) are effective in influencing on-campus activity behaviour (Anderson et al., 2024), less is known about personal moderators of the norm/behaviour relationship. One personal factor that could be important concerns one's intuitive understanding of how the mind and body relate, with mind and body perceived as being either connected (monism) or disconnected (dualism). Of interest, those holding monists' beliefs have an increased probability of engaging in health-positive behaviours (Ku et al., 2025), which suggests that monists could react more favourably toward trending norm messages about health. The purpose of this study was to examine whether monism/dualism beliefs would moderate the relationship between trending norm messages and on-campus physical activity (PA) and sitting intentions (SB). In an online survey, participants (N=182) were randomly assigned to receive either a trending normative (SN, n=94) or control (AC, n=88) message. Following message receipt, participants completed future on-campus PA and SB intentions. A MANOVA interaction effect ( $p = 0.006$ ) emerged, with post hoc tests revealing that the messages significantly impacted SB intentions ( $p = 0.004$ ). Individuals with stronger monist beliefs receiving the norm message reported greater intentions to reduce on-campus sitting compared to those who received the attention control message. However, differences between the norm and attention control message for intentions to increase PA were not significantly different for monists/dualists. These results provide preliminary evidence suggesting that mind-body beliefs may serve as a personal moderator of the relationship between trending norm messages and on-campus SB.

#### **49. Using Music to Facilitate Group Dynamics Among College Soccer Players**

*Tristan Loria, Washington State University; Sadie Chamberlain, Washington State University; Paul Kimbrough, Washington State University; Alex Gang, Washington State University*

As Name, Image, and Likeness (NIL) policies reshape the landscape of collegiate athletics, the growing emphasis on personal branding and individual visibility may complicate the development of cohesive team environments. This qualitative study explored how shared musical experiences may support group dynamics in this evolving context. Thirteen college students (M age = 19.2 years), all newcomers to a club soccer team at an American university in the Northwest, participated in a season-long music-based intervention. Players took turns sharing personal playlists that were played during warm-ups (i.e., beginning) and cool-downs (i.e., end) of every practice session and match throughout the season. Following the final game, players engaged in semi-structured interviews reflecting on the social impact of the





intervention. Reflexive thematic analysis revealed three core dimensions: (1) Music facilitating social interaction, (2) Spatial elements supporting informal dialogue, and (3) Autonomy in music as a vehicle for self-expression. Participants described music as a meaningful social anchor that sparked conversations, bridged interpersonal gaps, and enabled expression of cultural identity. For these newcomers, music served as a low-pressure entry point to develop relationships and establish a sense of belonging and created space for athletes to balance self-expression with group cohesion. These findings highlight the potential for music-based interventions to enhance social connectedness in team sport settings and offer practical strategies for coaches and sport program designers aiming to cultivate inclusive and collaborative team cultures in the era of NIL.

#### **50.A scoping review of athlete maltreatment in sport: Conceptualisations, methodologies, and research gaps**

*Michael P. Jorgensen, University of Toronto; David M. Brown, University of Toronto; Amy E. Nesbitt, University of Toronto; Isabella L. Tremonte, University of Toronto; El Zahraa Majed, University of Toronto; Sasha Gollish, University of Toronto; Tara-Leigh F. McHugh, University of Calgary; Catherine M. Sabiston, University of Toronto*

Maltreatment in sport, a pervasive issue across all levels of competition, can have severe negative impacts on athlete well-being. Despite growing amounts of research on maltreatment, the literature remains fragmented. Inconsistencies in how athlete maltreatment is defined and operationalised have resulted in a lack of conceptual clarity that limits current research, practice, and monitoring within and across sport sectors. A comprehensive synthesis of current evidence is needed to identify gaps, inform policy, and guide future research. A six-stage scoping review identified relevant literature across six electronic databases. Eligible sources, including peer-reviewed research and dissertations, addressed the concept of maltreatment within sport among athletes across various age groups, sport types, and competition levels. The extracted data were analysed using qualitative content analysis and descriptive statistics, which were further expanded upon through community advisory group consultations with athletes, coaches, researchers, and policymakers. Included studies were predominantly qualitative and captured many types of maltreatment in sport, including sexual abuse, harassment, and bullying. Explicit definitions and conceptual frameworks of maltreatment were often missing. Commonly used measures failed to capture the experiential complexities described in qualitative work, highlighting the need to develop more comprehensive measures of athlete maltreatment. Notably, there has been a substantial shift in the foci of athlete maltreatment research over three decades; early work primarily examined indices of risk or abuse, while emerging evidence emphasised systemic forms of discrimination as well as prevention and safeguarding initiatives. Collaborative and intersectional approaches that prioritise athletes' lived experiences are needed to advance research and practice.

#### **51. “A stronger sense of community than most people think”: Exploring barriers and facilitators to physical activity and the role of acculturation among international students at a mid-sized university in Northwestern Ontario**



*Corrie Marin, Lakehead University; Shreya Pradhan, Lakehead University; Veronica Giancola, Lakehead University; Amanda Boustead, Lakehead University; Erin S. Pearson, Lakehead University*

University students face unique challenges that can impact their participation in physical activity (PA). Barriers, including stress, varying priorities, and lack of social support, often result in lower PA engagement, despite its mental and physical benefits. To date, little research exists on international student PA experiences, and more is needed, given the unique circumstances they may face. This study explored the barriers and facilitators to PA and the role of acculturation in shaping international students' participation. One-on-one semi-structured interviews were conducted with eight international students (five males, three females; ages 18-28,  $M = 22.75$ ) at a mid-sized university in Northwestern Ontario, all of whom had lived in Canada for less than five years. Participants were enrolled in various academic programs, including kinesiology ( $n = 3$ ), economics/political science ( $n = 2$ ), and one each in psychology, engineering, and geology. Data were analyzed using deductive and inductive thematic analysis. Barriers to PA participation included time constraints, weather, availability of facilities, and lack of social support. In contrast, social support, facility access, health benefits, and self-empowerment facilitated engagement. Acculturation factors, such as navigating cultural differences, adjusting to PA norms, and adapting to the Canadian environment, influenced participation both positively and negatively. Participant recommendations for universities included improving resource awareness, enhancing facility access, and offering culturally inclusive programming. These findings highlight the importance of addressing structural and cultural barriers while promoting PA as a tool for integration and well-being. Future research should expand to more diverse samples across multiple Canadian institutions to improve transferability.

## **52. The effect of age on self-compassion & self-criticism in elite women athletes and the potential influence of these factors on perceived sport performance**

*Margo Adam, University of Alberta; Alexandra Black, University of Alberta*

Self-compassion has been identified as a valuable resource for women athletes in sport with relevance to reducing self-criticism and producing a more productive perception of oneself and their performance. Current research has suggested that self-compassion increases with age while self-criticism declines; however, there has been limited investigation of these trends within an athletic population. This study aimed to address this gap by exploring the effect of self-compassion and self-criticism in elite women athletes of two sample groups distinguished by age: older (G1;  $n=16$ ;  $M_{age}=52.27$ ) and younger (G2;  $n=28$ ;  $M_{age}=21.56$ ) through an online survey. Results indicated no significant differences between groups in self-compassion ( $t=-0.881$ ,  $p=0.384$ ), self-criticism ( $t(42)=1.622$ ,  $p=0.112$ ), or perceived sport performance in training ( $t(42)=-0.794$ ,  $p=0.431$ ) and competition ( $t(42)=0.284$ ,  $p=0.778$ ). There was no correlation between age and self-compassion ( $r=-0.252$ ,  $p=0.195$ ;  $r=-0.346$ ,  $p=0.190$ ), self-criticism (G1  $r=0.326$ ,  $p=0.090$  and G2  $r=0.250$ ,  $p=0.351$ ), or perceived sport performance in training (G1  $r=0.196$ ,  $p=0.318$  and G2  $r=0.196$ ,  $p=0.041$ ) or competition (G1  $r=0.053$ ,  $p=0.787$



and G2  $r=-0.238$ ,  $p=0.376$ ). These findings contradict trends of the general population. There is need for more research as this initial study highlights that elite women athletes do not seem to have the same increase in self-compassion and decrease in self-criticism as their non athlete counterparts with age.

### **53.Colour and sport and body, oh my!: Using a modified Stroop task to explore body surveillance, body image, and attention bias among athletes**

*Delaney Thibodeau, University of Toronto; Catherine Sabiston, University of Toronto; Michael Atkinson, University of Toronto*

Body surveillance and body image present challenges towards attentional control leading to attention bias measured using modified Stroop colour-naming tasks. When athletes' mental resources are directed to body-related concerns, the capacity to focus on performance is limited, contributing to attention bias towards body-related stimuli in sport. Research also suggests body-related authentic pride as a facilitator of better performance in sport, suggesting that positive body-related emotions may be beneficially related to attention bias. In this study, body surveillance and attention bias were tested using a modified Stroop task with colour, sport, and body conditions among a sample of athletes ( $N = 97$ , 60.8% cisgender women, 46.4% White, 45.4% competing in lean-focused sports). Body-related emotions (i.e., authentic and hubristic pride, shame, guilt) and disordered eating were explored as potential mediators in the association between body surveillance and attention bias. Greater guilt ( $p = .031$ ) and disordered eating ( $p = .025$ ) were correlated with poorer accuracy in the body condition. A path model exploring body surveillance as a predictor of attention bias with body image mediators demonstrated direct effects of body surveillance on guilt ( $p < .001$ ), shame ( $p < .001$ ), and disordered eating ( $p < .001$ ) as well as a direct effect of disordered eating ( $p = .046$ ) on accuracy in the colour condition. The findings speak to the complex relationships between body surveillance and body image with attention bias among athletes and highlight the importance of athletes maintaining more positive body image to likely facilitate stronger control over attention.

### **54.Integrating Perspectives: Developing a Dance-Based Rehabilitation Approach for persons living with Acquired Brain Injury**

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Acquired Brain Injury (e.g., stroke, traumatic; ABI) can occur at any age and with a range of lasting effects, creating a need for adaptable physical activity programming within inpatient and outpatient rehabilitation settings. Dance is gaining attention as a complementary approach to traditional rehabilitation techniques. Recently, dance has been shown to be a feasible activity



that enhances mobility, body awareness, working memory, and mood for persons with severe traumatic brain injury. Despite the interest and strong rationale for integrating dance into rehabilitation, questions remain about how an interdisciplinary approach to dance-based movement programming may align with holistic rehabilitation goals that foster individuals' engagement in meaningful family and community life. Four interdisciplinary clinician teams (Occupational, Physical and Speech Language Therapy) who work in ABI participated in separate focus groups (n=12). Semi-structured focus group questions were designed to gain insight into the perceived feasibility and potential of dance to address interdisciplinary rehabilitation goals. Inductive thematic analysis was used to identify common themes and recommendations that arose in each focus group. Preliminary thematic analysis revealed themes of barriers to participation and implementation of dance-based activities, dance and music as motivational, dance as an adaptable/flexible program design, and the potential to support functional goals and socio-emotional wellbeing. Overall clinicians perceived dance as an engaging activity to address holistic rehabilitation goals. The variety of movements, along with benefits of working in groups, were seen as strengths. Challenges to integrating within existing structures included time, space and supports (notably access to expertise in dance education).

#### **55.No One-Size-Fits-All: Exploring the Meaning of Body Diversity in Girls' Sports**

*Chelsi Ricketts, University of Toronto; Vanessa Coulbeck, University of Toronto; Kristen M. Lucibello, Western University; Catherine M. Sabiston, University of Toronto*

Despite the role of community sport in fostering youth identity and belonging, over 60% of Canadian girls disengage during adolescence, partly due to a lack of culturally responsive body-diverse spaces (Canadian Women and Sport, 2022; Koulanova et al., 2021). This issue may be further compounded by identity factors including race, Indigeneity, gender, and disability (Azzarito & Solomon, 2005). Research examining the meaning and landscape of body diversity in sport is limited, hindering efforts at promoting inclusive spaces. This qualitative descriptive study explored girls' understanding of body diversity through their experiences as past or current sport participants. Six semi-structured interviews were analyzed using inductive content analysis and organized into three content categories. The first, 'representation of diverse groups' (who gets to play), reflects (1) visibility of diverse bodies and identities (e.g., body shapes, racial groups) across sport settings and mediums, and (2) representation through prioritizing athlete potential and diverse skill levels. The second, 'access to opportunities' (who gets to play), reflects (1) equal opportunities to play sport regardless of identity or background, and (2) access to sport as an avenue for learning and skill development for all. The third, 'inclusion and belongingness' (who feels welcome), characterizes an inclusive sport environment and culture, as well as (2) freedom and support for self-expression. These findings highlight that who is present, who gets to play, and who feels welcome are central to body diversity in girls' sport. Hence, grounding sport spaces in these elements may promote body diversity and support girls' continued participation.



## **56. Identifying the Conceptual Attributes of Physical Activity Maintenance Among Adults with Physical Disability: Preliminary 6-Month Results**

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Evidence on physical activity (PA) maintenance in the context of physical disability remains limited due to inconsistent conceptualization of “maintenance”. A configurative review identified conceptual attributes of PA maintenance, grouped into three categories: (1) *Individual and Environmental Resources* (supportive physical environment, social support, self-monitoring, self-efficacy, and grit); (2) *Valued Outcomes of Physical Activity* (health outcomes, enjoyment, values PA, and gratification/satisfaction); and (3) *Achievement of Maintenance* (consistency and achieving PA recommendations). The purpose of this study was to examine the relationship between the identified attributes among adults with physical disability over 6-months. Participants (n=28) were adults with physical disability who reported at least 30 min of PA in the last month. Self-reported questionnaires corresponding with the identified attributes were administered at baseline, 3-months, and 6-months. Multi-level analysis was conducted separately for each attribute category and for each outcome: PA participation and consistency. Among *Individual and Environmental Resources*, social support significantly predicted PA participation ( $p=0.007$ ) and self-efficacy significantly predicted consistency ( $p=0.03$ ). Positive relationships, trending towards significant, were identified for gratification/satisfaction ( $p=0.09$ ) and enjoyment ( $p=0.12$ ) with PA participation and grit ( $p=0.08$ ) and self-monitoring ( $p=0.10$ ) with consistency. Among *Valued Outcomes of Physical Activity* satisfaction with PA significantly predicted consistency ( $p=0.001$ ). These results provide initial findings of the identified PA maintenance attributes among adults with physical disability. Significant and trending results suggest the identified attributes may be relevant for maintaining PA. Future analyses with the larger dataset currently being collected (n = 75) will clarify their contribution to PA maintenance.

## **57. Body Image and Physical Activity in Older Adult Vietnamese Women**

*Meghan McDonough, Faculty of Kinesiology, University of Calgary; Elisa Nguyen, Faculty of Kinesiology, University of Calgary*

Body image is salient in physical activity contexts because they can provide opportunities for positive embodied experiences as well as social comparisons and concerns about body surveillance, for example. Body image perceptions are informed by social and cultural contexts; however, much of the physical activity research surrounding the body is focused on young, White people with Western cultural origins. The purpose of this study was to understand experiences with physical activity and body image among older adult Vietnamese women living in Canada. We examined the role Vietnamese cultural discourses, age, and gender in the relationship participants had with physical activity and their bodies. Four women (age 56-83) were interviewed in English and/or Vietnamese. Using semantic translation and reflexive

thematic analysis 4 main themes were identified: (a) social pressures and internalized expectations to be small, (b) focusing on physical function to cope with negative feelings about appearance, (c) expectations to prioritize caring for others, and (d) the feeling of being judged is hard to resist. These results were interpreted in light of how social comparison, generational differences, language surrounding thin and youthful cultural ideals and dress, cultural discourses surrounding weight and health, ageism, tensions between gender roles and expectations to take care of oneself and attend to appearance, and internalization and self-reinforcement created challenges for experiencing positive body image and engaging in physical activity.

### **58. Women's Futsal, Equity and Justice: Is Sport Equitable or Simply Reinforcing a Gendered Culture?**

*Fernando Santos, Centro de Investigação e Inovação em Educação, inED, Escola Superior de Educação, Instituto Politécnico do Porto, Rua Dr. Roberto Frias, 602, 4200-465 Porto, Portugal; Júlia Barreira, Faculdade de Educação Física, Universidade Estadual de Campinas, Campinas, Brazil; Marta Ferreira, Centro de Investigação e Inovação em Educação, inED, Escola Superior de Educação, Instituto Politécnico do Porto, Rua Dr. Roberto Frias, 602, 4200-465 Porto, Portugal; Ana Carvalho, Escola Superior de Educação, Instituto Politécnico do Porto, Rua Dr. Roberto Frias, 602, 4200-465 Porto, Portugal; Keith Davids, Sport & Human Performance Research Group, Sheffield Hallam University, United Kingdom*

The need to create equitable opportunities for women in sport has been widely acknowledged. In recent times, research on women's futsal has increased somewhat moderately, particularly in Brazil, Spain and Portugal. However, more studies are needed to enhance scholars' and practitioners' understandings of issues related to equity in women's futsal, which can help foster more just sport environments. Therefore, the present study explored Portuguese coaches and athletes' perspectives on the current status quo in women's futsal in Portugal. Semi-structured interviews were conducted with six coaches and six athletes actively involved within high-performance women's futsal. An Interpretative Description Methodology was used, which can involve the use of a diverse range of approaches towards qualitative data analysis. In this case, to provide an in-depth overview of participant stories, reflexive thematic analysis was used. Findings revealed a perceived lack of support from decision makers towards equity promotion, which led to few affordances being provided for female athletes to thrive. Coaches and athletes tended to accept the current conventions in women's futsal. Particularly, athletes remain silent and accept any conditions provided in both training and competition. These conditions can lead to the normalization of inequities throughout the athlete developmental process. The current system was perceived to have reinforced a gendered culture by oppressing and discriminating female athletes. To challenge the status quo, it may be necessary to promote developmental programs committed to fostering increases in critical consciousness amongst all sport decision makers. This study reinforces the need to facilitate more just and equitable environments.

### **59. Age-ordered shirt numbering in youth ice hockey: Mitigating relative age effects?**





*Jess Dixon, University of Windsor; Abigail Scott, University of Windsor; Kristy Smith, University of Windsor; Sean Horton, University of Windsor; Laura Chittle, University of Windsor; Joe Baker, University of Toronto; Nick Wattie, Ontario Tech University*

Relative age effects (RAEs) arise from age grouping policies that unintentionally create advantages for athletes born just after the cut-off date, placing younger members of the same cohort at a disadvantage (Dixon et al., 2020). Addressing these inequities is crucial for promoting fair competition as well as maximizing the potential for all participants in sport. One method that has shown promising results in mitigating RAEs when performance evaluations rely on the perspectives of talent scouts is age-ordered shirt numbering. In this approach, players' jersey numbers reflect their relative ages, with the oldest assigned the lowest number and the youngest assigned with the highest number. Mann and van Ginneken (2016) demonstrated that when talent scouts know the meaning behind the assigned numbers, it reduced relative age selection bias in youth soccer. Our study replicated and expanded upon Mann and van Ginneken's (2016) study within youth ice hockey. Twenty-seven hockey scouts were grouped into three treatment conditions (no age information, date-of-birth, & age-ordered shirt numbering), instructed to watch video footage of a 60-minute U13 AAA talent showcase game, and then rank-order players using an online Qualtrics survey. Using a rank-ballot method, the relative age bias of scouts in each condition was calculated by correlating their rankings with those expected based solely on relative age. Our preliminary results suggest that age-ordered shirt numbering might actually reinforce RAEs in the context of youth ice hockey. Potential explanations for our findings, along with the implications, limitations, and future directions of this research will be discussed.

## **60.Goaltenders Under Pressure: Examining Sixth Shooter Outcomes in National Hockey League Shootouts**

*Cedric Ralph, Saint Mary's University; Ryan Hamilton, University of New Brunswick*

Shootouts are used in professional hockey and soccer to resolve tied games and are often regarded as high-pressure, skill-based contests that can resemble a coin-flip outcome. In hockey, shootouts follow a best-of-three format, with each team choosing three shooters (six total) for a one-on-one breakaway with the opposing goalie. If a tie remains after six shooters, the shootout continues on a best-of-one basis until a winner is determined. Previous research in soccer, which uses a best-of-five format, has shown that players are more prone to choking in high-pressure situations (loss-imminent vs. win-imminent). Most of this work has focused on shooters, despite goaltenders statistically holding the advantage in shootouts in hockey, unlike in soccer. Given hockey's format, analyzing goalie performance on the sixth shootout attempt offered a chance to explore whether elevated psychological pressure affects goaltender success in win-imminent versus loss-imminent situations. It was hypothesized that goaltenders on the sixth attempt would be more likely to make a save when facing a potential win than a loss. To test this, data from all NHL shootouts between the 2015–16 and 2024–25 seasons were collected. Of 903 total shootouts, 302 ended before a sixth shooter appeared, resulting in a final analysis of 601 shootouts. Contrary to expectations, results showed no significant difference in goaltender performance based on the situation (win-imminent save percentage,



71%; loss-imminent, 70.2%). These findings highlight the potential influence of sport-specific contextual factors on shootout performance and raise a need for further research.

### **61.Exploring Physical Activity as a Moderator of Appearance-Related Emotions and Mental Health**

*Samira Sunderji, University of Toronto; Madison Vani, University of Toronto; Kristen Lucibello, Western University; Catherine Sabiston, University of Toronto*

Appearance-related self-conscious emotions (e.g., shame, guilt, authentic and hubristic pride) are important correlates of poor mental health. Although physical activity (PA) is a well-established protective factor for poor mental health, its role in the relationship between appearance-related emotions and symptoms of depression and anxiety remains underexplored. This study examined whether PA moderated the associations between appearance-related emotions and symptoms of depression and anxiety in emerging adults. Participants ( $N=298$ ;  $M_{age}[SD]=23.55[3.78]$ ; 65% women) completed online self-report measures of PA (Godin Leisure-Time Exercise Questionnaire), appearance-related emotions (BASES), and poor mental health symptoms (PHQ-9, GAD-7). PA was dichotomized as “active” or “inactive” using standard MET cutoffs. Controlling for age and gender, a MANCOVA revealed a significant multivariate effect of PA status on appearance-related emotions and poor mental health symptoms ( $F(6, 257)=2.66, p=.015$ ). Active students reported significantly higher appearance-related authentic ( $p<.001$ ) and hubristic pride ( $p=.006$ ); there were no significant differences for shame, guilt, depression symptoms, or anxiety symptoms ( $ps>.05$ ). Bivariate correlations and linear regressions showed significant associations ( $ps<.05$ ) between all emotions and poor mental health outcomes in expected directions. However, moderation models testing PA as a protective factor yielded non-significant interactions. These findings suggest complex relationships among these variables, with other psychological factors likely involved (e.g., body dissatisfaction), warranting further study. Future research should also use objective PA assessments to clarify how specific activity types and intensities interact with emotions to affect mental health, guiding more precise, emotion-informed interventions for emerging adults.

### **62.Weight Stigma and Exercise Self-efficacy During Pregnancy: Experiences within Physical Activity Settings**

*Taranjot Dhillon, Brock University; Kirina Angrish Dandora, Brock University; Taniya Nagpal, University of Alberta*

Emerging work has highlighted that weight stigma, defined as social misconceptions and stereotypes associated often with higher weight, is pervasive in pregnancy and may be a barrier to healthful behaviours such as physical activity (PA). Self-efficacy plays a crucial role in facilitating adherence to PA in pregnancy. This study explored if weight stigma experienced within PA settings is associated with exercise self-efficacy among Canadian pregnant individuals. A hundred and eighty-seven pregnant participants completed an online Qualtrics questionnaire on: adherence to Canadian PA recommendations, exercise self-efficacy, and open-ended questions about their weight stigma experiences. Analysis of covariances were



conducted to compare self-efficacy scores between individuals who did and did not report weight stigma, controlling for gestational age. Ninety-four participants (50.3%) reported experiencing weight stigma during pregnancy, and 52 of the 94 participants (27.8%) reported stigma specifically within PA settings with no differences observed for exercise self-efficacy. To describe weight stigma in PA contexts, content analysis revealed two distinct themes: pregnancy-related changes related to physical function and functional limitations and social influences. Participants described PA environments as non-conducive to larger bodies especially with changes in weight gain. Second, social networks through judgemental remarks increased feelings of stigma and exclusion in PA environments. These findings suggest that although weight stigma did not appear to impact exercise self-efficacy, it is still prevalent in PA contexts and could impact behavioural decision-making. Future work may explore factors such as internalization of weight stigma and impact on PA behaviours.

### **63.Exploring parents' expectations of coaches in youth sport through the lens of concerted cultivation**

*Stephanie L. K. Fuller, Utah State University; Jordan A. Blazo, Louisiana Tech University; Travis E. Dorsch, Utah State University; Shannon R. Pynn, Utah State University*

Concerted cultivation (Lareau, 2003) is a classed parenting approach whereby parents actively foster their children's intellectual, social, and emotional skills in hopes of equipping their children for future success. Although the concept originates in sociology, it is relevant to youth sport psychology research given its focus on parents' values, behaviors, and goals related to their children's extracurricular activities. Historically, research on concerted cultivation has rarely considered how race may shape parenting practices, particularly in sport. This study was designed to explore race and concerted cultivation in youth sport by examining group differences between parents' racial identities and priorities for their children's sport participation. We assessed parents' priorities based on how they ranked the importance of ten philosophies their children's coaches should have, among a sample of 1,848 parents ( $M_{age} = 40.89$ ,  $SD_{age} = 10.58$ ) with children (ages 6-18) participating in sport. Rank-ordered logistic regression revealed significant differences in parent priorities, notably with Black parents demonstrating lower odds of prioritizing social-emotional philosophies (e.g., good sportsmanship,  $OR = 0.39$ ,  $p < .001$ ; love of sport,  $OR = 0.47$ ,  $p < .001$ ; having fun,  $OR = 0.54$ ,  $p < .001$ ) compared to White parents. All racial groups showed similar preferences for philosophies regarding playing time distribution, winning, and learning life skills. Interestingly, mothers demonstrated higher preference for social-emotional philosophies compared to fathers. These findings offer preliminary insight into the intersection of race, class, and gender in sport parenting styles and practices, and reinforce the need for more cultural approaches to sport parenting research.

### **64.Does Varsity Status and Campus Size Impact Mental Health Awareness and Perceived Institutional Support?**

*Quinten Carfagnini, Brock University*



Previous research has shown that help-seeking rates among students and athletes may depend on specific contextual factors such as location of help-seeking services, social support and institutional/organizational characteristics (Tashkandi et al., 2022; Carfagnini, 2024). One major barrier to increasing help-seeking utilization is a lack of resource visibility and awareness among students on campus (Davis et al., 2023). Therefore, the mental health awareness of an institution's student population plays an important role in facilitating adequate help-seeking use. The current study aims to assess the mental health literacy and perceived institutional support of students based on varsity status, campus size and residence location. This study utilized the Canadian Campus Wellbeing Survey (CCWS) from data collected in the winter 2024 term (17,685 students). Self-reported 6-point Likert scale questions based on seeking campus resources and perceived institution support were compared using factorial ANOVA models. Results indicated that students at small (4.40) and medium (4.61) campuses had a better understanding of where to seek help compared to larger campuses (4.20). A similar trend was found with respect to perceived institutional support. Varsity athletes had a better understanding of campus mental health resources (4.49 vs. 4.32) as well as higher perceived institutional support (4.27 vs. 4.01). Findings suggest that lower help-seeking rates at larger campuses may be a product of lower overall mental health awareness. Additionally, despite similar help-seeking rates compared to non-athletes, varsity athletes seem to have similar or slightly better mental health awareness compared to non-varsity athletes (Cosh et al., 2024).

#### **65.Exploring athletes' experiences in a community-based high performance sport education program: What program features facilitate and challenge athletes' positive experiences and outcomes?**

*Nathania Ofori, York University; Joe Baker, University of Toronto; Nick Wattie, Ontario Tech University; Jennifer Leo, University of Alberta; Jessica Fraser-Thomas, York University*

Sport can serve as an optimal environment to facilitate Positive Youth Development (PYD); however, outcomes are largely contingent on the program context and delivery. Sport schools (i.e., institutions offering tailored academic and athletic programming) offer a unique context that is growing in popularity. A recent systematic review (Thompson et al., 2022) revealed mixed findings regarding the effectiveness of sport schools, underscoring the need for further investigation into program features that support or hinder student-athletes' experiences and outcomes. This study explored student-athletes' experiences in a Community-Based High Performance Sport Education (CBHPSE) program, exploring program features that facilitated and challenged athletes' PYD experiences and outcomes. Thirty-six student-athletes aged 14-17 (M=16.3) participated in a semi-structured interview during each of their two years enrolled in the program. Data were transcribed verbatim and analyzed using inductive-deductive thematic analysis, guided by the Model of PYD Through Sport (Holt et al., 2017). Findings indicated three PYD-facilitating features: (a) a PYD climate fostering empowering relationships (i.e., unique coach and peer relationships within the CBHPSE), (b) an explicit focus on holistic development (i.e., academic, personal, and life skill developmental supports), and (c) inclusive distal systems (i.e., community and policies that supported safety and well-being). Findings also emerged regarding features that challenged PYD experiences and outcomes: (a) disruptive distal systems



(i.e., a ‘pressure cooker’ culture of intensive scheduling and high expectations), and (b) lack of PYD climate and explicit PYD programming (i.e., resulting in athletes feeling unsupported and isolated). Implications for sport school design and future research considerations are discussed.

#### **66.A Self-Compassion Intervention for Self-Identified Girls in Youth Sport: Preliminary Outcomes**

*Danielle Cormier, University of Alberta; Amber D. Mosewich, University of Alberta*

This study evaluated the impact of a targeted self-compassion intervention for self-identified girls in youth sport. While sport participation offers important physical and psychosocial benefits, Canadian girls discontinue involvement at disproportionately high rates during adolescence. This is the third and final study in a series of projects which involved an initial needs assessment and feasibility study conducted with athletes, coaches, and parents. These sport participants identified harsh self-criticism as a significant barrier to girls’ sport enjoyment and retention. To address this, an intervention on self-compassion—defined as a kind, balanced response to suffering—was developed. Four 30-minute workshops were delivered to 30 girls participating in youth sport over the span of four weeks. Workshop activities included psychoeducation about tender and self-self-compassion, embodied self-compassion movement, applied worksheets, reflective homework, and newsletter updates sent to parents and coaches after each session. Pre- and post-intervention measures indicated significant increases in some measures of self-compassion (Sussex-Oxford Compassion for the Self Scale: pre  $M = 13.04$ ,  $SD = 2.95$ ; post  $M = 13.86$ ,  $SD = 3.01$ ;  $t = -2.18$ ,  $p = .02$ ; Compassionate Engagement and Action Scale: pre  $M = 12.70$ ,  $SD = 2.75$ ; post  $M = 13.68$ ,  $SD = 2.51$ ;  $t = -1.89$ ,  $p = .04$ ), but not the Youth Self-Compassion Scale or the Fear of Self-Compassion Scale. Results demonstrate the potential of this intervention to enhance self-compassion among girls, but more work must be done to make any cause-and-effect claims.

#### **67.Cross-Lagged Associations Between Social Support and Physical Activity in Older Adults: Understanding Direction of Effects**

*Sarah Stephen, University of Calgary; Meghan McDonough, University of Calgary; Chantelle Zimmer, University of Calgary*

Regular physical activity (PA) offers substantial health benefits for older adults, enhancing longevity and quality of life. Social support may encourage PA engagement, while PA itself can create opportunities to foster social ties. However, longitudinal evidence on these reciprocal relationships is limited. This study used data from the Canadian Longitudinal Study on Aging (CLSA) to examine whether (1) nine social support factors predict PA over time, (2) PA predicts these social factors, and (3) these associations vary by demographic characteristics. The sample included 18,110 adults aged 65 and older ( $M = 73.02$ ,  $SD = 5.67$ ), assessed at two time points approximately three years apart. A cross-lagged path model tested prospective relationships, and invariance testing assessed moderation by sex, sexual orientation, living alone, country of birth, caregiving status, and income. Model fit was excellent ( $CFI = .97$ ,  $SRMR = .18$ ,  $RMSEA = .03$ ). Social participation ( $\beta = .034$ ), social networks ( $\beta = .061$ ), affectionate support ( $\beta = .026$ ), and social contact frequency ( $\beta = .017$ ) significantly and positively predicted future PA.



Conversely, PA significantly and positively predicted social participation ( $\beta = .042$ ), social networks ( $\beta = .042$ ), social contact frequency ( $\beta = .017$ ), and domestic partnership status ( $\beta = .022$ ), and significantly negatively predicted online communication ( $\beta = -.019$ ). However, no moderation effects were found, suggesting these associations were consistent across demographic groups. These findings highlight the bidirectional relationship between PA and social connections in older adults and underscore the importance of fostering social networks to support healthy aging.

### **Sessions #3 (Friday Oct 3<sup>rd</sup>, 3:45-5:15 PM)**

#### **Session 3A: Well-Being During Sport Exercise**

##### **Effects of the Together for Us (T4Us) Intervention on Team Identification, Moral Behaviour, and Mental Health in Youth Competitive Soccer Teams: A Cluster RCT**

*Meredith Schertzinger, Nipissing University; Colin D. McLaren, Cape Breton University; Katrien Fransen, KU Leuven; Ian D. Boardley, University of Birmingham; Luc J. Martin, Queen's University; Stewart Vella, University of Wollongong; Richard B. Slatcher, University of Georgia; Rebecca Misiasz, Nipissing University; Cassidy Brooks, Nipissing University; Sophia Milner, Nipissing University; Justin M. Carré, Nipissing University; Mark W. Bruner, Nipissing University*

T4Us is an athlete-led intervention designed to strengthen team identity in youth sport teams. High team identification has been associated with positive developmental outcomes (Bruner et al., 2018; Vella et al., 2021). Previous studies have demonstrated the efficacy of T4Us through feasibility testing and proof-of-concept evaluation (Bruner et al., 2025). This study assessed the effectiveness of the T4Us intervention on enhancing team identification, moral behaviour, and mental health across a sport season. As part of a cluster-randomized control trial (RCT) design, five teams ( $n=90$ ,  $M_{\text{age}} = 13.29$  years) completed T4Us, and five teams ( $n=74$ ,  $M_{\text{age}} = 13.59$  years) received an athlete-focused mental performance session. The RCT had three time points: pre-season, post-intervention, end-of-season. A longitudinal mixed effects model found no significant *ConditionTime interaction for team identification*,  $F(2, 293)=1.82$ ,  $p=.16$ . However, *pairwise comparisons indicated a significant increase in team identification in the T4Us condition from pre- (Time 1,  $M=5.88$ ) to post- (Time 2,  $M=6.13$ ) intervention ( $p=.004$ ), while no change occurred for control teams. For those in the T4Us condition, a significant *ConditionTime interaction* highlighted a maintenance of lower anti-social behaviour toward teammates during competition ( $p=.006$ ) and socially ( $p=.001$ ), and also increased perceptions of resilience ( $p=.04$ ). Pairwise comparisons for mental health demonstrated significant improvements for T4Us teams across time points Time 1-2 ( $p=.002$ ) and Time 1-3 ( $p<.0001$ ). Together, these findings support T4Us as a promising group-based intervention to enhance team identification and promote positive developmental and mental health outcomes in youth sport.*

##### **Small Screens, Big Stages: (Re)storying Ballet Traditions on #BalletTok**





*Regan Sarah Irene Thompson, The University of British Columbia; Erica Valérie Bennett, The University of British Columbia; Moss Edward Norman, The University of British Columbia; Francesca Cavallerio, Anglia Ruskin University*

Ballet culture has traditionally consisted of thin White bodies, heteronormative and patriarchal depictions of youthful femininity, and authoritarian pedagogy. Recently, discourse on social media has aimed to (re)story such traditional ballet norms. TikTok is a social media platform specializing in short form videos with over 6.7 billion global downloads as of 2025. We downloaded 50 videos posted to #BalletTok at three time points over a five-month period (150 videos), and 10 comments from each video. Using critical content analysis and narrative thematic analysis, three themes were constructed which explored how traditional ballet narratives are currently upheld and critiqued on TikTok through videos created by dancers themselves. In the first theme, *Behind the Curtain*, TikTok was used to share stories of common humanity, particularly showcasing the silly, ‘unflattering’, and physically painful aspects of ballet training that are often hidden from traditional audiences. In the second theme, *Rewriting the Ending*, dancers shared explicit counter-stories to traditional ballet narratives, such as encouraging healthy eating, starting ballet training in adulthood, and representations of LGBTQ+ and racialized dancers. However, in the third theme, *A Large (Digital) Stage*, TikTok served as a space for intense visibility for dancers. Posts that went viral often received admiration for embodying ballet ideals but also faced harmful critical and envious comments. These findings illustrate how TikTok functions as a space where small, everyday stories are actively working to reshape dominant cultural narratives in ballet, while simultaneously amplifying the pressures of an already highly scrutinized and idealized art form.

### **A Season Long Examination of Organizational Citizenship Behaviours, Well-Being, and Subjective Performance in Professional Women Football Players**

*Kaitlin N. Fortier, Queen’s University, Canada; Jake D. Pavicic, Western University, Canada; Alex J. Benson, Western University, Canada; Manon Eluère, Université Grenoble Alpes, France; Jean-Philippe Heuzé, Université Grenoble Alpes, France; Stuart G. Wilson, Queen’s University, Canada; Luc J. Martin, Queen’s University, Canada*

Organizational citizenship behaviour (OCB) plays a critical role in group functioning and has been positively correlated with athlete experiences and performance in cross-sectional designs. However, researchers have yet to study these important inter-relationships over time. In this study, we examined how athletes’ trajectories of OCB, well-being, and subjective performance developed in relation to one another throughout a season. Questionnaire responses were collected from 516 professional women athletes ( $M_{age} = 23.8$ ;  $SD = 4.5$ ) representing 21 teams from the first and second divisions in France. Confirmatory factor analyses and temporal invariance testing were conducted to assess the validity and appropriateness of growth modelling. Parallel latent growth models were then used to evaluate the relationships among, and development of, OCB, well-being, and subjective performance across the season. The change in subjective well-being over time positively covaried with changes in OCB subdimensions: civic virtue ( $\beta = 1.06$ ,  $p < .001$ , 95% CI [0.80, 1.32]), helping behaviours ( $\beta = 0.85$ ,  $p < .001$ , 95% CI [0.38, 1.32]), and sportspersonship ( $\beta = 0.75$ ,  $p < .001$ , 95% CI [0.22,



1.29]). The change in subjective performance positively covaried with changes in civic virtue ( $\beta = 0.06$ ,  $p < .001$ , 95% CI [0.03, 0.09]) and helping behaviours ( $\beta = 0.06$ ,  $p < .001$ , 95% CI [0.03, 0.09]). Thus, the more athletes reported an improvement in well-being and performance, the more they reported increased OCBs. Practically, and given the correlational nature of our analyses, interventions could leverage the reciprocal influence of OCBs to benefit athlete well-being and performance.

### **Navigating Early Menarche: Experiences of Young Women in Competitive Dance**

*Alysha Ambrosio, Faculty of Kinesiology, Sport, and Recreation University of Alberta; Margo Adam, Faculty of Kinesiology, Sport, and Recreation University of Alberta*

Menarche is a significant milestone in adolescence, yet the implications of early menarche (menarche before 12.72 years [Canadian mean]), remain insufficiently understood. Early menarche is generally linked to increased mental health risks, which may be intensified by the appearance-based pressures of competitive dance. Existing literature emphasizes menstrual disorders and delayed menarche, leaving early menarche in dance largely underexplored. This study investigated how young women in competitive dance perceive and experience early menarche, and how parental support influences dancers' ability to express needs and navigate this transition. Five dancers ( $M_{age}=14.62$ ) who experienced their first menstruation at 11.58 to 12.54 years ( $M=12.24$ ), participated in one-on-one semi-structured interviews, and five parents joined a focus group. Data were analyzed using reflective thematic and functional analysis. Three themes were generated to reflect athletes' experiences: *Alone in the Spotlight: What It Means to Menstruate Early*, *Behind the Curtain: Presence and Absence of Support*, and *Dancing Through Discomfort: Symptoms, Struggles, and Strength*. Two shared dancer-parent themes were generated: *Step by Step: Mastering the Art of Hiding Periods* and *Choreographing Comfort: Medication for Period Symptoms*. Three additional themes were generated to reflect parent experiences: *The Prep Step: Early Education and Preparation Before Onset*, *Backstage Support: Helping Young Dancers Manage Their Period*, and *Dad's Got the Moves: Stepping Up for Her Cycle*. Findings from this research highlight the unique, multi-faceted challenges of early menarche in competitive dance and underscore the need for tailored education, support, and resources for young dancers and their families.

### **"A Different Standard of Perfect": Racialized Athletes' Experiences of Perfectionism in Post-Secondary Sport**

*J'mi Worthen, The University of Toronto; Katherine Tamminen, The University of Toronto; Andrew Hill, York St. John University; Janelle Joseph, Brock University; Gretchen Kerr, The University of Toronto*

Perfectionism is widely observed in sport and has been shown to meaningfully influence athletes' experiences (Flett & Hewitt, 2014; Hill et al., 2023). Despite extensive literature on perfectionism in sport, the experiences of racialized athletes remain underexplored, reflecting a broader pattern of underrepresentation in research (Joseph et al., 2022; Raddatz et al., 2023). This study explored how racialized post-secondary athletes experience and make meaning of perfectionism, drawing on Critical Race Theory, anti-racism principles, and intersectionality



frameworks. Interpretive Phenomenological Analysis was applied to the experiences of 12 racialized student-athletes (ages 19–30) from various sports through one-hour semi-structured interviews. The sample included six men, four women, one genderqueer participant, and one who preferred not to disclose their gender. Four participants identified as East Asian, three as South Asian, three as bi-racial, and two as Black. Three themes were generated through IPA data analysis. Theme one, “Cultural Expectations and Perfectionism,” describes how cultural values, such as familial pressure and community representation shaped participants’ perfectionistic tendencies. Theme two, “Alone and Under the Microscope,” demonstrates the experience of racial isolation and how this visibility led to microaggressions, stereotype-based scrutiny, and pressure to perform. Theme three, “Pushing for Representation and Belonging,” reflects participants’ desire for more diverse sport spaces and the emotional toll of navigating environments lacking psychological safety and cultural understanding. These findings illustrate how perfectionism is shaped by cultural expectations, racial isolation, and systemic inequities, highlighting sociocultural, not merely individual, dimensions for racialized athletes.

### **Clustering Suicidality in Canadian Student-Athletes: The Impact of Psychological Stress, Social Connection, and Identity**

*Burgandy Thiessen, Brock University; Philip Sullivan, Brock University*

Suicide is the second leading cause of death among American varsity student-athletes, highlighting the urgent need to understand mental health challenges in this population. However, nearly all existing research on suicidality in student-athletes has been conducted in the United States, leaving a critical knowledge gap about the experiences of their Canadian counterparts. Given that suicide remains a leading and potentially preventable cause of death among student-athletes, this study aimed to answer: What are the characteristics of Canadian USPORTS athletes who report high levels of suicidal ideation? Canadian student-athletes who scored  $\geq 7$  on the SBQ-R ( $N=103$ ) were drawn from the Spring 2022 ACHA’s NCHA survey. A k-means cluster analysis identified two distinct groups. Group 1 was characterized by higher levels of psychological distress and loneliness, and included a greater proportion of non-heterosexual individuals. Group 2 exhibited a similar but less severe pattern and included more heterosexual individuals. These findings underscore the complex interplay of psychological and social factors contributing to suicidality among Canadian student-athletes. In particular, student-athletes lacking protective factors like social support and effective stress management may be at elevated risk for serious suicidal ideation, particularly those navigating stress related to sexual orientation. Identifying these patterns supports early risk detection for coaches, athletic directors and sport organizations. Targeted prevention strategies, such as expanding access to counselling services, stress management workshops, mindfulness training, and peer support programs, can help foster a climate of resilience and mental health awareness within varsity sport.

### **Session 3B: Coaching, Teaching, & Leadership**



### **Between the classroom and the court: A scoping review on the teacher-coach role conflict and its implications on teaching**

*Juliana LeBlanc, Acadia University; Maggie Neilson, Acadia University; Matthew Vierimaa, Acadia University*

The teacher-coach role conflict occurs when an individual holds both teaching and coaching roles as the positions are viewed as similar, but differ greatly in goals, expectations, and status (Mellor et al., 2020). Coaching tends to hold priority and may reduce the effectiveness of teaching practices (Mellor et al., 2020). The purpose of this study was to investigate the current scope of the literature on how the teacher-coach role conflict may impact the act of teaching. The PRISMA extension for scoping reviews (PRISMA-ScR) (Tricco et al., 2018) framework guided the work. A database search was completed across Academic Search Premier, SportDiscus, PSYCInfo, and ProQuest Central alongside a structured grey literature search (Godin et al., 2015) on Google. Initial database searches yielded 225 total articles. After title and abstract screening, 39 articles were retained and 35 moved onto analysis following full-text screening. Inclusion criteria focused on articles that were about teachers of any subject who were also holding athletic coaching positions, the conflict that may or may not occur from holding those roles, and the impact it then has on their teaching practices. All data analysis occurred on SUMARI. Results highlighted a variety of role stressors that exist across literature such as time demands, differing expectations, and role retreatism that may impact teaching behaviours. This review shows the present issues that may be associated with teacher-coach role conflict and highlights a need for supports to mitigate this issue and improve teaching practices.

### **Facing the Unknown: Coaches' Experiences of Uncertainty in Daily Practice**

*Isabelle Fortin-Delisle, Université du Québec en Outaouais; François Rodrigue, Université du Québec en Outaouais*

Uncertainty is increasingly recognized as a key consideration in psychology, as it is associated with anxiety, depression, and reduced well-being (Satici et al., 2022). Sport research shows that athletes are influenced by uncertainty (Csurilla & Sterbenz, 2022). No study has examined how coaches – those who support athletes – experience uncertainty in their profession although coaching is acknowledged as a complex, high-pressure profession (Rynne & Mallett, 2012; Mallett & Lara-Bercial, 2016). Therefore, we conducted a phenomenological study to understand the lived experiences of coaches facing uncertainty in their work. Semi-structured interviews were conducted with 12 coaches, including head and assistant coaches working with national to world-class athletes in individual or team sports. Data were analyzed using inductive thematic analysis, following the reflexive approach of Braun and Clarke (2019). Uncertainty arose from job insecurity, athlete decisions, funding challenges, and injury management. Coaches frequently reported emotional reactions such as stress and frustration, followed by coping strategies focused on acceptance and redirecting energy toward controllable elements. These responses were shaped by personal values, trust in colleagues, and family context. Rather than viewing uncertainty solely as a burden, coaches described it as integral to their



development and a necessary part of growth. Overall, these findings highlight the ability to manage uncertainty as a central process that sport psychology must now examine more deeply, both to support coaches and the athletes' performances by extension. Uncertainty seems to not only be a risk to control, but a driver of learning and resilience.

**“The shit I had to take because I’m the first one”: High-performance coaches experiences of pregnancy and parenting**

*Ariel J. Dimler, University of Calgary; Helene Jørgensen, University of Calgary; Margie H. Davenport, University of Alberta; David J. Hancock, Memorial University of Newfoundland; Katie Kavic, University of Alberta; Tara-Leigh F. McHugh, University of Calgary*

Women are significantly underrepresented as coaches in high-performance sport contexts. Organizational policies and professional practices have systematically influenced the low percentage of women in coaching. Furthermore, key life stages, including starting a family, have been identified by women as a barrier to participation. The pregnancy and parenting experiences of high-performance women coaches have been overlooked in the sport literature, yet such experiences are essential in understanding the cultural and societal complexities that continue to limit women's equitable inclusion in sport. Research grounded in the voices of high-performance women coaches is necessary to facilitate the development of evidence-informed policies and practices. As such, the purpose of this research was to better understand the pregnancy and parenting experiences of high-performance coaches through a matricentric feminist lens. An international sample of 14 high-performance coaches from a broad range of winter and summer sports participated in semi-structured one-on-one interviews. Data were analyzed through content analysis, and the findings of this study are represented by five main themes: (a) visibility and voices for change, (b) trusting abilities, c) pressure to navigate gendered expectations around parenthood, d) lack of transparency, and e) negotiating unique cultural circumstances. The in-depth stories shared by participants highlight the unique social, political, economical, and cultural challenges that mother coaches navigate in high-performance sport contexts due to their position as women *and* mothers. Participants' shared stories highlight the critical need for sport policies and practices that will support the Government of Canada's goal to reach gender equity in sport by 2035.

**Do men and women lead differently? Perspectives of sex and gender differences in sport leadership, within high-performance women's ice hockey**

*Daniel Church, York University; Jessica Fraser-Thomas, York University*

Research on leadership in sport has focused largely on male perspectives (Bucci et al., 2012; Camiré, 2016). While research has highlighted differences between male and female teams and leaders, participants in these studies are more often male (Murata, et al., 2023). In the sport of ice hockey, one study found 82% of sport psychology research comprised all-male samples (Robertson et al., 2019), emphasizing a need to for more purposeful and targeted research focused on girls, women, and female athlete participants. The purpose of this study was to explore perspectives of sex and gender differences in sport leadership within high-performance women's ice hockey. Fifteen coach and athlete-leader dyads (i.e., N=30) were purposefully



sampled from high-performance youth [women's](#) leagues (i.e., U18 AAA) for representation across Canada. Each participant engaged (individually) in a semi-structured interview towards the end of the season, focused on leadership, including specific questions exploring perceptions of leadership among [men and women](#) coaches and athlete leaders. Participants did not perceive differences in the capabilities of men and women coach and athlete leaders, but they did perceived differences in their respective leadership styles. Specifically, themes emerged in three key areas: (a) relatability of women athletes and athlete leaders with women coaches compared to men coaches; (b) social environmental differences between women's teams and men's teams; (c) communication style differences between women coaches and athlete leaders compared to their men counterparts. Findings are discussed in the context of previous and potential future research, with a particular focus on practical implications.

### **Implementing Their Coaching Philosophies: Youth Sport Coaches' Orchestrating Processes**

*Manal Beydoun, York University; Manal Beydoun, York University; Jessica Fraser-Thomas, York University*

Coaches' attempts to maintain an equilibrium between winning and developing athletes as people have often resulted in coaches' internal role conflict. Coaching philosophies have the potential to guide coaches in simultaneously achieving performance and personal development objectives. Building upon recent work focused on developing coaching philosophies, this study aimed to advance the understanding of youth sport coaches' processes of implementing their coaching philosophies. Thirteen youth sport coaches (n = 5 women, 8 men; aged 26-61 years) who identified having explicit coaching philosophies, engaged in two semi-structured interviews. Data were recorded, transcribed, and analysed drawing upon reflexive thematic analysis and constructivist grounded theory. Coaches outlined a process of consistent implementation, with explicit strategies including: (a) engaging in focused and progressive coaching, (b) developing a reflective culture, (c) delivering individualized and versatile coaching, and (d) being strategic in their development. Themes were synthesized into a conceptual framework, illustrating the nuanced and layered processes coaches followed when translating their statements into practice. In sum, implication: (a) was anchored by unwavering objectives, (b) was shaped by athletes' needs, (c) involved a multifaceted decision-making process, (d) included deliberate strategies and behaviours, and (e) was an iterative evaluation process. Most coaches voiced the benefits their statement offered in ensuring consistency and accountability, and reported some navigating tensions and resistance. This conceptual framework could serve as a preliminary tool to guide coaches through the different stages of effectively implementing their philosophy.

### **Teaching Towards Meaningful Physical Education: An Autoethnography**

*Autumn Nesdoly, University of Calgary; Douglas Gleddie, University of Alberta; Tim Fletcher, Brock University; Tara-Leigh McHugh, University of Calgary*

The concept of Meaningful Physical Education (MPE) has emerged in response to critiques of disengaging and/or utilitarian models of physical education over the last three decades. MPE is a flexible framework based on teachers' beliefs, values, and the contexts in which they work. In





2022, the government of Alberta released a new physical education and wellness (PEW) curriculum, whereby the importance of fostering meaningful movement opportunities is emphasized. However, limited research has examined how teachers interpret and facilitate MPE within their own practice. Drawing on my own experiences as an elementary generalist teacher, the purpose of this narrative autoethnographic study was to explore how I make sense of, connect to, and facilitate meaningful physical education experiences. Findings are presented in the form of poems and vignettes about critical incidents rather than succinct themes. However, the findings highlight the trials, tensions, and triumphs I have experienced in making sense of, connecting to, and facilitating MPE. The poems and vignettes have been crafted to capture the nuance and complexity of my lived experience and allow the audience to position insights into their own practice. This autoethnographic research situates my own negotiations with MPE within a broader societal, cultural, and theoretical context. Ultimately, this research contributes to a growing body of literature that seeks to support teachers in their endeavors to teach towards MPE.

### Session 3C: Cognition & Joint Action

#### **Pick, Plan, Attend: Cognitive contributions to visuomotor adaptation**

*Darrin O. Wijeyaratnam, University of Ottawa; Erin K. Cressman, University of Ottawa*

Visuomotor adaptation has long been framed as arising implicitly (i.e., unconsciously). Recent evidence highlights a role for explicit (i.e., cognitive strategy) contributions. Across three experiments, we show how movement strategies, target choice, and attentional focus influence visuomotor adaptation. Participants reached with cursor feedback that was either aligned or rotated 40° clockwise relative to their hand motion. Explicit and implicit adaptation were assessed using the process dissociation procedure. In Experiment 1, participants reported either the *direction* their hand should aim, the *endpoint* of their movement, or made no report before reaching. Visuomotor adaptation was greatest for the Direction group, including enhanced explicit strategy use during and following training, while implicit adaptation was similar across groups. In Experiment 2, a Choice group selected their reach target, while a Yoked group reached to targets in the same order without choice. Although both groups adapted their reaches to a similar extent, the Choice group exhibited greater explicit adaptation following training, while implicit adaptation was similar between groups. In Experiment 3, participants adopted either an external (on the cursor) or internal (on their hand) focus of attention or received no focus instruction. The internal focus group adapted their reaches to a greater extent compared to the external focus group, yet with comparable contributions of explicit and implicit adaptation. Across studies, explicit adaptation was modulated by cognitive processes, while implicit adaptation remained stable. These findings support a dissociation between explicit and implicit contributions to visuomotor adaptation, with only the former sensitive to top-down influences.

#### **When Memory Fights Back: Implicit Interference Persists Despite Temporal Spacing**



*Aarohi Pathak, University of Toronto; Aarohi Pathak, University of Toronto; Tim Welsh, University of Toronto*

Interference between competing motor memories is well-documented in sensorimotor adaptation. Interference is typically assessed using an ABA paradigm wherein participants first adapt to one rotation (Task A), then to an opposite rotation (Task B), and finally are re-exposed to the original rotation (Task A). Interference is observed when performance during the second exposure to Task A is impaired, implying that the motor memory of Task A has been overwritten or masked by the performance of Task B. Previously, we reported that interference is driven by implicit processes because participants exhibited impaired relearning of Task A after adapting to Task B under clamped-feedback conditions (emphasizing implicit processes), but not with delayed-feedback (emphasizing explicit learning). The present study was designed to examine whether memory consolidation, generated by temporal spacing between adaptation sessions, can modulate the interference driven by implicit processes. Participants first adapted to a visuomotor rotation (Task A), returned after 24-hours to complete an opposing clamped rotation (Task B), and then returned another 24-hours later to re-adapt to Task A. It was predicted that the first 24-hr interval would allow for memory consolidation of Task A and reduce the interfering effect of implicit processes. However, results revealed interference during relearning of Task A because there were no differences in performance of Task A between the initial and re-exposure sessions. These findings support the hypothesis that adaptation is particularly susceptible to interference by subsequent implicit learning and highlight the limitations of temporal spacing as a strategy to mitigate interference.

### **Involuntary Feedback Responses Reflect a Representation of a Partner During Jointly Coordinated Actions**

*Seth Sullivan, University of Delaware; John H. Buggeln, University of Delaware; Jan A. Calalo, University of Delaware; Truc T. Ngo, University of Delaware; Jennifer Semrau, University of Delaware; Michael J. Carter, McMaster University; Joshua G.A. Cashaback, University of Delaware*

Our lives are enriched when we coordinate our actions with others, such as dancing with a partner. Past work has suggested that humans form neural representations of a partner's actions. Yet it is unclear whether rapid feedback responses will reflect a representation of our partner during jointly coordinated movements. Here we tested the idea that involuntary visuomotor circuits have a representation of both self and partner. To investigate, human pairs performed goal-directed reaches by moving a jointly controlled cursor. Participants observed both their own self target and their partner's target. We manipulated the width of both the self and partner target to be either relevant (short width) or irrelevant (long width). The self-target center was aligned with the partner target center. Participants were instructed to move and stabilize the jointly controlled cursor in their self-target within a time constraint. We had four experimental conditions: *partner-relevant/self-relevant*, *partner-irrelevant/self-relevant*, *partner-relevant/self-irrelevant*, *partner-irrelevant/self-irrelevant*. On a subset of trials, each participant's hand was constrained within a force channel when the jointly controlled cursor jumped laterally and then back to the original path. We measured the lateral force applied to



the channel during the involuntary visuomotor feedback response epoch (180-230 ms). Participants displayed significantly greater involuntary visuomotor feedback responses in the *partner-relevant/self-irrelevant* condition compared to the *partner-irrelevant/self-irrelevant* condition ( $p < 0.001$ ). Remarkably, our result demonstrates that humans have a rapid and involuntary feedback response that considers a representation and goal of their partner.

### **Interference effects in a dual-task paradigm reveal that imagining joint action is more cognitively demanding than imagining individual action**

*Molly Brillinger, University of Toronto; Timothy N. Welsh, University of Toronto*

Motor imagery (MI), the mental simulation of movement without physical execution, engages neural and behavioral mechanisms similar to those involved in physical movement. Although extensive research has examined how individuals engage in MI when they act alone, little is known about MI of joint actions when an individual imagines coordinating with a partner. Recent evidence suggests that joint MI is shaped not only by one's own motor plans, but also representations of a partner's assumed action capabilities. The present study investigated whether imagining a joint action is more cognitively demanding than imagining the same action performed alone. The task involved transferring 4 discs onto a post. Participants ( $n=28$ ) performed this task alone and imagined performing it alone and with an imagined partner. This task was performed and imagined on its own (single-task) and with a concurrent mental calculation task (dual-task). Results showed that the dual-task disrupted imagined movement times (MTs) more than physical MTs. Critically, the dual-task had a greater impact on imagined MTs in the joint MI task compared to imagined MTs in the individual MI task. Motor overflow, unintended micromovements during MI that are a measure of inhibitory control, increased under dual-task conditions, but did not differ between individual and joint MI tasks. These findings suggest that imagining joint actions is not merely a combination of two individual simulations, but a more cognitively demanding process involving perspective-taking, anticipation, and coordination. This work has important implications for MI training in sport and rehabilitation, where interpersonal coordination is vital.

### **Effects of Response Effector and Body Posture on Attention in 3D Space**

*Noah Britt, McMaster University; Jim Lyons, McMaster University; Hong-jin Sun, McMaster University*

Observers distribute their attention to facilitate action. For example, attention is prioritized toward stimuli proximal to their hand if the hand is positioned near the display screen (perihand bias). In the present study ( $n = 108$ ), using a target detection task, we examined whether the factors of response effector (hand vs foot) and body posture (seated vs standing) could affect the distribution of attention toward perihand space. Observers positioned their right hand near the right edge of the display screen, and the target stimulus could appear proximal or distal to the hand in simulated peripersonal or extrapersonal space. The results revealed a significant interaction between response effector and body posture. For hand-effector responses, the perihand bias was elicited for both seated and standing body postures. However, for foot-effector responses, the perihand bias was only revealed while in the standing



body posture, not while seated. We concluded that attention appears distributed in an action-centered framework, with action affordances driving the perihand bias. These results have ramifications for affordance competition hypotheses and the interactive role of body posture with the task-relevant response effector.

### **The Effects of Music Listening on Motor Skill Learning**

*Anthonia O. Aina, Faculty of Kinesiology and Physical Education, University of Toronto; Joyce L. Chen, Faculty of Kinesiology and Physical Education, University of Toronto*

Listening to pleasurable music influences spatial-temporal performance through mood and arousal regulation (Husain et al., 2002). Listening to pleasurable music also engages reward regions of the brain (Gold et al., 2019); these regions are implicated in reward-based motor learning (Abe et al., 2011). Thus, this study examined the effect of pleasurable music listening on motor learning. We hypothesized that participants who practice a motor skill while listening to pleasurable music will show better skill acquisition and retention performance than control groups. Healthy participants (n=32 of 53) were randomly assigned to one of four listening conditions: Pleasurable music, Control music, Audiobook, or Silent. Participants completed mood and arousal questionnaires before and after completing a Sequential Visual Isometric Pinch Task (SVIPT). On Day 1, participants practiced the SVIPT (6 blocks of 30 trials) under one of the four listening conditions. On Day 2, a retention test (1 block of 30 trials) was completed in silence. Skill performance was calculated using error rate and movement time data. During skill acquisition, preliminary results show no statistically significant effects of time ( $p=0.233$ ) or condition ( $p=0.343$ ). Similarly, skill retention results show no statistically significant effects of time ( $p=0.666$ ) or condition ( $p=0.554$ ). However, the pleasurable music group showed trends for better skill acquisition and retention compared to other groups. During retention, participants in the pleasurable music, control music, and audiobook groups maintained their skill performance, while the silent group showed a decline. These findings will inform future studies on the use of music within clinical rehabilitation settings.

### **Saturday October 4<sup>th</sup>**

#### **Sessions #4 (Saturday Oct 4<sup>th</sup>, 8:30-9:45 AM)**

Session 4A (SEP/MLC Symposia): Rebuilding bridges: Bringing sport psychology and motor learning and control back together

#### **Lead Abstract: Rebuilding Bridges: Bringing Sport Psychology and Motor Learning and Control Back Together**

*Lori Dithurbide, Dalhousie University; Heather Neyedli, Dalhousie University; Bradley Young, University of Ottawa; Joseph Baker, University of Toronto; Nicole Robak, University of Manitoba*

The purpose of this symposium is to elicit idea exchanges and discussions on bringing back together psycho-motor research that spans the areas of sport psychology, motor learning, and motor control. While historically these disciplines have shared common ground and were co-



located in parallel within the human movement sciences, there seems to be a divide in recent years. Therefore, the aim of this symposium is to bring together researchers who have bridged (or attempted to traverse) these areas of study. The symposium will focus on the value of inter-disciplinary research and how cross-talk can enrich each discipline. It will also discuss challenges related to methods and design and further considerations for how constraints (related to experimental tasks, environmental conditions, and the recruitment of participants) might need to be modified when traversing disciplines. We will invite our discussant to pose questions and draw conclusions based on the panelists' presentations and propose next steps.

**Abstract #1: Design Dilemmas: Examples from Coaching with Technology Research**

*Heather Neyedli, Dalhousie University; Bradley Young, University of Ottawa; Lori Dithurbide, Dalhousie University*

This presentation will outline the design challenges, dilemmas, and potential benefits related to studies that combine both motor learning and sport psychology in settings that promote ecological validity. Framed against our own studies examining the impact of technology use in coaching, self-regulated learning, and sport performance, the authors will unpack unexpected challenges in pursuit of our inter-disciplinary work. Specifically, we have examined the use of technology in golf coaching and practice using golf simulators commonly used by golf instructors across several sessions. The goal was to employ classic motor learning paradigms while ensuring ecological validity in translating results for applied use to coaches. The presentation will illustrate the necessity of pivoting and compromising on several accounts related to recruitment of participants, the task and experimental design, and the environment. While there is a clear benefit for increased ecological validity for experimental field work, it has posed challenges in study design and execution. These include for example logistical challenges around coach's schedules, procedural designs in line with typical practice structures, and participant recruitment with certain levels of expertise. In conclusion, while the conflict between internal validity in experimental design and external validity to the context being studied is not a new problem across most areas of science, we highlight the unique challenges and present potential solutions relevant to the SCAPPS audience.

**Abstract #2: Advancing Ecological Validity in Sport Science: Insights from Curling and Olympic Weightlifting**

*Nicole Robak, University of Manitoba; Steven Passmore, University of Manitoba*

This presentation will discuss how recent and future work in high-performance sport addresses key design challenges in motor control and sport psychology while striving for ecological validity. Through a scoping review, methodological trends and gaps in the sport of curling research were identified, highlighting the need for sport-specific approaches. Building on this, our recent study aligns qualitative and quantitative measures of attentional focus during stone delivery. We discuss the interplay between perception, action, and cognition in elite athletes. This work informs the design of future studies by advocating for representative task design, athlete-centered methodologies, and context-sensitive measurement tools that better reflect the demands of sport performance. Building on our curling research, we will continue to



explore high-performance sport within ecologically valid environments, now focusing on Olympic weightlifting. We aim to investigate the physiological, biomechanical, and perceptual effects of sport rituals that utilize ergogenic aids, such as ammonia inhalant, on the performance of the Snatch and Clean and Jerk among national-level weightlifters. These tools are frequently used in competition with the intent to enhance arousal, focus, and execution, yet remain under-researched in applied settings. Understanding ergogenic aid's impact on athletes' ability to enter or maintain their zone of optimal functioning is critical in a sport that frequently utilizes these tools. Studying these aids in real-world conditions, rather than in lab settings, ensures that findings are directly relevant to athlete preparation and coaching strategies, aligning with the broader goal of advancing ecologically valid sport science research.

**Abstract #3: Science at the speed of sport: Improving the quality of applied research with elite sport systems**

*Joseph Baker, Tanenbaum Institute for Science in Sport, University of Toronto; Kathryn Johnston, Tanenbaum Institute for Science in Sport, University of Toronto; Nick Wattie, Ontario Tech University; Sam Robertson, Track Consulting Group*

The speed of high-performance sport is more rapid than ever, driven by a seemingly inexhaustible supply of accessible data about athlete performance, health, and development. As a result, those involved with the delivery of high-performance sport (e.g., coaches, administrators, trainers) are increasingly pressured to make modifications to athlete training to take advantage of scientific advancements. As researchers who actively engage with sport practitioners in various forms, we have noted the movement away from traditional approaches to scientific research and discourse in many organizations, toward approaches focusing on 'in house' or 'embedded' scientists who work exclusively with a specific sport (or multiple, usually related, sports). While the ultimate reasons for this movement are hard to discern (e.g., they are driven, at least in part, by the large amounts of data available for sport practitioners and the increasing need to determine how to integrate this data into practice as rapidly as possible), they can promote 'siloed' approaches to complex problems. In this presentation, we examine the current landscape of high-performance sport research and explore ways to integrate elements of sport psychology and motor behaviour research to inform more sophisticated models of athlete learning and development. While the benefits and advantages of integrated approaches will need to be balanced against the rapidly evolving constraints of contemporary high-performance sport, they have the potential to provide superior foundations for capturing the complexity and nuance of high-performance athlete development.

Session 4B: Athletic Performance: Menstruation, Eating Disorders & Injury Recovery

**A Grounded Theory of Eating Disorder Recovery Among Athletes: Developing a Framework of Key People and Actions Involved in Athletes' Recovery and Reintegration into Sports**

*Olivia Feng, McGill University; Chelsea Murray, McGill University; Lindsay R. Duncan, McGill University*





Sport participation can contribute to physical, mental, emotional, and social health; however, athletes are at great risk of experiencing disordered eating and developing eating disorders (EDs), with up to 45% of women athletes and 33% of men athletes being affected. To support athletes in experiencing the benefits of sport participation, the purpose of this study was to establish a conceptual framework of *who* should support athletes during recovery and reintegration into sports, and *how*. Data were collected in two rounds. In round one, competitive athletes (n=17) from various sports (e.g., boxing, distance running, gymnastics, rowing) completed a semi-structured interview where they first constructed a visual representation of their support network, then elaborated on each network member's role. In round two, individuals who supported athletes during recovery and the reintegration into sports (e.g., coaches, family members, psychologists, dieticians) (n=12) were recruited for a semi-structured interview. Data were iteratively analyzed using a constructionist grounded theory methodology. Our framework depicts five layers to athletes' experiences: (1) development of ED behaviours, (2) turning point, (3) early recovery, (4) toward full(er) recovery, and (5) future self. Within each layer, specific people and actions that are needed to support athletes are delineated. Central to our framework is that with support from important others, athletes became increasingly empowered to (re)define their relationship with their body, food, sport, and self. This study provides a novel conceptual framework to support athletes in a healthy return-to-sport and serves as a preliminary step toward developing ED-related policies and protocols.

### **Coming of Age in Sport: Exploring Women Athletes' Early Menstrual Experiences**

*Grace Martina Spilchak, University of Alberta; Jimena Lopez Lamas, University of Alberta; Margo E.K. Adam, University of Alberta*

Although research has begun to explore menstruation in sport, little is known about how athletes experience their first periods and how these events influence their sport participation. Understanding these early experiences is critical for informing more supportive and inclusive sport environments during a formative time in athletes' lives. The purpose of this interpretive descriptive study was to explore and describe women athletes' early menstrual experiences. Two semi-structured interviews were conducted with 12 athletes aged 16-24 who were active in competitive sport at the time of their first menstrual period. Each participant completed two interviews exploring their early menstrual experiences and how they navigated these moments in sport and life. Member reflections followed to facilitate co-interpretation of their stories and support co-production of the story narratives. Data was analyzed using reflective thematic and functional analysis to explore shared meanings and narrative expression. Three short stories were generated to reflect the data (1) *The Fear and Relief of Being Seen*, capturing tensions between vulnerability and connection; (2) *A Natural Nuisance in Sport*, reflecting how menstruation is treated as both ordinary and disruptive; and (3) *Care Isn't Guaranteed*, pointing to inconsistent support from coaches, peers, and systems. These stories offer emotionally resonant reflections that may be used by sport stakeholders seeking to foster more inclusive environments. By making visible what is often hidden, these stories open conversations that



acknowledge—rather than ignore—women’s realities, contributing to a shift toward sport spaces that reflect their experiences and genuinely support their development.

### **“Oh boy, this is gonna be a roller coaster”: Parents’ stories of communication around menstruation and menarche in sport**

*Rylan Curtis, University of Toronto; Katherine Tamminen, University of Toronto; Miquel Torregrossa, Universitat Autònoma de Barcelona*

Female athletes perceive the menstrual cycle as having negative physical and psychological impacts on sport participation (Adam et al., 2022). However, support for athletes managing menstruation is limited due to stigma (Keil et al., 2023) and communication barriers between coaches and athletes (Höök et al., 2021). Furthermore, little is known about parent-athlete communication regarding menstruation. This research explored parents’ experiences of communication about menstruation and menarche with female youth athletes. Ten parents (7 mothers, 3 fathers) completed narrative interviews discussing topics including emotional experiences, sport participation, social comparison, and reflection on communication with their child across developmental stages. Using a constructivist paradigm (Tamminen & Poucher, 2020), the interviews were analyzed using narrative thematic analysis (Riessman, 2008). A braided narrative method of creative nonfiction (Cavallerio, 2022) was used to weave the perspectives of fathers and mothers within the cultural context of menstruation to communicate the themes constructed during this study, including (a) *riding a roller coaster of emotions*, where parents experienced emotional challenges while supporting their daughters through menstruation, (b) *coexisting narratives of menstruation*, focusing on social and biological perspectives, (c) *self-reflection on parental support and understanding*, where participants reflect on their ability to support their daughters, and (d) *gender roles shaping parent-athlete relationships*, or how gender influences whether parent-athlete relationships grow closer or become more distant through menarche. These insights align with research on cultural narratives of menstruation as taboo outside of close female relationships (Erchull & Richmond, 2015), and show how parents navigate social norms while supporting athletes.

### **A scoping review of athlete menstruation**

*Margo Adam, University of Alberta; Danielle Cormier, University of Alberta*

Researchers are gaining momentum exploring menstruation in sport. Yet, no attempt to synthesize the literature has been made. The purpose of this scoping review was to explore and describe what has been researched and to provide guidelines for future research. Using Arksey and O’Malley’s (2005) scoping review framework, 85 articles fit our inclusion criteria. Most research used quantitative methods (58.8%) and cross-sectional designs (72.9%), and was conducted by researchers residing in Westernized countries (77.6%). Study participants ( $N = 14,705$ ) competed across a wide variety of sports and competition levels. Researchers had explored different aspects of athlete menstruation (e.g., menstrual bleeding, coach experiences, sport performance, the role of hormones), from a range of biological, sociological, psychological, and mixed perspectives. To maintain momentum in this vital research area, six main suggestions are presented to assist in promoting the rigor of research and how we as a



scientific community communicate our findings. The recommendations are, in order of importance, 1) center athlete experiences and voices, 2) recognize how taboo(s) and stigma(s) negatively impact the research process, 3) account for the full menstrual cycle including subphases, 4) recognize that menstruation is a complex biopsychosocial experience, and 5) intentionally adopt research methodologies that align with specific topics of interest. Overall, our review shows that the research output focused on athlete menstruation has increased significantly over the last five years, though several opportunities to improve quality still remain.

### **Demographic and sport-related predictors of concussion history among Special Olympics athletes in Canada**

*Nikoleta Odorico, University of Toronto; Christina Ippolito, University of Toronto; Emily Bremer, Acadia University; Nick Reed, University of Toronto; Kelly Arbour-Nicitopoulos, University of Toronto*

**Background:** All athletes are at risk for concussion, including athletes with intellectual disability. Special Olympics (SO) provides sport opportunities for 45,000 individuals with intellectual disability in Canada each year. However, demographic and sport-related factors affecting concussion experiences for SO athletes are unknown. **Purpose:** Examine whether demographic characteristics and sport participation of SO athletes in Canada predict their concussion history. **Methods:** Secondary analysis of retrospective survey data collected from SO athletes (N = 241) and caregivers (N=25) at three National and Provincial SO Games in 2024 was conducted. A binomial logistic regression was employed to predict athlete concussion history (previous concussion or not) from demographic characteristics (age, gender, ethnicity) and sport participation (Chapter, competition level, high-risk concussion sport, winter and summer sports). **Results:** A total of 257 surveys (66% men, mean age=33.9 years, 67% provincial-level) were included in the analysis. Across the sample, 27% of athletes (62% men, mean age=34.2 years, 67% provincial-level) had a concussion history. The regression model explained 20.2% of the variance ( $R^2$ ) in concussion history. Provincial-level athletes were 4.2 times more likely to have a history of concussion compared to national-level athletes ( $p=0.031$ ). No other factors included in the model significantly contributed to the explained variance in concussion history. **Discussion:** Understanding demographic and sport-related participation factors affecting concussion history in SO athletes can systematically identify areas for targeted concussion prevention and education strategies. The implementation of these strategies can lead to safer sport participation for SO athletes in Canada, and beyond.

### Session 4C: Motor Control in Clinical/Special Populations

#### **“To Bind or Not to Bind”: Investigating Sense of Agency in Parkinson’s Disease Through Intentional Binding (Preliminary Findings)**

*Markus Lenizky, University of Toronto; Judith Bek, University College Dublin; Tim Welsh, University of Toronto*



An individual's experience of voluntary movement is critical to shaping estimates of action outcomes and motor performance. The experience of voluntary movement is closely linked to a sense of agency, which can be experimentally assessed through the phenomenon of intentional binding. In neurotypical participants, intentional binding is observed as the perceived compression of time between a voluntary action and an associated perceptual event. Intentional binding, however, has been shown to be impaired in movement disorders including Parkinson's disease (PD). The current study investigated the sense of agency in PD and explored potential relationships between sense of agency and impairments in motor imagery, interoception, and impulsivity. Participants with mild to moderate PD (N=7) completed an intentional binding task in which they estimated the time of either a voluntary key press or a consequent auditory tone. This implicit measure of sense of agency was collected alongside an explicit measure of agency (subjective judgement). Motor imagery vividness (state test), interoceptive awareness (state test), and impulsivity (state test) were also assessed. Preliminary results indicate no significant intentional binding effect, suggesting a reduced sense of agency in PD, as noted in previous literature. A correlation was identified between implicit and explicit sense of agency. Further, a correlation was identified between implicit sense of agency and impulsivity, but no association was found with motor imagery or interoception. Further analysis of data from a larger sample is needed to better understand these relationships in PD and neurotypical individuals.

**Acute cannabis intoxication negatively impacts human reaching: A double-blinded, placebo-controlled crossover study on  $\Delta$ 9-tetrahydrocannabinol and cannabidiol**

*Quinn Malone, School of Health and Exercise Sciences, University of British Columbia: Okanagan, Kelowna, British Columbia, Canada; Paige V. Copeland, School of Health and Exercise Sciences, University of British Columbia: Okanagan, Kelowna, British Columbia, Canada; Hailey E. Tutt, School of Health and Exercise Sciences, University of British Columbia: Okanagan, Kelowna, British Columbia, Canada; Miyah K. Kailey, School of Health and Exercise Sciences, University of British Columbia: Okanagan, Kelowna, British Columbia, Canada; Brian H. Dalton, School of Health and Exercise Sciences, University of British Columbia: Okanagan, Kelowna, British Columbia, Canada; Chris J. McNeil, School of Health and Exercise Sciences, University of British Columbia: Okanagan, Kelowna, British Columbia, Canada*

As ~25% of Canadians used cannabis in 2024, it is imperative to understand the acute effects of intoxication on activities of daily living, including reaching movements. However, no study has examined how reaching is acutely impacted by ingestion of  $\Delta$ 9-tetrahydrocannabinol (THC, the psychoactive component in cannabis) or cannabidiol (CBD, commonly co-consumed with THC). Therefore, our purpose was to characterize the acute influence of THC and CBD ingestion on reaching performance. Ten (4 female) healthy, infrequent users (<1/week for 6 months) participated in four experimental sessions. Each session included a 60-trial reaching task before and ~3h after ingestion of capsules which contained: no THC or CBD (placebo), 10mg THC, 10mg CBD, or 10mg THC + 10mg CBD. Using a linear mixed effects model, post-pre change scores were compared for: movement time (MT), reaction time (RT), peak velocity (PV), time-to-peak velocity (ttPV), constant error (CE; final distance from the target), and variable error (VE;



intraindividual CE variance). Compared to placebo, each drug intervention increased MT (THC: +19.06ms, CBD: +25.91ms, THC+CBD: +30.35ms), whereas only THC and THC+CBD increased RT (THC: +12.02ms, THC+CBD: +8.95ms). THC+CBD decreased PV (−60.0mm/s), and increased ttPV (+10.0ms), CE (+1.62mm), and VE (+0.33mm). CBD alone reduced CE (−1.84mm). These results demonstrate that ingesting THC in isolation or with CBD negatively impacts reaching speed and accuracy, while CBD alone led to slower but more accurate movements.

### **An oscillatory investigation of imagined action sequences in Parkinson's Disease: Evidence for impairment and compensation**

*Kathryn JM Lambert, Department of Occupational Therapy, University of Alberta; Yvonne Y Chen, Department of Neurosurgery, University of Pennsylvania; Ada WS Leung, Department of Occupational Therapy, University of Alberta; Anthony Singhal, Department of Psychology, University of Alberta*

Parkinson's Disease (PD) impairs the physical execution of action sequences. As action sequences are integral to many daily activities, impaired action sequencing has significant functional implications. PD-related deficits in the processing of action representations may contribute to this impairment. One way to examine action representations is through motor imagery. This study investigated how PD affects motor imagery of sequential actions in terms of behaviour and oscillatory activity. Electroencephalographic (EEG) recordings were collected from 20 people with PD and 20 controls as they completed the Test of Ability in Movement Imagery (TAMI). The two groups did not differ in terms of age, sex, or cognitive status. EEG analysis focused on mu oscillations (8-14 Hz), as their suppression is proposed to represent activation of the sensorimotor network, and theta oscillations (3.5-7 Hz), which have been implicated in sensorimotor integration. Lower TAMI scores were observed in the PD group. While participants exhibited less mu oscillations during successful TAMI trials, the two groups did not differ in overall mu activity. The PD group exhibited more theta oscillations over the right temporo-occipital region, which may reflect increased activity in the extrastriate body area. The present findings suggest that impaired execution of action sequences in PD may stem in part from deficits related to action representations. Given the similar levels of sensorimotor network activation between groups, it is possible that this activation is less efficient in PD. This inefficiency may then lead people with PD to rely more on visual networks when imagining action sequences.

### **Vibrotactile Feedback Enhances Planning and Execution in Sequential Reaching Tasks Among Older Adults**

*Saba Mohammadlinezhad Kolahdouz, Applied Health Sciences, Faculty of Kinesiology & Recreation Management, University of Manitoba; Quinn Malone, University of British Columbia: Okanagan, Kelowna; Steven R. Passmore, University of Manitoba, Winnipeg; Jonathan J. Marotta, University of Manitoba, Winnipeg; Cheryl M. Glazebrook, University of Manitoba, Winnipeg*

The one-target advantage (OTA), in which participants perform single-target reaching movements faster compared to two-target sequential movements, is well-established in



younger adults. Older adults, however, adjust their aiming movements to account for age-related changes in sensory and motor systems. Recently, we demonstrated that older adults exhibit the OTA and that vibrotactile feedback improves two-target aiming performance. The present study extends this research by examining if auditory (A) or vibrotactile (VT) feedback affects planning and execution of various bimanual OTA tasks. Twenty-four older adults (Aged 60-82 years) performed 5 target tasks under 3 feedback conditions: no feedback (NF), (A), and (VT). Position data were captured via an Optotrak 3D motion-tracker and analyzed using repeated measures ANOVAs. Reaction time (RT) was significantly influenced by task complexity ( $F_{4,92}=10.83$ ,  $p=.001$ ), with the shortest RT in the two-target extension with single hand 2T1He condition. A significant Feedback  $\times$  Task interaction ( $F_{8,184} = 2.92$ ,  $p=.004$ ), showed that VT reduced RT in 2T1He compared to all other conditions. Movement time to the second target increased with task complexity ( $F_{3,69}=26.81$ ,  $p=.001$ ), especially in bimanual reversal tasks. Kinematic analyses revealed that VT increased peak velocity (PV2) and shortened time after PV (TAPV2). Notably, time to PV in the second sequential movement (TTPV2) was prolonged with VT in complex sequences ( $F_{6,138}=3.57$ ,  $p=.003$ ), implying strategic modulation of acceleration under increased task demands. These findings suggest VT feedback enhances older adult movement planning and execution, particularly under moderate task demands, demonstrating promise for improving sensorimotor function during sequential movements.

#### **Investigating Individual Variability in the Brain's Response to Aerobic Exercise**

*Jess Gibson, Dalhousie University; Allison Murphy, Dalhousie University; Shaun Boe, Dalhousie University, University of Western Ontario*

Acute aerobic exercise has been demonstrated to increase corticospinal excitability (CSE), an important precursor to long-term neuroplasticity, and therefore, learning. However, while this effect has been demonstrated in recent research, the exact mechanism driving this response remains elusive. Furthermore, although overall trends in study data support an effect of aerobic exercise on the brain, there appears to be considerable variability between individuals. We sought to explore this variability by characterizing individual responses of participants to a single bout of aerobic exercise. Retrospective data analysis was conducted on individual participant data ( $N = 92$ ) from four studies, all which used transcranial magnetic stimulation to assess CSE before and after an aerobic exercise intervention. Responses ranged from a -53% to an 854% change in CSE following exercise, with a positive change in CSE demonstrated following 57 sessions, while 35 sessions showed a negative change, and 22 yielded a negligible difference (defined as a change of less than  $\pm 10\%$ ). While most studies examining the impacts of aerobic exercise on CSE have found significant increases at the group level, our findings demonstrate that these results are highly variable at the individual level. To date, the cause of this variability remains unknown, necessitating further investigation. Knowledge as to how and why individuals vary in their neurophysiological responses to exercise may reveal the mechanism(s) driving exercise-induced changes in CSE, which is critical in the use of exercise as a rehabilitative tool.

**Multidisciplinary Keynote (Saturday Oct 4<sup>th</sup>, 10:00-11:00 AM)**





Sara-Lynne Knockwood

**Combined discipline rapid oral presentations (Saturday Oct 4<sup>th</sup>, 11:15-12:15 PM)**

**Not just a round of golf: The lived experiences of social and recreational inclusion for individuals with dementia**

*Kaitlyn Riddell, University of Calgary; Meghan H. McDonough, University of Calgary; Pamela Roach, University of Calgary; Chantelle Zimmer, University of Calgary; Cindy Barha, University of Calgary; Dallas Seitz, University of Calgary*

Regular physical activity (PA) has well documented health benefits for individuals with dementia, and participating in PA with others can enhance social well-being and reinforce a sense of agency. Although inclusive recreation programs have demonstrated positive impacts for people with dementia, these programs remain limited in availability and little research has qualitatively explored the experiences of participants in these programs. This study explored the lived experiences of individuals with dementia who participated in an inclusive golf program with their care partners. Six participants ( $N = 6$ ;  $M_{age} = 75$  years) were interviewed and three were able to provide in-depth data that was examined using a narrative approach. The remaining three participants, either directly or via their care partner, expressed general satisfaction with the program. The first participant's narrative emphasized being empowered through re-engaging in golf and the enjoyment of connecting with peers they could relate to, despite initial nervousness about their golf abilities and fear of disappointing others. The second participant's narrative conveyed feeling supported within the program, while also navigating the challenges of receiving unwanted support. Their narrative arc was similar to that of the first participant, highlighting the importance of social connection despite initial feelings of nervousness. The third participant focused more on the game itself rather than socializing and expressed frustration when others did not share this focus. These varied experiences highlight the importance of balancing social connection, individualized support, and diverse interests to create inclusive and enjoyable PA opportunities for people with dementia.

**Don't believe everything you see: Piloting the FLICC misinformation framework with fitness inspiration Instagram posts**

*Elaine M. Ori, Mount Royal University; Sean Locke, Brock University; Rafaelle Peñas, Mount Royal University; Skyla Dungey, Mount Royal University*

Background: Social media is popular for sharing exercise content such as fitness inspiration under various hashtags including "fitspo" or "fitsporation". It is also an opportunity for false information to circulate rapidly, disguised as informative content. The FLICC Framework identifies misinformation as messages containing at least one of five constructs: Fake experts, Logical fallacies, Impossible expectations, Cherry picking, or Conspiracy theories. Purpose: To apply the FLICC Framework for misinformation to popular fitness inspiration posts found on Instagram, and explore whether these media fit a misinformation profile. Methods: A systematic sample of 120 Instagram posts + accompanying biographies were collected,



searching “fitsporation”; 100 posts met inclusion criteria. Two researchers coded 33% of the data with excellent agreement for all five FLICC constructs, all Intraclass Correlations  $\geq 0.87$ , 95% CI [.87, .97],  $p < .001$ . The primary coder completed remaining posts independently. Results: There was a statistically significant difference in the number of posts that contained at least one FLICC construct for misinformation,  $\chi^2(1) = 9.00$ ,  $p = .03$ ; 35 posts contained no misinformation, 65 posts did contain misinformation. Posts with 5 misinformation constructs were most prevalent, found in 14% of the posts. Cherry picking,  $\chi^2(1) = 5.76$ ,  $p = .02$  and conspiracy theories  $\chi^2(1) = 92.16$ ,  $p < .01$  were observed the least. Discussion: Fitness inspiration content is likely to contain at least some element of misinformation, containing logical fallacies and impossible expectations, presented by fake experts. This may help to explain negative influences to mood state and body objectification, seen in prior work.

### **Developing a fNIRS-Neurofeedback Intervention for SMA Activation: A Proof-of-Concept Study**

*Christine Ausman, Dalhousie University; Diane MacKenzie, Dalhousie University; David Westwood, Dalhousie University; Shaun Boe, Western University; Tim Bardouille, Dalhousie University; Sarah Moore, Dalhousie University; Chelsey Hall, Acadia University; Cory Munroe, Dalhousie University; Heather Neyedli, Dalhousie University*

Background/Purpose: Neurofeedback interventions effectively support stroke survivors in regaining motor function. However, these interventions often focus on the motor cortex rather than secondary motor areas, like the supplementary motor area (SMA), which can be leveraged to support motor rehabilitation. This proof-of-concept study explored the feasibility of using functional near-infrared spectroscopy (fNIRS)-based NF to upregulate brain activity in the SMA. Methods: Fifty-three healthy adults (77.4% female, mean age 26.2 years) participated in a 5-session neurofeedback training schedule, including pre- and post-intervention assessments and MRIs. Participants were randomly assigned to receive real neurofeedback or sham neurofeedback. Participants completed a bimanual finger tapping task while changes in concentration of oxygenated blood were measured. Psychosocial factors (commitment, motivation, perceived difficulty) were assessed at each session. Using linear mixed effects models, we evaluated changes in blood oxygenation between groups and across sessions. MRI analysis employed NiPrep preprocessing and analysis using FSL. Results: Results demonstrated significantly decreased perceived task difficulty over time across both groups, suggesting participants found the task easier with practice. While between-group differences in SMA activation were not statistically significant, one group showed an overall decline in SMA activation from pre- to post-intervention, while the other group maintained more consistent activation patterns. MRI results demonstrated no significant difference between groups. Discussion: These findings suggest that additional research is needed to determine optimal fNIRS-NF intervention parameters for SMA activation before testing with stroke survivors. Future studies should investigate different feedback protocols and training intensities to maximize neuroplastic changes in the SMA.



## **Peer Mentorship to Promote Physical Activity and Mental Health: A Systematic Literature Review**

*Johdeth Dela Cruz, York University; Larkin Lamarche, York University; Karl Erickson, York University; Rebecca Bassett-Gunter, York University*

Physical inactivity and mental health issues are pressing concerns for university students facing sedentary behaviour, academic pressure, and stress. Peer mentorship has emerged as a promising intervention for fostering healthy behaviours. However, further research is needed on the design and outcomes of peer-led programs that promote physical activity (PA) and mental health. This review aimed to catalogue and synthesize peer mentorship programs in the published literature that integrate PA for individuals aged 18 and older, with a particular focus on university students. Specifically, the review identified common program structures and reported physical and mental health outcomes. Following systematic review methods, database searches (Medline, PsycINFO, SPORTDiscus) using keywords (e.g., peer-led, peer mentor, PA) identified 13 eligible articles. Data were extracted on participant characteristics, peer mentor training, PA intervention design, collaborators, and reported physical and mental health outcomes, and then synthesized across studies. Programs commonly included three key components: 1) structured peer mentor training (n=11), 2) cross-unit institutional collaboration (n=12), and 3) participant-centred approaches (n=10). These important features support program delivery and improvements in PA, as well as participant satisfaction. Among the included studies, five reported statistically significant improvements in PA and/or mental health outcomes (e.g., anxiety, depression). Six studies reported self-reported improvements in PA and well-being (e.g., confidence, mood). Peer-led PA interventions are feasible and demonstrate promising outcomes. However, few studies directly measure the mental health outcomes resulting from peer mentorship programs that promote PA.

## **Predestination scales with task difficulty in a random dot motion task**

*Nour Al Afif, McMaster University; Mikayla Lalli, McMaster University; Michael Croteau, McMaster University; Kaylen Rathwell, McMaster University; Joshua G.A. Cashaback, University of Delaware; Michael J. Carter, McMaster University*

Predestination—the tendency to initiate tasks prematurely at the cost of greater effort—has emerged as a robust and counterintuitive phenomenon in human behavior. It has been reliably observed in tasks involving bucket transfers, reach-to-grasp movements, and numerical judgments. However, past studies have used static stimuli in which task-relevant information is fully available at the outset. Here, we investigated whether predestination extends to decision contexts that require continuous deliberation prior to action selection. Based on the cognitive account that predestination reflects a strategy to reduce working memory load by “clearing” one’s mental to-do list, we hypothesized that predestination would increase with task difficulty in a random-dot-motion task. In the single-response condition, participants made one decision about motion direction on each trial. In the double-response condition, participants always made an initial decision about motion direction followed by a second decision that could confirm or revise their initial response. Condition order was counterbalanced across participants. The dot-motion display remained visible throughout each trial. Task difficulty was



manipulated by varying motion coherence across four levels: 6.4%, 12.8%, 25.6%, and 51.2%. Results revealed a robust precrastination effect in the double-response condition, with first response times significantly longer than second response times. The magnitude of this effect increased as motion coherence decreased. First response times in the double-response condition were also significantly longer than those in the single-response condition. These findings demonstrate that precrastination generalizes to dynamic contexts and scales with task difficulty, providing additional support that precrastination serves to reduce cognitive load.

### **Suicide Literacy in Canadian University Student-Athletes: Implementing the Talk Today Program**

*Joshua Celebre, Brock University; Philip Sullivan, Brock University*

Collegiate athletes experience distinct mental health challenges that are often unmet by campus services, and this is especially true for Canadian collegiate athletes who are also under-researched (Egan, 2019; Way et al. 2020). This project implemented the Talk Today program in Canadian university sport. The Talk Today program, developed by the Canadian Mental Health Association, includes a suicide awareness workshop, mental health champion, mental health coach, and awareness event. Nine Canadian University sport teams participated in the program and non-participating student-athletes acted as a control group. Suicide literacy was assessed with the Literacy of Suicide Scale (LOSS; Caelear et al., 2022) at baseline, 3-months, and 6-months post-workshop. To assess change over time, an Individual Growth Curve (IGC) analysis was conducted. IGC's account for baseline differences between individuals and can detect changes on the dependent variable based on clusters. The dependent variable was suicide literacy, and the clusters were time, group (intervention/control), and gender. The IGC revealed a significant main effect of gender ( $\beta = -2.04$ ,  $SE = .90$ ,  $p < .05$ ), and a significant interaction of gender\*time ( $\beta = 1.24$ ,  $SE = .57$ ,  $p < .05$ ), but no effect of the intervention over time. However, participants attend a university that is consistently ranked highest for mental health support, and the intervention (79%) and control (82%) groups' LOSS scores were higher than the general population (63%) and university students (58%; Caelear et al., 2022). Participants also reported increased confidence in helping others and comfort in knowing resources are available.

### **How is Leadership Shared? SNA Insights into Athlete Leadership Distribution in Sport**

*Ashley Flemington, University of Windsor; Todd M. Loughead, University of Windsor; Krista J. Munroe-Chandler, University of Windsor*

Athlete leadership (AL) is a vital component of team performance and is positively associated with individual and team-level outcomes (Loughead, 2017). Researchers have shown that AL is often shared among multiple team members (Duguay et al., 2019). Given the relational nature of AL, Social Network Analysis (SNA) offers an ideal methodological approach, as it focuses on patterns of relationships and interactions among individuals (e.g., athletes) within a team (Borgatti et al., 2013). Although SNA has been used in sport psychology to examine team dynamics (e.g., Loughead et al., 2016), there is limited understanding of how AL is distributed across teammates. Thus, the purpose of this study was to examine the distribution of shared AL across team members of interdependent sport teams using SNA techniques. Network metrics,



including density and centralization, were calculated for six sport teams and demonstrated substantial variability in how AL was distributed (e.g., on a scale of 0 to 1, density ranged from 0.32-0.84, and centralization ranged from 0.19-0.54). Exploratory analyses using structural equivalence techniques were conducted to examine how similarly positioned athletes are within the leadership network. For instance, in some teams, formal leaders occupy structurally equivalent positions, meaning they have similar leadership relationships with their teammates. In other teams, formal leaders have distinct positions within their team's network, reflecting more diverse and individualized leadership relationships. The findings provide further evidence for the shared nature of AL and provides novel insight into the various network patterns of AL than can be present within a sport team.

### **Examining Publicly Available Physical Activity Apps: Do The MARS and ABACUS Measure Up?**

*Elaine M. Ori, Mount Royal University; Courtney Baay, Alberta Health Services; Manuel Ester, University of Calgary*

**Background:** Publicly available digital applications (apps) are a popular resource for physical activity, though it is unclear whether commercially distributed applications adhere to behaviour change best practices. The App Behaviour Change Scale (ABACUS) and Mobile App Rating Scale (MARS) are validated scales for assessing behaviour change features and quality, respectively, of physical activity apps. **Purpose:** To identify and analyze the number of active, publicly available digital physical activity apps, exploring the extent to which each app adheres to behaviour change tools, and to identify relationships between the apps' behaviour change potential, digital app quality, and user ratings. **Methods:** Using both Apple iTunes and Google Play, key terms 'physical activity', 'exercise', and 'fitness' were searched. Only no-cost, interactive English-based apps were included. Tracking apps (i.e., step count logs) were excluded. Two researchers systematically coded a final sample of 17 apps for ABACUS and MARS scales. **Results:** ABACUS-defined Feedback and Monitoring, and Actions were significantly related to Subjective Quality (all  $p < .03$ ). MARS-defined Engagement, Functionality, Aesthetics, Information, and Quality, were significantly related to Subjective Quality (all  $p < .01$ ). App-specific content related to Awareness, Knowledge, Attitudes (instrumental), and Behaviour Change were significantly related to Subjective Quality (all  $p < .05$ ). Regression analyses showed no significant interactions between ABACUS and MARS constructs, with app user ratings. **Discussion:** Non-significant findings suggest ABACUS and MARS criteria may not align with user preferences. Improving physical activity may require focusing on additional cognitive antecedents including physical activity affect. Attention to visual app design may positively influence behaviour change potential.

### **Comparative Analysis of Postural Stability in Competitive Cross-Country Skiers and Non-Skiers**

*Melissa Chik, University of Ottawa; Lucas Michaud, University of Ottawa; Yves Lajoie, University of Ottawa*

Cross-country skiing involves frequent single-leg support while coordinating upper and lower body movements and maintaining balance on unstable, gliding surfaces with the assistance of ski poles. Balance and postural control in cross-country skiers have received limited research



attention. The objective of this study is to investigate the centre of pressure (COP) and balance strategies in competitive skiers compared to non-skiers in a single-leg stance by measuring COP area and sample entropy (SampEn). Nine varsity-level cross-country skiers ( $20.67 \pm 2.35$  years) and nine non-skiers ( $22.11 \pm 1.27$  years) were instructed to maintain a quiet stance with eyes open, either on their dominant leg or with feet together, while standing on a force platform. A ski pole was positioned upright beside each participant, who held it lightly during designated conditions. Four conditions were tested: feet together with and without the ski pole, and single-leg stance with and without the pole. Participants completed four 35-second trials per condition, for a total of 16 trials. Preliminary results suggest that standing with the ski pole reduces sway magnitude (lower area and variability) and increases signal regularity across both stances. In single-leg stance without the ski pole, skiers exhibit lower SampEn values than non-skiers, potentially indicating that skiers might be employing more conscious control during challenging balance tasks, resulting in distinct COP dynamics. This distinction diminished when external support was available. Further research could explore whether the conscious control observed in skiers contributes to long-term postural adaptations and increased injury resilience.

#### **Wilberg and Carron distinguished lectures (Saturday Oct 4<sup>th</sup>, 1:30-3:00 PM)**

Dr. Brian Maraj (University of Alberta)

*There's no place like home*

Dr. Joseph Baker (University of Toronto)

*Nature, nurture, noise and nonsense: Unlocking the puzzle of exceptional achievement*

#### **Sessions #5 (Saturday Oct 4<sup>th</sup>, 3:15-4:15 PM)**

##### **Session 5A: Practical Considerations for Exercise Interventions I**

#### **Adolescent Voices in Physical Literacy: A Participatory Qualitative Study on Co-Designing Relevant Messaging**

*Charlotte Grace Grant, University of Victoria; Jean Buckler, University of Victoria; Braeden McKenzie, University of Victoria*

Despite ongoing efforts to increase adolescent physical activity (PA), participation rates among youth continue to decline. Physical literacy (PL), defined as the motivation, confidence, physical competence, knowledge, and understanding to engage in PA for life, has become an important area of focus in PA promotion. However, existing PL models and messaging tools are often designed without input from adolescents themselves, resulting in resources that may lack relevance and impact. The purpose of this study was to understand how adolescents perceive current PL resources and work alongside them to create revised messaging that better resonates with their experiences. This study employed a participatory, qualitative design to





explore how adolescents understand PL and their responses to both existing and revised PL resources. Fifteen adolescents (ages 13–18) from Victoria, BC, participated in three rounds of semi-structured focus groups. Categorical thematic analysis revealed four key findings: (1) PA disengagement was shaped by identity misalignment, performance pressure, and toxic social environments; (2) adolescents had not heard of PL, but intuitively understood its core concepts; (3) current PL models were irrelevant, overly complex, or juvenile; and (4) adolescents had clear ideas of how to improve PL messaging through inclusive, visually engaging, and relatable content. Our results highlight the value of involving adolescents in the co-design of health messaging. By centering youth voice, PL resources can better support adolescent motivation, confidence, and sustained engagement in PA. These findings, along with our co-developed PL and PA resources, offer practical implications for promoting PA among Canadian adolescents.

**Enhancing instructor practice: Exploring fitness professionals' use of social support strategies following a training program**

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Social support is recognized as a key factor in promoting adults' engagement, enjoyment, and adherence in physical activity (PA) programs. However, fitness professionals often receive little formal guidance on how to intentionally foster social support in group-based settings. In our collaborative pan-Canadian work, we developed an evidence-based training module based on reviews of published literature to educate fitness professionals on social support strategies. The impact of this training has yet to be tested. This study explored how fitness professionals experienced and implemented social support strategies after completing the training. A qualitative description methodology guided by a relativist ontology and constructivist epistemology was used to explore the practical application of support strategies in community-based PA programs for adults. Semi-structured interviews were conducted with five fitness professionals who facilitated group PA programs for adults after completing the training. Participants reflected on how they integrated the strategies, the challenges they faced, and the contextual factors that shaped their efforts. Our analysis identified three themes: attending to the diverse needs and identities of participants, adapting social support strategies to program constraints, and communicating supportively and responding to participants' emotions.



Findings reflect the ways instructors worked to support diverse participants while navigating structural limitations and their own evolving confidence and skillsets. Many participants described the training as an opportunity to reflect more deeply on their teaching practices, strengthen intentionality, and expand their approach to fostering connection. This study offers practical insights to inform future instructor education aimed at enhancing social support in adult PA programs.

### **Beyond the Binary: Reimagining 2SLGBTQI+ Inclusion in Postsecondary Physical Activity Programming**

*Carmen Golnaraghi, University of British Columbia; Naomi Maldonado-Rodriguez, The University of British Columbia; Benjamin A Hives, The University of British Columbia; Kay Anderson, The University of British Columbia; Eli Puterman, The University of British Columbia; Erica Bennett, The University of British Columbia*

While postsecondary students can reap health benefits from physical activity, 2SLGBTQI+ students face unique barriers that negatively impact their participation, including gender-segregated bathrooms and locker rooms, lack of representation in gym facilities, violence, and discrimination. Little research has focused on how to promote 2SLGBTQI+ student thriving in physical activity spaces, including safety, well-being, and inclusion. We examined the physical activity experiences of 2SLGBTQI+ students in a large postsecondary setting. Employing a constructivist approach and drawing on reflexive thematic analysis of focus groups with 22 sexual and gender minority postsecondary students, we identified three themes. In *More than Muscle*, participants challenged dominant notions of fitness as physical prowess, instead valuing spaces where connection, enjoyment, and accessibility were fostered through community building and playfulness. In *Uncomfortable Fit*, participants discussed how athletic wear functioned as a tool of regulation rather than empowerment, reinforcing gender norms and body ideals. Clothing choices were symbolic of broader gendered expectations, directing how one should look, move, and be seen, and leaving participants exposed, scrutinized, and misaligned with dominant athletic aesthetics. In *Beyond Labels to Relational Inclusion*, participants highlighted how inclusion cannot be achieved through naming alone. While some programs used language intended to signal openness, vague or binary framings left those questioning or navigating fluid identities feeling unseen. True belonging emerged from relational experiences, including moments where staff genuinely understood and affirmed participants' identities. These findings are guiding recommendations for postsecondary physical activity that emphasize authentic inclusion through recognition, affirmation, and meaningful connection.

### **The timing and consistency of physical activity during adolescence predict positive mental health in early adulthood**

*Pierre Philippe Wilson Registe, Université de Sherbrooke, Centre de Formation Médicale du Nouveau-Brunswick; Salma Jemaa, Université de Sherbrooke, Centre de Formation Médicale du Nouveau-Brunswick; Said Mekari, Université de Sherbrooke, Centre de Formation Médicale du*



*Nouveau-Brunswick; Mathieu Bélanger, Université de Sherbrooke, Centre de Formation Médicale du Nouveau-Brunswick, Réseau de Santé Vitalité*

Background: Evidence suggests that adolescents' physical activity (PA) influences mental health in young adulthood. However, it remains unclear whether this association reflects a cumulative effect or is driven by PA during specific periods in adolescence. Purpose: To determine whether PA accumulated throughout adolescence or at certain stages of adolescence more strongly predicts positive mental health in early adulthood. Methods: 536 participants in the MATCH longitudinal study self-reported their PA annually over eight years during adolescence, and their positive mental health across four years in early adulthood. Adolescent PA history was computed as either the Cumulative Index of Exposure (CIE), which captures the total PA, or the Weighted Cumulative Exposure (WCE), assigning specific weights to exposure at each age. Linear mixed models were used to examine associations between adolescent PA history (CIE or WCE) and early adult positive mental health. Results: Positive mental health declined during early adulthood ( $\beta = -1.11$ ; 95% CI: -1.73 to -0.49). Total adolescent PA (CIE) and PA accumulated toward the end of adolescence (WCE) were both positively associated with better initial levels of positive mental health in early adulthood. None of the total adolescence PA or PA accumulated at specific periods of adolescence was associated with a change in positive mental health during early adulthood. Discussion: These findings confirm long-term benefits of adolescent PA on early adult mental health and identify late adolescence as an important period. Efforts to promote sustained PA, especially in later adolescence, may help people maintain better mental health for many years.

#### Session 5B: Self-Compassion in Sport

##### **Exploring the self-compassion intervention preferences of athletes with intersecting and unfolding identities: Considering sport context**

*Lucie Blackburn, University of Saskatchewan, Department of Psychology and Health Studies; Kirstyn Robertson, University of Saskatchewan, College of Kinesiology; Kianna Cadman, University of Saskatchewan, College of Kinesiology; Paige Willems, University of Saskatchewan, College of Pharmacy and Nutrition; Kent Kowalski, University of Saskatchewan, College of Kinesiology*

Self-compassion, which includes self-kindness, common humanity, and mindfulness, is a useful resource to support athletes through setbacks, failures, and inadequacies. Despite demonstrated effectiveness of self-compassion interventions in sport, research suggests they could be enhanced if individualized. One way to tailor self-compassion interventions is by considering athletes' identities. Our study explored self-compassion intervention preferences of athletes with intersecting and unfolding identities while also considering sport context. Using a qualitative narrative strategy of inquiry, nine student-athletes (5 men and 4 women) from various sports were individually interviewed. Athletes were introduced to self-compassion, discussed identity intersections, and completed a self-compassion exercise. Self-compassion intervention preferences and their potential link to identities were then shared through participants' stories. Following the first interview, participants engaged in self-compassion



practices and were invited to attend a follow-up member reflection interview. Participants represented a range of identities (e.g., athletic, academic, ethnic, spiritual, sexual orientation, and gender), with diverse intersections among them. Data were analyzed using a thematic narrative analysis. Five themes were generated from participant stories: (a) Clear Identities, Unclear Intersections, (b) “Some Garbage”: A Need to Personalize Self-Compassion Interventions, (c) An Evident but Blurry Bridge Between Identity and Self-Compassion, (d) Identity Roadblocks, and (e) Shifting Identities and Preferences. Across interviews, athletes recognized the importance of identity in their choice of self-compassion intervention preferences; however, our research highlights the complexity of this relationship and how best to tailor self-compassion intervention preferences to athletes remains a significant but important challenge for both researchers and practitioners.

### **Compassion in Motion: A Pilot Study of an Embodied Self-Compassion Intervention in a Movement-Based Learning Environment**

*Jimena Elena Lopez Lamas, University of Alberta; Paula Mazur, University of Alberta; Danielle Cormier, University of Alberta; Emily Noton, University of Alberta; Amber Mosewich, University of Alberta*

Self-compassion is the lived expression of mindfulness, common humanity, and kindness when facing adversity and struggle (Neff, 2003b), yet *experiencing* self-compassion is rarely emphasized in its instruction. Building on our prior feasibility findings suggesting embodied pedagogy—learning through physical experience—may support the development of self-compassion, this study piloted a refined intervention within a movement-based undergraduate course. Over three weeks, 37 students ( $M = 20.31$ ;  $SD = 5.45$ ) engaged in a 50-minute psychoeducation session, three 15-minute movement sessions, and a 50-minute group reflection. Repeated measures ANOVAs revealed significant improvements, with most gains maintained at 4-week follow-up, in self-compassion (pre:  $M = 2.83$ ,  $SD = 0.59$ ; post:  $M = 3.46$ ,  $SD = 0.58$ ; follow-up:  $M = 3.23$ ,  $SD = 0.65$ ),  $F(2, 38) = 8.17$ ,  $p < .001$ ), flourishing (pre:  $M = 46.70$ ,  $SD = 4.32$ ; post:  $M = 50.50$ ,  $SD = 2.04$ ; follow-up:  $M = 48.15$ ,  $SD = 4.88$ ),  $F(2, 38) = 19.09$ ,  $p < .001$ ), and compassionate engagement and action (pre:  $M = 13.55$ ,  $SD = 0.74$ ; post:  $M = 15.5$ ,  $SD = 0.56$ ; follow-up:  $M = 15.27$ ,  $SD = 0.60$ ),  $F(2, 38) = 7.77$ ,  $p < .001$ ). Additionally, three themes reflecting students’ experiences of the intervention were generated through reflexive thematic analysis: (1) Balanced Awareness—increased attunement to bodily discomfort; (2) Compassionate Motivation—a shift from performance pressure to supportive self-talk; and (3) Whole-Person Integration—movement, emotion, and reflection fostered a felt understanding of self-compassion. These findings suggest that movement-based learning may be a viable approach to developing self-compassion and demonstrate its potential for classroom integration.

### **Fierce self-compassion: An exploration of athlete perceptions**

*Abimbola Eke, University of Toronto; Danielle C. Cormier, University of Alberta; Karissa J. Johnson, University of Saskatchewan; Jimena E. Lopez Lamas, University of Alberta; Ben J. Sereda, University of Alberta; Paula M. Mazur, University of Alberta; Ryan G. Beatson, University of Saskatchewan; Craig Hordal, University of Alberta; Brea McLaughlin, University of Alberta;*



*Tarun Thamilselvan, University of Alberta; Grace Spilchak, University of Alberta; Margo E. K. Adam, University of Alberta; Kent C. Kowalski, University of Saskatchewan; Amber D. Mosewich, University of Alberta; Leah J. Ferguson, University of Saskatchewan*

Self-compassion has been recognized as a valuable resource for athletes' well-being, stress reduction, and personal growth in sport contexts (Cormier et al., 2025). Recently, *fierce self-compassion*—which emphasizes protecting, providing for, and motivating oneself (Neff, 2021)—has attracted the interest of researchers and sport participants, though it remains unexplored with athletes. As such, this study describes high-performance athletes' understandings and applications of fierce self-compassion in sport by: (1) exploring how athletes conceptualize the construct, and (2) identifying sport situations where it may be relevant to performance and well-being. Participants included 49 varsity athletes ( $M_{age}=20.4$  years;  $SD=1.7$ ; 28 women, 21 men) from four teams (volleyball, basketball, swimming, ice hockey) at a Western Canadian university. Athletes participated in a 45-minute educational session introducing fierce self-compassion, followed by focus groups ( $N_{groups}=8$ ;  $M_{length}=39:29$  minutes) to discuss their perceptions and experiences of fierce self-compassion in sport. Data were analyzed using interpretive phenomenological analysis to explore athletes' meaning making of fierce self-compassion. The generated themes (and subthemes) highlight that athletes perceived fierce self-compassion as essential in sport (noting that this was an unnamed yet familiar skill, the embodied nature of fierce self-compassion, and the various benefits of its use), and that it is important to find the 'sweet spot' of fierce self-compassion (depending on timing, context, preference, and self-awareness) to attain success in sport. These findings offer initial insights into how athletes actively navigate and integrate fierce self-compassion into their sport experiences, highlighting it as a flexible skill that may support performance and well-being.

### **“My Toughest Opponent Was Myself”: Exploring Personality and Self-Compassion in Coping with Athlete Performance Slumps**

*Katelyn Forner, McGill University; Lindsay R. Duncan, McGill University*

Performance slumps are prolonged periods of unexplained underperformance that exceed an athlete's typical fluctuations and affect over 50% of athletes, often leading to heightened stress, anger, and frustration. While the expression of slumps can vary depending on sport type (individual versus team) and personal factors, how athletes cope with them, and how these factors influence coping, remains less understood. This study aimed to explore the relationships between sport type, personal factors (personality and trait self-compassion) and coping strategies used during performance slumps. We recruited 184 athletes from Canada, the United States, the United Kingdom, and Australia to complete a quantitative survey that assessed demographics, sport and slump history, personality, self-compassion, and coping. Linear regression analyses revealed significant relationships between personal factors and each category of coping strategy (problem-focused, emotion-focused, and avoidance). Specifically, extraversion and conscientiousness predicted greater use of problem-focused strategies, while neuroticism and mindfulness predicted greater use of emotion-focused strategies. Additionally, agreeableness and conscientiousness predicted less use of avoidance strategies. These patterns



are notable as problem-focused and emotion-focused strategies are generally considered more adaptive and linked to more positive outcomes, whereas avoidance strategies are typically viewed as more maladaptive and linked to more negative outcomes. Despite these results, there were no significant differences in coping strategy use between individual-sport athletes and team-sport athletes. Together, these findings underscore the importance of personality and self-compassion in coping with performance slumps, highlighting the need for future research to examine and develop support strategies tailored to individual differences.

#### Session 5C: Motor Planning in Applied Skills

##### **The Influence of Experience on the Sensory Contributions Needed for Piano Learning**

*Kate Moses, Queen's University; Liam Morassut, Queen's University; Sadiya Abdulrabba, Queen's University; Gerome Manson, Queen's University*

When learning a musical instrument, it requires coordination of auditory, visual, tactile, and proprioceptive information. Previous research has investigated the role of sensory feedback in experienced pianists, yet minimal research has focused on novice piano learners. Our study investigated the difference in sensory feedback use between experienced (N=18, 9F) and novice (N=17, 10F) piano learners. Participants performed piano sequences across three different sensory feedback conditions: audiovisual, auditory-only, and visual-only. On day one, participants performed a pre-test, an acquisition period, and an immediate retention test. During the pre-test, participants performed three sequences and received audiovisual feedback. During acquisition, participants practiced each sequence, with each one randomly assigned to a sensory feedback condition. During acquisition, participants were provided with feedback about their accuracy (i.e., correct or incorrect) and asynchrony (i.e. stimulus - response timing). The post-test assessed immediate retention by having participants perform each sequence with audiovisual feedback. On the second day, participants performed a 24-hour delayed retention test, identical to the pre- and post-test. Analysis showed that for accuracy and asynchrony, both experienced and novice piano learners significantly improved between the pre- and post-tests, and pre- and retention tests across all sensory conditions. Between-group analysis revealed a group effect for accuracy and asynchrony. However, there were no significant differences between sensory conditions for either measure. Motion fluidity analysis showed no significant differences based on group, test, or condition. These findings suggest that sequence learning can occur even when auditory or visual feedback is occluded, for both novices and experienced players.

##### **Effect of Batting Practice in Virtual Reality on Swinging Decision in Baseball Players**

*Fabian Alberto Romero Clavijo, Bishop's University/ INS Québec; Thomas Romeas, Institut national du sport du Québec, Université de Montréal, York University.; Zachary Besler, Langara College; Maxime Trempe, Bishop's University*

Baseball involves a dynamic confrontation between a pitcher and a batter, in which the batter must use the pitcher's kinematics to decide whether to swing or not. However, replicating this interaction during regular batting practice (RBP) is difficult due to the limited availability of





pitchers. To address this limitation, virtual batting practice (VBP), in which a batter faces a pitcher in a virtual reality environment, has been proposed to be an effective substitute to RBP to train swinging decision. This pre-registered study examined the effectiveness of VBP compared to RBP. Thirty-eight male baseball batters aged 11 to 15 ( $M = 13$ ,  $SD = 1.01$ ), with an average of 5 years of baseball experience ( $SD = 1.44$ ), were recruited from the same club and randomly assigned to VBP or RBP groups. The VBP group completed twelve 20-minute VR training sessions over four weeks using commercial software (Win Reality, Austin, TX, USA) during their regular ten hours per week of practice, while the RBP group engaged only in regular practice. Decision-making was assessed pre- and post-intervention using a video-based pitch recognition test (PRT) and swing decision accuracy during live at-bats. Results revealed significant improvement in PRT from pre- to post-test ( $p = 0.03$ ), with no between-group differences ( $p = 0.50$ ). However, neither group improved swing decision accuracy during live at-bats ( $p > 0.17$ ). Thus, substituting part of regular practices with virtual reality training led to similar improvement compared to RBP. Future studies should investigate the effects of longer or varied VBP schedules.

#### **Fore-getting the Risk: Golfers do not select an optimal shot endpoint when hazards are present**

*Sophie Inkoen, Dalhousie University; Ashton Sheeves, Dalhousie University; Conrad Von Palleske, Dalhousie University; Stephan Zahno, Universität Bern; Bradley Young, University of Ottawa; Lori Dithurbide, Dalhousie University; Heather Neyedli, Dalhousie University*

Previous laboratory-based research using a touchscreen and pointing movements has shown that participants can adjust their aimpoint to maximize expected gain while avoiding negative outcomes in their environment. This laboratory task is analogous to a golfer trying to hit a green while avoiding sand and water hazards around the green. The purpose of this study was to determine whether golfers optimally adapt their shot aimpoints to account for different penalty landscapes and their own motor variance. Participants (golfers who could report a handicap) hit golf balls using a TrackMan golf simulator to aim for a green. As in previous laboratory work, the size of the green and the presence of a penalty region were manipulated across separate blocks of trials. Participants earned points for hitting the green but lost points for hitting the penalty region, when present. These points were converted into a monetary reward at the end of the experiment. Unlike previous laboratory studies results, participants did not adjust their swing aimpoints in response to the penalty region, even though avoiding it would have required substantial endpoint shifts to maximize expected payout. This finding suggests that golfers may have difficulty selecting shot endpoints that effectively avoid hazards on the course highlighting a potential role for coaches in helping players develop more strategic and adaptive aiming decisions under risk.

#### **Reduced Muscle Activity and Co-Contraction in Cross-Country Skiers Compared to Non-Skiers During a Challenging Postural Task**

*Lucas Michaud, University of Ottawa; Melissa Chik, University of Ottawa; Yves Lajoie, University of Ottawa*



Cross-country skiers frequently perform movements requiring single-leg stability, making postural control a cornerstone of their performance. Their sport-specific demands involve balancing on sliding surfaces while coordinating complex upper and lower body movements using ski poles. Despite its importance, postural control in cross-country skiing remains unexplored. This study aimed to examine muscle activation in dual- and single-leg stance tasks in varsity-level cross-country skiers, and to assess how ski pole support influences neuromuscular control. We hypothesized that skiers would display reduced muscular activation due to better postural control. Nine varsity skiers ( $20.67 \pm 2.35$  years) and nine non-skiers ( $22.11 \pm 1.27$  years) were recruited. Participants stood either feet together or on their dominant leg, with or without a ski pole on their non-dominant side. Each condition included four 35-second trials performed with eyes open. Tibialis anterior (TA) and medial gastrocnemius (MG) muscle activity were recorded using surface electromyography (EMG), rectified, and smoothed via RMS envelope. Signals were normalized to the maximal voluntary isometric contraction. Mean EMG and co-contraction index (CCI) were calculated. Across all conditions, ski pole support reduced TA, MG, and CCI activation ( $p < 0.05$ ), suggesting a generalized unloading effect. During single-leg stance, skiers showed lower TA and CCI activation than non-skiers, suggesting more efficient control. However, these group differences disappeared when the pole was used. These findings reveal neuromuscular differences between cross-country skiers and non-skiers during challenging balance tasks. Such information may be useful for guiding training and rehabilitation strategies in cross-country skiers.

### **Sessions #6 (Saturday Oct 4<sup>th</sup>, 4:20-5:20 PM)**

#### **Session 6: Practical Considerations for Exercise Interventions II**

##### **Implementation of social support in physical activity: Observations of social support strategy use by fitness professionals**

*Bobbie-Ann P. Craig, Faculty of Kinesiology, University of Calgary; Ella C. Blanke, Faculty of Kinesiology, University of Calgary; Vanessa Paglione, Faculty of Kinesiology, University of Calgary; Kaitlyn Riddell, Faculty of Kinesiology, University of Calgary; Meghan McDonough, Faculty of Kinesiology, University of Calgary; Isabelle Doré, School of Kinesiology and Physical Activity Sciences, Université de Montréal; Catherine Sabiston, Faculty of Kinesiology and Physical Education, University of Toronto; Erica Bennett, School of Kinesiology, The University of British Columbia; S. Nicole Culos-Reed, Faculty of Kinesiology, University of Calgary; Cari Din, Faculty of Kinesiology, University of Calgary; Jennifer Hewson, Faculty of Social Work, University of Calgary; Sarah J. Kenny, Faculty of Kinesiology, University of Calgary; Stephanie Won, Recreation and Social Programs, City of Calgary; Chantelle Zimmer, Faculty of Kinesiology, University of Calgary; Ann Toohey, Community Health Sciences, University of Calgary; Krista White, University Heights Dance Program; Amanda Wurz, University of the Fraser Valley*

Physical activity (PA) can provide opportunities to experience social support (SS), but fitness professionals rarely receive training on how to provide and foster SS with adults. We developed an online training for fitness professionals working with adults that includes education on how



to deliver nine categories of SS strategies previously identified in two literature reviews and refined by fitness professionals and participants: welcome and include participants, foster social connections, make PA fun and more pleasant, model PA, provide information, encourage, give mastery feedback, give autonomy support, and offer emotional support. Training includes background information, practical strategies, reflective exercises, and activities focused on customizing strategies to their role. This study aimed to identify which SS strategies fitness professionals implemented and how they used them. Seven fitness professionals were observed across three sites. Observations were conducted online or in-person using ethnographic fieldnotes and data were analyzed using qualitative description. Fitness professionals demonstrated use of SS strategies from all categories. However, they more frequently implemented SS strategies that also functioned as instructional methods (e.g., providing PA modifications tailored to participants' needs) and less frequently implemented strategies intended solely to provide SS (e.g., comforting distressed participants). Providing SS may be less familiar to fitness professionals and more challenging to integrate than delivering instruction that includes elements of SS. Refining SS training to build on strategies already familiar to fitness professionals may enhance implementation and adaptability across different contexts and help expand the range of SS strategies fitness professionals are able to use effectively.

### **Equity Considerations in the Implementation of Active Transportation Interventions Across Canada**

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Active transportation such as walking, wheeling, running, or cycling, is increasingly recognized as an accessible means of physical activity. Despite investments in active transportation through the implementation of infrastructure, such as cycling lanes, disparities remain in access, benefit, and perceived safety. Indeed, marginalized groups have been historically neglected in transportation planning, perpetuating systemic inequalities in health mobility and physical activity participation. Moreover, little is known about the extent to which equity is



considered throughout the planning, construction, and maintenance of active transportation interventions. Therefore, the purpose of this study was to explore how equity is considered in the implementation of a specific type of cycling infrastructure, All Ages and Abilities, across Canada. We used a comparative case approach, selecting 16 case studies from nine Canadian municipalities. First, an initial document review was completed to identify preliminary patterns in how equity is considered in the different stages of implementation (e.g. pre-implementation, implementation, post-implementation). Next, we conducted semi-structured interviews with key-informants to gain further insight into practices that municipalities use to engage marginalized groups during the implementation of cycling infrastructure. After thematically analyzing 265 documents and interviewing 40 key-informants, we found that equity was most frequently considered during the pre-implementation phase of an intervention. Additionally, distributional equity, defined as the equitable distribution of resources, infrastructure, and opportunity, was the most common type of equity considered. This study contributes to scholarship on equity in active transportation and provides evidence to inform more equitable mobility and physical activity outcomes in marginalized communities.

#### **Identifying contextual factors and mechanisms of effective physical activity interventions for children and youth with disabilities: A realist review**

*Katerina Disimino, York University; LaMarsh Centre for Child and Youth Research; Canadian Disability Participation Project; Amanda Doherty-Kirby, Canadian Disability Participation Project; Maeghan E. James, Children's Hospital of Eastern Ontario Research Institute; Canadian Disability Participation Project; Rebecca L. Bassett-Gunter, York University; LaMarsh Centre for Child and Youth Research; Canadian Disability Participation Project; Suzanne Deliscar, Canadian Disability Participation Project; Kelly P. Arbour-Nicitopoulos, University of Toronto; Canadian Disability Participation Project; The Family Engagement Research Team, Canadian Disability Participation Project*

Physical activity (PA) provides positive health outcomes for children and youth with disabilities (CYD). However, CYD often face systemic barriers that limit their involvement in PA. This realist review applied the context-mechanism-outcome (CMO) framework to explore characteristics of effective PA interventions for CYD. Initial CMO program theories were developed in consultation with our Family Engagement Research Team. Peer-reviewed literature was searched across six databases to refine the program theories. Eligible studies: 1) targeted CYD, 2) described PA participation interventions, and 3) reported increases in PA. A team of reviewers independently screened titles, abstracts, and full texts using Covidence. Data extraction involved using Microsoft Copilot to generate preliminary extractions based on structured prompts, which were verified by a second extractor. Extracted data were used to test and refine CMO program theories. The final sample consisted of 45 studies. Most studies included participants with autism spectrum disorder (37.8%), intellectual disability (26.7%), and cerebral palsy (22.2%) and were conducted in school (40.0%), home (33.3%), and community (31.1%) settings. Interventions were mainly focused on physical training (84.4%), compared to behavioural (33.3%) or participation-focused (17.8%) approaches. All studies included at least two of the six experiential elements of quality participation; engagement was the most



frequently reported (84.4%), while meaning was the least common (57.8%). The quality participation building blocks likely play a critical role in enhancing PA participation for CYD, and their absence could limit intervention effectiveness. This realist review contributes valuable insights into the contexts and mechanisms that optimally support PA participation for CYD.

**Developing an evidence- and expert-informed disability-specific competency-based framework for qualified exercise professionals: Lessons learned from working in partnership**

*Alexandra J. Walters, UBC Okanagan; Jennifer R. Tomasone, Queen's University; Amy E. Latimer-Cheung, Queen's University*

Competency-based education (CBE) evidences the potential to enhance trainees' abilities (i.e., knowledge, skills, and attitudes) to provide quality care across many health contexts. However, qualified exercise professional (QEP) training in Canada has yet to adopt CBE. Moreover, many QEPs may not receive formal or standardized training about supporting exercise for persons with disabilities (PWDs). Resultingly, many PWDs experience interpersonal and organizational barriers that impede their full and effective participation in exercise. Standardizing QEP training to include a disability-specific competency-based framework potentiates vast improvements in QEPs' abilities to support PWDs while exercising. However, literature describing how to develop competency-based frameworks is unclear and variable. In this manuscript, we discuss the process of developing a draft disability-specific competency-based framework for QEPs to support PWDs while exercising. Guided by the Appraisal of Guidelines, Research and Evaluation (AGREE) II Instrument and a six-step model for developing competency frameworks in healthcare professions, this project established consensus on an evidence- and expert-informed scope and purpose statement and framework structure for a disability-specific competency-based framework for QEPs. Our consensus-based process included the meaningful engagement of key partners at all stages of research. Our approach aims to further formalize the rigor of developing a competency-based framework and eventual CBE curriculum for QEPs in Canada.

Session 6B: Athlete Perceptions & Emotions

**The power and limits of youth sport to motivate the athlete to official transition**

*Maria Luisa Pereira Vargas, Memorial University of Newfoundland; Erin Teschuk, University of Ottawa; Matthew Vierimaa, Acadia University; Karl Erickson, York University; David Hancock, Memorial University of Newfoundland*

Much is known about the athlete to coach transition, and how athletic experiences can influence motivations to coach—whether that be to give back to their sport or not wanting to move on from competitive sport post-athletic career. However, less is known about the athlete to official (i.e., referees, umpires, judges) transition. Through a critical realist lens, we examined how sport officials' youth sport experiences contributed to their motivation to officiate. A semi-structured interview was conducted with 17 sport officials (ten males and seven females) from ten sports in Canada with 14.8 years average experience. All officials had experienced a transition from athlete to official. Data were analyzed using a Grounded Theory approach. The grounded theory denotes that the youth athlete to sport official transition is influenced by the



type and quality of motivation held, the barriers encountered, and the available resources to officials. We propose while high-quality motivations (e.g., intrinsic; ‘giving back to the sport’) stemming from positive experiences in youth sport, and perceived resources (e.g., positive role models) ease the transition—significant barriers (e.g., inadequate training, abuse), unstable motivations (e.g., extrinsic; ‘just a part time job’) and/or limited resources made the transition harder. Therefore, although youth sport is a powerful vehicle to develop sustained involvement in sporting roles like officiating, its participation alone is not enough to motivate all youth sport athletes to transition into officiating as there still remains significant barriers that impact their motivations to transition.

**“It was family, religion, and then it was sports”: The role of family emotional climate on collegiate athletes’ emotional experiences in sport**

*Shannon R. Pynn, Utah State University; Jared Vance, Utah State University; Daisy Owens, Utah State University*

The family plays a central role in children’s sport experiences and outcomes. Parents, in particular, are instrumental in facilitating their children’s participation by providing necessary resources, fostering psychosocial development, and serving as a primary source of emotional support. Sport is often emotionally charged, and parents strongly influence how their children develop, process, and regulate emotions. However, much of the sport parenting literature in this area has focused on specific parent behaviours within the sport context, with less attention given to the broader family context. The purpose of this study was to investigate how the family context was perceived to influence athletes’ emotional experiences in sport. Using interpretive description methodology (Thorne, 2016), we conducted semi structured interviews with 10 collegiate student-athletes (6 women, 4 men,  $M_{age} = 20.5$ ,  $SD = 1.84$ ) to discuss their emotionally significant sport experiences, describe their past and present family dynamics, and share their perceptions of how their parents shaped their emotions in sport. Our findings were organized around the overarching conceptual insight of ‘the family emotional sport climate’, which captured four main themes: parental expectations for sport, observing emotional expression in the family, emotion-coaching from parents and siblings, and cultural and religious norms and expectations. These findings highlight the complex ways in which family may shape athletes’ emotional development and socialization, offering insights that may inform future theoretical approaches. Sibling and religious influences stood out as particularly impactful, suggesting the need for future work in these areas.

**Why do athletes avoid savouring milestones in sport? Evidence for the reminiscing-is-debilitating belief**

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Athletes often avoid savoring the milestones they reach as they pursue their ultimate goals in sport. Why might this be? One explanation is that athletes believe that reminiscing too much about milestone accomplishments will negatively affect their future performance, a viewpoint we refer to as the reminiscing-is-debilitating belief. We conducted three studies with basketball





fans and current/former players (total  $N = 904$ ) to test for the presence of this belief and the underlying reasons for it. In each study, participants read scenarios about an athlete who had reached an important milestone in their competitive season (winning a divisional championship) and was continuing to pursue an ultimate goal (winning a national championship). Some participants were randomly assigned to learn that the athlete had reminisced about the milestone accomplishment, whereas others did not (between-subjects design). Results showed that participants who learned that the athlete had been reminiscing about the milestone expected the athlete to perform worse in the subsequent competition compared to participants who did not learn about the athlete's reminiscing behaviour. Mediation analyses showed that this experimental effect was due to the expectation that reminiscing reduces preparedness for future competitions and lowers goal commitment. These findings help explain why many athletes avoid maximizing their positive feelings after reaching important milestones in their competitive seasons.

### **Something bigger than yourself: The influence of sport on body-image perceptions and identity among U-Sports football linemen**

*Tristan Murray, University of Manitoba; Chris Shields, Acadia University*

Within sport, the way in which we understand our body becomes tightly intertwined with the fulfillment of various identities. The relationship between an athlete's identity and their understanding of their body has been previously explored in sports in which performance demands that athletes maintain thin muscular bodies; little work has explored sports that require large bodies. This gap was addressed by two studies that sought to understand the role that sport plays in how Canadian varsity football linemen make sense of their bodies. An Interpretative Phenomenological Analysis (IPA) of semi-structured interviews with seven current and retired U-Sports football linemen found that identity processes manifested in four major themes; a reframing of their bodies as fulfilling a purpose within football, a sense of belonging within the sport, tensions between body priorities, and an awareness of football as being temporary. An autoethnography supplemented the findings of the IPA by highlighting the effects of forced retirement on identity and body-related perceptions. Taken together, these studies provided evidence that, for those with large bodies, participating in football led to a positive change in the way participants understood their body and a strong commitment to the athlete-identity of lineman. However, the participants still experienced social pressure to be thin and unanimously desired to continue to be active and/or lose weight at the end of their football careers. These findings suggest a body protective effect within large-bodied sports that may facilitate sport participation for overweight youth, while developing lasting exercise behaviours.

### **Session 6C: Reaching & Decisions**

#### **Grasping Under Target Uncertainty**

*Kevin LeBlanc, Dalhousie University; Anne Lacroix, Dalhousie University; Jada Benwell, Dalhousie University; Brett Feltmate, Dalhousie University; Heather Neyedli, Dalhousie University*



Prior to initiating a grasping action, the nervous system generates a motor plan aimed at optimizing task performance. Despite extensive research on single target grasping, the mechanisms by which grasping movements are planned in the context of multiple potential targets, referred to as target uncertainty, remain poorly understood. The present study investigated how the nervous system concurrently plans multiple grasping movements for potential targets with conflicting size characteristics. Using 3D motion capture to measure hand kinematics, participants were presented with two cylindrical objects of different sizes and were required to grasp one of them under two distinct conditions. In the Go-Before-You-Know condition, participants initiated their grasping movement before knowing which object would be the target. In contrast, in the Know-Before-You-Go condition, the target object was identified prior to movement onset. Results revealed that, under target uncertainty, peak grip aperture increased when the distractor object was larger than the target but was not significantly influenced when the distractor was smaller than the target. These findings suggest that the nervous system engages in parallel motor planning for multiple potential actions and tends to scale the grip toward the largest possible target. This behaviour appears to represent an adaptive strategy in which the motor system proactively scales the grasp to accommodate the largest potential target within the action space. This approach likely serves to optimize the efficiency and reliability of executing a successful grasping action.

#### **“Blink and You’ll Miss It”: Visual Hand Feedback Reveals When the Vergence-Accommodation Conflict Disrupts Aiming in VR**

*Timothy Welsh, University of Toronto; Xiaoye Michael Wang, University of Toronto; Luc Tremblay, University of Toronto; Gavin Lawrence, Bangor University; Catherine Sabiston, University of Toronto; Damian Manzone, University of Toronto*

Virtual reality (VR) systems using head-mounted displays combine stereoscopic displays and position tracking to simulate the perceptual experiences and movements in a physical environment. This mediated experience, however, can introduce perceptual mistranslations that impact movement. Our previous research suggests that one mistranslation, depth compression, that can lead to undershooting during visually guided aiming. The present study was designed to explore the impact of vision on the spatiotemporal characteristics of visually-guided VR movements. Participants ( $n=20$ ) performed pointing movements to targets at one of four distances in an immersive VR environment. Their virtual hand was either always visible (online guidance) or hidden at 350, 200, 100, 50, or 0ms after movement onset to reduce online visual feedback. Overall, constant error (CE) was smallest in the online guidance and 350ms conditions and there was overshooting in all other condition. Interestingly, the impact of depth compression was only revealed in the online guidance and 350ms conditions wherein undershooting increased as target distance increased. Trajectory analyses indicated that undershooting emerged after peak deceleration and depended on visual feedback available between peak velocity and peak deceleration (i.e., in the online and 350ms conditions). These findings suggest that movement undershooting in VR results from the depth compression in VR impacting online control more than planning mechanisms. Further, comparisons to previous literature on movements in the physical environment wherein  $\sim 100$ ms of vision is sufficient for



online control, the current study indicates that visually-guided movements in VR need a longer time window of vision for online control.

### **Does self-declared handedness apply to online limb-target regulation processes?**

*Gabriela Oancea, University of Toronto; Sara A Thompson, University of Toronto; Luc Tremblay, University of Toronto*

Handedness is typically defined by preferred tool use, which is arguably based on cognitive insights of motor planning mechanisms. Also, there is limited evidence of how hand preference relates to online control processes (e.g., Elliott et al., 1993) and no known evidence of how handedness relates to limb-target regulation processes (Elliott et al., 2010). In contrast, right-handed individuals can suppress a secondary, online limb-target regulation acceleration with their dominant hand when a target shifted 3 cm closer during movement and vision was presented for 20 ms (Loria et al., 2019; Manzone et al., 2018). The present study examined limb-target regulation acceleration suppression with the dominant vs. non-dominant hand in right-handed ( $n=14$ ) and left-handed ( $n=9$ ) individuals. Participants reached to a target with either hand, with a target jump on 1/3<sup>rd</sup> of trials and a 20 ms window of vision presented before peak velocity. Although movement endpoint distributions indicated that both groups significantly suppressed the secondary acceleration with both hands, there were significant asymmetries in temporal costs. Right-handed participants exhibited longer times after peak velocity (TAPV) with the left ( $M=263$  ms,  $SD=46$ ) vs. the right hand ( $M=246$  ms,  $SD=43$ ) ( $p=0.011$ ). In contrast, left-handed participants did not exhibit such a significant TAPV cost (non-dominant:  $M=240$  ms,  $SD=28$  vs. dominant hand:  $M=233$  ms,  $SD=28$ ) ( $p=0.27$ ). Notably, at least 43% of participants in each group suppressed the secondary acceleration more efficiently with their non-dominant hand. Thus, definitions of handedness are anchored on tool use and do not extend to online limb-target regulation processes.

### **A new theory of decision deliberation as a controllable process**

*Jan Calalo, University of Delaware; Seth Sullivan, University of Delaware; Truc Ngo, University of Delaware; John Buggeln, University of Delaware; Michael J Carter, McMaster University; Isaac Kurtzer, New York Institute of Technology; Joshua G. A. Cashaback, University of Delaware*

Decision-making is ubiquitous in our everyday lives, from selecting between food options at a meal to the cognitively effortful choices of an air traffic controller. Intuitively, we prioritize sensory evidence linked to desirable and rewarding outcomes, but have diminished focus on sensory evidence when tasks are cognitively effortful and offer little reward. Prominent perceptual decision-making theories view decision deliberation through an information processing perspective, where sensory evidence is always acted upon in the same way during deliberation. Yet these models lack a unifying principle that governs how deliberation is modulated across different experimental conditions, requiring model refitting for each new context. Here we propose a novel theoretical framework where deliberation is a controllable process governed by desirability and cognitive effort. We used classic control theory, linear quadratic regulator, to model decision-making. From this theory, evidence accumulation (integration) and urgency act as complementary and interacting mechanisms to drive a



decision. Several hallmark features of decision-making emerged from our model, including skewed response times, the speed-accuracy tradeoff, and Hick's law. Further, low-dimensional neural dynamics from recent neural recordings in monkeys mapped onto the urgency and evidence accumulation components of the model. Taken together, our results provide compelling support for the notion that deliberation is a controllable process that is tuned by task demands and biologically plausible objectives of obtaining desirable outcomes with minimal cognitive effort.