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Conference Abstract Book

Canadian Society for Psychomotor Learning and Sport Psychology
Société Canadienne D'Apprentissage Psychomoteur et de Psychologie du Sport

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Session 1: Oral Presentations

Friday Oct 2, 8:00 am – 9:30 am

Exercise psychology

SUPPORTING PHYSICAL ACTIVITY ACROSS CONTEXTS

Psychomotor learning

Neural Mechanisms & Modulation Methods

Sport psychology

COACHING

Exercise psychology

Session 1: SUPPORTING PHYSICAL ACTIVITY ACROSS CONTEXTS

Friday, Oct 2 | 8:00 AM | Capitale

Towards building physical activity-based supportive care for cancer-related cognitive impairment: Qualitative insights from oncology patients and healthcare providers

Sitara Sharma¹, MacKenzie Aubin¹, Jennifer Brunet¹

¹ University of Ottawa

Background: Cancer-related cognitive impairment (CRCI) is common and under-addressed. Although physical activity (PA) may help patients self-manage CRCI, many require self-management support (SMS) to be active. Healthcare providers (HCPs) can offer PA-based SMS but often lack training/resources. **Purpose:** We qualitatively explored patients' and HCPs': (1) knowledge/perceptions of CRCI guidelines, treatment gaps, and self-management strategies (e.g., PA), and (2) barriers, facilitators, and needs for receiving/providing PA-based CRCI SMS. **Methods:** Ontario-based oncology patients (n=15; M_{age}=58.3±14.3 years) and HCPs (n=10; M_{experience}=14.7±6.1 years) completed online surveys and interviews. Surveys were analyzed descriptively; interviews underwent deductive (*Theoretical Domains Framework*-driven) and inductive (data-driven) content analysis, with deductive findings mapped to the *Capability, Opportunity, Motivation-Behaviour Model*. Themes were refined with an Advisory Council. **Results:** *Capability* to self-manage/provide CRCI SMS was constrained by knowledge barriers, including poor CRCI understanding (100%) and limited awareness of CRCI-PA evidence (67% patients; 90% HCPs). *Opportunity* was hindered by environmental context/resource barriers (100%) like inadequate HCP-delivered CRCI/PA support (patients) and insufficient resources and system-level guidance (HCPs). *Motivation* was strong: beliefs about consequences (e.g., valuing PA for cognitive health) and intentions (i.e., to use/provide SMS) were facilitators (80-93% patients; 80-100% HCPs), though HCPs (90%) described professional role/identity-related barriers (e.g., scope-of-practice uncertainty). Needs converged around credible CRCI/PA education via flexible HCP training and tailored patient-facing resources. **Discussion:** Findings suggest readiness for PA-based CRCI SMS while highlighting important targets to address when developing/selecting intervention content, format, and behaviour change techniques to strengthen cognitive care in oncology.

Exercise psychology

Session 1: SUPPORTING PHYSICAL ACTIVITY ACROSS CONTEXTS

Friday, Oct 2 | 8:15 AM | Capitale

From Consensus to Competence: Co-Developing Essential Competencies for Qualified Exercise Professionals Working with Persons Experiencing Disability

Alexandra J. Walters¹, Jennifer R. Tomasone², Amy E. Latimer-Cheung²

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² Queen's University

Qualified exercise professionals (QEPs) often lack confidence and competence to support persons experiencing disability to participate in exercise. As a consequence, persons experiencing disability lack access to trained QEPs or enter environments offering a poor experience. To address this gap, this research aimed to co-develop a disability-specific competency framework (herein the "Framework") for QEPs.

First, a working group (n=9) co-developed a draft version of the Framework. A multidisciplinary consensus panel (n=22) participated in a modified Delphi process with follow-up focus group interviews to establish agreement (>70% of panelists selecting "slightly agree" or higher on a Likert scale) on the Framework structure and content, including its title, preamble, scope and purpose, values, competency statements, and glossary. End-users (n=217) completed a survey to confirm Framework clarity and identify implementation considerations.

The *Essential Competencies for Qualified Exercise Professionals Working with Persons Experiencing Disability* provides guidance on the abilities required of QEPs at entry-to-practice to provide safe, welcoming, and inclusive exercise experiences. The Framework includes 16 competencies across six domains and four fundamental values. Key implementation considerations included plain language tools and resources, webinars, and access to low-cost training.

The Framework provides a foundation for enhancing QEPs' confidence and abilities and will ultimately result in creating better exercise experiences for persons experiencing disability. Future work will focus on co-developing and implementing training resources to support Framework uptake and application in practice.

Exercise psychology

Session 1: SUPPORTING PHYSICAL ACTIVITY ACROSS CONTEXTS

Friday, Oct 2 | 8:30 AM | Capitale

A Case Study of Trauma-Informed Physical Activity at a Fitness Studio in Western Canada: Understanding Participant Experiences of the Moving Through Healing 6A Framework

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² *Action Potential Fitness (Community Partner)*

The Moving Through Healing 6A Framework, designed by Dube-Lockhart et al. (2022), recognizes that the physiological response to exercise is similar to that of trauma, and that this may evoke different emotional and psychological responses in those who have been impacted by trauma or are experiencing high levels of chronic stress. The 6A framework (Dube-Lockhart et al., 2022) is designed to educate fitness professionals on the urgency of a trauma-informed practice, underscoring the importance of curating a culture aligned with the pillars of the framework: awareness, accountability, acceptance, adaptiveness, attainability, and accessibility. While this framework is applied in practice with clients, no research has been conducted to data exploring how participants experience trauma-informed physical activity.

Thus, the purpose of this study was to better understand participant experiences of trauma-informed physical activity at a small fitness studio in Western Canada. Four long-standing clients of the gym, who also represent marginalized identities (i.e., self-identify as queer, disabled, and fat), were recruited to participate in semi-structured individual interviews.

Results were analysed using a deductive reflexive thematic analysis structured around the 6A Framework (awareness, accountability, acceptance, adaptability, accessibility, and attainability). Results emphasized the importance of communication, individualization in creating training activities and physical activity environments, and building and sustaining a trauma-informed cultures. These participant interviews teach us about the praxis and impact of this framework in key areas, including, but not limited to, emotional/physical safety, healing from trauma, and creating a sense of kinship.

Exercise psychology

Session 1: SUPPORTING PHYSICAL ACTIVITY ACROSS CONTEXTS

Friday, Oct 2 | 8:45 AM | Capitale

“You got to fill up your own cup before you help someone else”: How self-compassion shapes fitness professionals’ social support provision in adult physical activity

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Fitness professionals are main providers of social support in adult physical activity, yet little research has examined the intrapersonal skills they can develop to enhance their support provision. Self-compassion may be one such resource, reflecting the capacity to respond to oneself with kindness and understanding during times of challenge or suffering. It is theorized that when individuals are less self-critical, they may be better able to focus on supporting and responding to the needs of others. This study examined fitness professionals’ experiences regarding self-compassion and the provision of social support in adult physical activity, and their perceptions of the connection between self-compassion and social support provision in their role. Using interpretive description methodology, semi-structured interviews were conducted with 25 fitness professionals and analyzed inductively. Four themes were identified: it is easier to be kind to others than to yourself, self-kindness promotes acceptance and attentiveness towards others, mindfulness enables being present to provide social support, and common humanity helps relate to others. Although many fitness professionals reported difficulties engaging in self-compassion and described tendencies toward self-criticism, self-compassion was viewed as an important skill to practice that could enhance the capacity to provide social support to participants. In contrast, responding uncompassionately towards oneself could lead to self-focus, rumination, and disconnection. Findings suggest that self-compassion may help fitness professionals to enhance their capacity to provide social support while also navigating the demands of their role. Future research should investigate whether self-compassion interventions can enhance support provision and improve the well-being of fitness professionals.

Acknowledgements

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Exercise psychology

Session 1: SUPPORTING PHYSICAL ACTIVITY ACROSS CONTEXTS

Friday, Oct 2 | 9:00 AM | Capitale

Believability and fitness inspiration online: An exploration of behavioural beliefs and outcome expectations

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Background: Fitness inspiration media are highly popularized content found on social media under various hashtags, meant to inspire exercise and healthy lifestyle. Yet extreme representations of exercise can be found in these media, and may contribute to misinformed outcome expectations of engaging in exercise if the images are believable. **Purpose:** This study explored the relationships between fitness inspiration media believability, behavioural beliefs, and outcome expectations among emerging adults. **Methods:** A sample of undergraduate students ($N=125$) completed a cross-sectional survey that included viewing fitness inspiration media. **Results:** Self-identified gender identity was associated with image believability ($r=.282, p=.001$); only women showed moderate associations between image believability and outcome evaluations ($r=-.43, p<.001$) and behavioural beliefs ($r=-.272, p=.022$). Using Hayes' PROCESS macro, a moderation analysis was computed to test whether the relationship between behavioural beliefs and outcome expectations was moderated by image believability. The overall model fit was significant, $R^2=.43, F(3, 67) = 17.03, p <.001$, with a significant main effect of behavioural beliefs on outcome expectations, $\beta=.56, 95\%CI[0.02, 1.09]$ but not for image believability $\beta= -.16, 95\%CI[-0.62, 0.29]$. The interaction between behavioural beliefs and image believability was not significant, $\Delta R^2=.0003, F(1, 67)=0.03, p=.86$, indicating that image believability did not moderate the relationship between behavioural beliefs and outcome expectations. **Discussion:** Viewing fitness inspiration media may be associated with related outcome expectations regardless of image believability, particularly when images align with an individual's behavioural beliefs about exercise.

Psychomotor learning

Session 1: Neural Mechanisms & Modulation Methods

Friday, Oct 2 | 8:00 AM | Chaudière

Individualized Low-Intensity Noisy Vestibular Stimulation Can Improve Balance Without Vision

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Balance requires the integration of visual, vestibular, and other sensory signals. Noisy galvanic vestibular stimulation (nGVS) has been shown to enhance vestibular signals through stochastic resonance (SR), which in turn, can improve balance. Studies employing nGVS have demonstrated improved centre-of-pressure (COP) measures during static balance. Moreover, most nGVS stimulation intensities ranged from ~0.4 mA and above, which can be perceptible or even cause discomfort. We assessed the effect of low-intensity, individualized nGVS in 26 healthy adults (14 female, 19-26 years). nGVS intensity was set at 80% of the perceptible square wave vestibular threshold ($M = 0.14\text{mA}$). Tandem stance performance was assessed across 2 stimulation (nGVS, no-nGVS) and 2 vision conditions (eyes open [EO] vs. eyes closed [EC]) for a total of 12 trials. We showed that COP velocity in the medio-lateral (ML) and antero-posterior (AP) directions were significantly reduced with nGVS, but only in the absence of vision. We then conducted secondary analyses to test if balance improvements with nGVS compared to without nGVS correlated with individualized stimulation intensity. No significant correlations were found between stimulation intensities and either the ML ($\rho = 0.108$, $p = 0.601$) or AP ($\rho = 0.029$, $p = 0.888$) postural outcomes. Thus, the individual stimulation thresholds (whether high or low) do not appear to influence nGVS-related benefits on static balance when vision is unavailable. While the thresholds were lower than the levels typically reported in the literature, these findings provide additional evidence in favour of employing low-intensity, imperceptible nGVS to improve balance outcomes.

Psychomotor learning

Session 1: Neural Mechanisms & Modulation Methods

Friday, Oct 2 | 8:15 AM | Chaudière

The influence of visual and vestibular input on body perception during body position localization

Jonathan Pitino¹, Gerome Manson¹

¹ *Queen's University*

Disrupting vestibular input is shown to shift perceived body orientation during reaches to external visual targets, leading to reduced accuracy and increased endpoint error. This error is hypothesized to stem from altered multisensory representations of body position due to the integration of inaccurate vestibular signals. Whether disrupting vestibular information biases movement toward the body, and whether visual feedback of body position during planning can counteract vestibular-induced errors, remains unknown. This study examined the effect of galvanic vestibular stimulation (GVS) on reaching errors to a vibrotactile-defined facial target and tested whether providing visual feedback reduced these errors. Participants ($n = 36$) performed reaches with and without visual feedback while bilateral-bipolar GVS induced an illusory tilt to the left or right. GVS had a significant effect on movement endpoint bias: directional errors were more rightward-biased with right anodal GVS than with left anodal GVS or the no-GVS control condition. Vision during planning did not mitigate GVS-induced errors; however, reaction times were significantly slower when vision was available. Trajectory analysis (R^2) also revealed that vision had a differential impact on aiming movements. With right anodal GVS, movement trajectories were more stereotyped, suggesting that movements planned without vision involved more online corrections, whereas movements planned with vision relied more on preplanning. These findings provide evidence that vestibular signals contribute to body-position localization during reach planning, and that visual feedback alters movement strategy but cannot compensate for vestibular-induced errors toward body-referenced targets.

Psychomotor learning

Session 1: Neural Mechanisms & Modulation Methods

Friday, Oct 2 | 8:30 AM | Chaudière

Body Composition and Sex Differences Influence Lower-Limb Responses to Transcutaneous Spinal Stimulation

Jermyl Allen Acuzar¹, Catrina Chebae¹, Aila Payrovelia¹, Evie Turner¹, Gerome Manson¹

¹ Queen's University

Transcutaneous spinal stimulation (TSS) is a non-invasive neuromodulation technique that activates spinal sensorimotor pathways to facilitate motor recovery after neurological injury. Despite growing clinical interest, how individual anatomical differences influence muscle responses to TSS and whether TSS-evoked responses are stable over time remains unclear. This study examined the influence of body composition and sex on TSS-evoked motor thresholds and their test-retest reliability in neurologically healthy adults.

Fifty neurologically healthy adults (25F, 25M; 20.6±1.1 years) received TSS at increasing intensities (10–190 mA). Bilateral EMG was recorded from five lower limb muscles. The primary outcome was the common motor threshold (CMT), defined as the lowest intensity eliciting responses in all muscles. Body composition was assessed by bioimpedance, and testing was repeated on Days 1, 2, and 8.

CMT correlated positively with BMI ($\rho = 0.63$) and L1–L2 skinfold thickness ($\rho = 0.45$; both $p < 0.05$) across all participants. These correlations were stronger in males (BMI: $\rho = 0.79$; skinfold: $\rho = 0.60$; $p < 0.05$) and not significant in females (BMI: $\rho = 0.45$; skinfold: $\rho = 0.45$; $p > 0.05$). Males exhibited higher CMT (78.4±26.3 mA) than females (62.9±18.9 mA; $p < 0.05$). CMT showed good reliability across visits (ICC(2,1) = 0.84; 95% CI: 0.75–0.90).

CMT is modulated by sex and body composition and demonstrates short-term reliability. These findings indicate that individualized dosing protocols accounting for anatomical and sex-related differences are necessary to optimize TSS efficacy and support its clinical translation across diverse populations.

Psychomotor learning

Session 1: Neural Mechanisms & Modulation Methods

Friday, Oct 2 | 8:45 AM | Chaudière

Attenuation of cognitive fatigue effects on psychomotor performance following auricular tVNS: A sham-controlled pilot study

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¹ School of Human Kinetics, University of Ottawa

Cognitive fatigue is known to increase subjective feelings of exhaustion and negatively impact psychomotor performance, including reaction time (RT). This pilot study explored whether auricular transcutaneous vagus nerve stimulation (tVNS) can attenuate the subjective, psychomotor, and/or autonomic effects of cognitive fatigue using a randomized, single-blind, sham-controlled design. Simple RT performance, average heart rate, heart rate variability, and subjective sensations of fatigue, motivation loss, and tension were assessed before and after participants ($n = 14$) completed a 60-minute cognitively fatiguing Math-Memory intervention. On separate days, participants received either *active* auricular tVNS or *sham* (earlobe) stimulation throughout the Math-Memory intervention. Results suggested that active stimulation may attenuate cognitive fatigue-related increases in subjective fatigue, motivation loss, and tension compared to sham. Active stimulation also tended to reduce the impact of cognitive fatigue on psychomotor outcomes, reflected by smaller pre- to post-intervention increases in premotor and displacement RT, fewer anticipation errors, and higher EMG magnitude compared with sham. Average heart rate appeared unaffected by stimulation condition; however, heart rate variability tended to increase over the cognitive fatigue intervention with sham stimulation, while active stimulation produced the opposite pattern. A side-effect questionnaire indicated that stimulation was well-tolerated. While many of the observed effects remained at the trend level ($.05 < p < .1$) in this pilot study, these findings strongly support continued investigation of tVNS as a promising non-invasive technique for counteracting cognitive fatigue-related psychomotor performance deficits, while also highlighting the need for future work clarifying the neurophysiological mechanisms underlying these effects.

Psychomotor learning

Session 1: Neural Mechanisms & Modulation Methods

Friday, Oct 2 | 9:00 AM | Chaudière

Subcortical contributions to choice reaction time

Meaghan Lapierre¹, Dana Maslovat¹, Anthony N. Carlsen¹

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The “StartReact effect” refers to the rapid release of a prepared movement following a loud, startling acoustic stimulus (SAS) that elicits a startle reflex. Typically, responses are triggered at such short latency reaction time (RT) that involvement of normal cortical initiation pathways is implausible. The StartReact effect is associated with startle-related activation of subcortical structures, often confirmed by sternocleidomastoid (SCM) activity, and observed in simple RT tasks where the required response is preprogrammed. Although some studies reported SAS-related speeding of choice RT, interpretation was complicated by the use of a head-rotation task that confounded SCM activation or by the failure to distinguish between trials with (SCM+) or without (SCM-) a startle reflex. Consequently, it remains unclear whether choice RT facilitation reflects a StartReact effect or stimulus intensity effects. To address this, twenty participants completed a wrist-flexion/extension choice RT task wherein a SAS (120dB) occasionally coincided with the visual go-signal. SCM+ trials were predicted to show faster RTs than SCM- trials if subcortical drive contributed to RT, whereas a stimulus intensity effect would facilitate RT regardless of SCM activity. Results showed a startle reflex (SCM+) occurred in only 39.7% of SAS trials, with correct responses produced 86.2% of the time. Although RTs were significantly shorter for SCM+ trials than for SCM- ($p = .002$) and non-startle ($p < .001$) trials, SCM+ absolute latencies (~200ms) were inconsistent with the StartReact effect. These results suggest subcortical activation contributes to choice RT, though unlikely to reflect direct StartReact triggering.

Psychomotor learning

Session 1: Neural Mechanisms & Modulation Methods

Friday, Oct 2 | 9:15 AM | Chaudière

Does Acute Aerobic Exercise Enhance Sensorimotor Adaptation Retention and M1 Excitability?

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Sensorimotor adaptation enables movement adjustments to environmental changes, and its consolidation depends on neuroplasticity within the primary motor cortex (M1). A single bout of exercise may enhance retention of sensorimotor adaptation, though findings are contradictory due to methodological inconsistencies. Relatedly, TMS studies suggest acute exercise can modulate motor-evoked potentials (MEP), short-interval intracortical inhibition (SICI), and intracortical facilitation (ICF), yet considerable variability remains regarding the magnitude and direction of these effects. To better understand the relationship between exercise, M1 excitability and motor memory, this study examined behavioral retention and neurophysiological responses following either high-intensity exercise ($n = 22$, 12F, 24 ± 6 years) or rest ($n = 21$, 11F, 27 ± 5 years) after a gradually-introduced force-field adaptation paradigm. Retention was assessed 24 h later, while TMS measures were obtained at baseline, post-adaptation, and post-intervention (i.e., exercise, rest). Linear mixed-effects models showed that force compensation increased from baseline to late adaptation and remained higher than baseline at retention (all $p < .001$), indicating successful retention. However, no significant Group effects were observed. Reaction time, movement time, perpendicular deviation, end-point error and movement velocity also showed no group-dependent effects. A significant effect of Time was observed for MEP amplitude ($p = .027$), reflecting greater MEP post-intervention compared to baseline, irrespective of group assignment. No significant effects were observed for SICI or ICF. Correlation analyses revealed no significant associations between retention and neurophysiological changes. These findings indicate that acute exercise after sensorimotor adaptation neither enhances retention nor modulates M1 excitability.

Sport psychology

Session 1: COACHING

Friday, Oct 2 | 8:00 AM | Ballroom A/B

Trust in the Coach-Athlete Dyad: From a Personal Construct Psychology Perspective

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¹ *Queen's University*

Trust is frequently identified as an important component of coach–athlete relationships within leadership¹, motivational², and interpersonal frameworks³. Despite its recognized influence, trust has rarely been examined as a dyadic phenomenon jointly constructed and experienced by both coaches and athletes. The purpose of this study was to explore coaches' and athletes' perceptions of their relationship and how these perceptions shape the quality of trust within their dyad. Ten Canadian coach–athlete dyads from individual sports participated in semi-structured interviews informed by Personal Construct Psychology⁴. Data were analyzed using reflexive thematic analysis⁵ and a dyadic analytic approach⁶ to identify shared meanings across coach and athlete perspectives. Findings suggest that participants perceived trust as both an experience and a developmental process. The experience of trust was characterized by positive emotional connection, confidence in competence, and meaningful contributions to the relationship. As a developmental process, trust was characterized by exploration, navigating conflict, communication that eliminates assumptions, and integrity motivated by care for the other person. These findings contribute to the conceptual understanding of trust in coach–athlete relationships by highlighting its relational and developmental nature. Methodologically, the study demonstrates the value of dyadic qualitative inquiry for examining interpersonal processes in sport. Practically, the findings provide coaches and athletes with insights into how trust can be developed, maintained, and strengthened within high-performance sport relationships.

Acknowledgements

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Sport psychology

Session 1: COACHING

Friday, Oct 2 | 8:15 AM | Ballroom A/B

Creating Value Through Case Studies: Coaches' Engagement With an AI-Generated Composite Vignette on Creativity

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² *Leeds Beckett University*

Coaching with creativity remains underexplored in the literature (Maiden et al., 2023; Richard & Rasmussen, 2026), yet elite coaches report that it is essential to working with and through the complexity inherent in their roles (Nash & Collins, 2024). Foundational to coaching with creativity appears to be reflection for action (Nash & Collins, 2024;), a trusted guide (Rodrigue et al., 2026), and contextual awareness (Jones & Santos, 2026). Case studies have been recognized as one effective mechanism to support learning in this orientation (Light & Dixon, 2007).

This study examined the value created, for coaches, by a case study built on a published AI-generated composite vignette. Each of the seven coaches (full-time, active, two or more years of experience, experience with a coach developer) completed a live reading and four reflective questions (about 30 minutes) and then performed a semi-structured interview (about 45 minutes). Data were then analyzed through a deductive codebook thematic analysis (Braun & Clarke, 2021) grounded in the value creation framework (Wenger-Trayner & Wenger-Trayner, 2020).

Findings suggest that such a vignette allows coaches to quickly engage with a situation, creating immediate value, while also challenging them to act in their context. Most coaches noted strategic value as the vignette led them to reflect on problems they had not yet faced. Therefore, this AI-generated composite vignette can generate value for coaches by offering a concrete and context-rich example that may help them develop a sophisticated understanding of their context and practice (Jones & Santos, 2026).

Acknowledgements

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Sport psychology

Session 1: COACHING

Friday, Oct 2 | 8:30 AM | Ballroom A/B

Creating Value Through Mentorship: Supporting Women Coaches' Development in Sport

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Contemporary approaches to coach and sport leadership development have increasingly drawn on social learning perspectives, particularly Wenger's (1998) view of learning as a socially situated and relational process shaped through participation, interaction, and shared practice. This perspective is especially relevant to women coaches, whose leadership pathways continue to be shaped by persistent structural and social barriers, including underrepresentation, gendered assumptions, limited access to formal mentorship, and unequal opportunities for advancement. These challenges highlight the need for targeted support initiatives, such as mentorship programmes, that provide women coaches with spaces to connect, share experiences, develop confidence, and learn with and from one another. This study explored the value created through the WAGE mentorship initiative in Canada. Data were collected through pre-, mid- and post-programme surveys, interviews, and focus groups with 32 mentees, 32 mentors, and 16 sport leaders. The present study draws on a subset of the broader evaluation data. The data were analysed using the Value Creation Framework alongside reflexive thematic analysis. Findings revealed marked increases in mentees' leadership self-efficacy, their ability to navigate systemic barriers, and their readiness to consider equity-driven change within their organizations. Mentors reported reciprocal benefits, including renewed motivation, new learning, and a deeper understanding of intersectional barriers in coaching. Sport leaders identified mentorship as a powerful tool for sustaining networks of women and gender-diverse leaders beyond the life of the programme. These findings suggest that structured mentorship can function as a social learning space that supports individual development, collective learning, and organizational change in sport.

Sport psychology

Session 1: COACHING

Friday, Oct 2 | 8:45 AM | Ballroom A/B

Mental Health Resources for NextGen Athletes: Exploring Athletes' and Coaches' Perceptions regarding Barriers and Facilitators to Help-Seeking

Lara Pomerleau-Fontaine¹, Véronique Boudreault¹, Juliette Maurin¹, Sophie Brassard¹

¹ *Université de Sherbrooke*

The Canadian sport system provides funding to cover mental health resources for national athletes. Yet, this access is limited for NextGen athletes, who train and compete in specialized environments striving for national team selection. In these contexts, coaches play a critical role in shaping accessibility to mental health resources as they can influence how NextGen athletes engage with supports. However, there remains limited knowledge regarding factors that influence help-seeking behaviors among NextGen athletes. The purpose of this study was to explore NextGen athletes' and coaches' perceptions of the barriers and facilitators to mental health services. Seven focus groups were conducted with a total of 24 NextGen athletes, and four with a total of 15 coaches. A reflexive thematic analysis identified six themes, including three barriers (resistance to seeking help, interpersonal dynamics compromising help-seeking behaviors, organizational and systemic constraints) and three facilitators (embedding the support within the sport environment, making space for mental health and mental performance, changing the system to increase help-seeking). While coaches and athletes reported similar barriers within the sport environment (e.g., superficial support, stigma) and the provincial system (e.g., logistical challenges, inconsistent funding), NextGen coaches noted a perceived lack of athletes' autonomy. To facilitate help-seeking, both groups highlighted the importance of coaches' discourse and integrating mental performance earlier within athletes' career. Our findings underscore the need to create coordinated and multi-level strategies to foster a culture where mental health is not only endorsed by individuals and coaches, but also structurally supported and sustainably implemented across sport systems.

Sport psychology

Session 1: COACHING

Friday, Oct 2 | 9:00 AM | Ballroom A/B

You Have to Understand Me First: How Black University Athletes Interpret Coaches' Behaviours Within Coach–Athlete Relationships

Jonathan Hood¹, Madeline Kwan²

¹ *St Francis Xavier University*

² *Dalhousie University*

Coach–athlete relationships are critical to athlete development, motivation, wellbeing, and performance. Existing frameworks, including the 3+1Cs model, Self-Determination Theory, and the COMPASS model, explain relationship quality, motivational outcomes, and relationship maintenance. However, less is known about how athletes determine whether coaches are worthy of trust and influence, particularly among Black athletes navigating predominantly White sport environments.

The purpose of this study was to explore how Black university athletes interpreted and made meaning of their coaches' behaviours within coach–athlete relationships.

Nine Black athletes (*M* age = 20.3 years) Canadian varsity student-athletes participated in semi-structured interviews. Data were analyzed using reflexive thematic analysis informed by a constructivist epistemology and abductive analytic approach.

Findings suggested that athletes evaluated coaches through two primary judgments: whether coaches understood them and whether coaches cared about them. Understanding included developmental understanding (e.g., recognizing athletes' goals, strengths, and learning needs) and personal-cultural understanding (e.g., engaging with athletes' identities and lived experiences). Care was recognized through visible acts of investment, advocacy, mentorship, support, and commitment beyond performance outcomes. These evaluations shaped trust, enabling coaches to exert influence and foster athlete commitment.

The findings support a Relational Process Model in which understanding and care shape trust, allowing coaches to earn relational access, influence, and commitment. The study extends coach–athlete relationship scholarship by identifying how athletes determine whether coaches are worthy of trust and influence before relationship quality, motivation, and maintenance mechanisms can operate, while highlighting the importance of cultural responsiveness in coaching Black university athletes.

Sport psychology

Session 1: COACHING

Friday, Oct 2 | 9:15 AM | Ballroom A/B

A global examination of the career and learning experiences of Special Olympics coaches

Madison Fraser¹, Danielle Alexander-Urquhart², Majidullah Shaikh¹, Fiona Murray³, Jeff Lahart³, Gordon Bloom⁴, Diane Culver⁵, Bettina Callary¹

¹ *Cape Breton University*

² *Université de Montréal*

³ *Special Olympics International*

⁴ *McGill University*

⁵ *University of Ottawa*

Special Olympics is the largest international sporting organization for athletes with intellectual disabilities, supporting 3.9 million athletes and almost four hundred thousand coaches. Given its global prominence, exploring how Special Olympics coaches develop their practice can give insight on how to support coaching effectiveness in this context (e.g., meeting individual athlete needs; navigating the Special Olympics environment; personal learning journeys). Partnering with Special Olympics International, the purpose of this study was to explore the career and learning experiences of Special Olympics coaches around the world. Thirty-eight coaches from 30 countries participated in virtual, semi-structured interviews that were audio recorded and transcribed verbatim. Through a thematic narrative analysis, findings focused on: (a) the nuanced learning required to effectively coach in the Special Olympics setting, including being open to adapting coaching strategies to meet athlete's diverse and individual needs; (b) coaching challenges (e.g., limited resources, societal stigma, lack of coaching feedback); and (c) recommendations (e.g., international knowledge sharing, communities of practice) specific to the Special Olympics context that would progress coach learning and development and contribute to higher quality coaching for athletes with intellectual disabilities around the world. With this in mind, we chose to present our findings through a creative non-fiction vignette of an international community of practice, highlighting the facilitators and barriers to coaching in an SO setting around the world.

Session 2: Oral Presentations

Friday Oct 2, 9:45 am – 11:00 am

Exercise psychology

SYMPOSIUM: The explanations for why you do certain things”: Theories, Stories, Steps, and Perspectives of Authentic Qualitative Research with Indigenous Peoples

Psychomotor learning

Decision-Making, Fatigue & Postural Control

Sport psychology

PROGRAM EVALUATION AND MULTI-STUDY APPRAISALS

SYMPOSIUM

Exercise psychology

The explanations for why you do certain things”: Theories, Stories, Steps, and Perspectives of Authentic Qualitative Research with Indigenous Peoples

Friday, Oct 2 | 9:45 AM | Ballroom A/B

The explanations for why you do certain things”: Theories, Stories, Steps, and Perspectives of Authentic Qualitative Research with Indigenous Peoples

Heather Foulds¹, Leah Ferguson¹, Shara Johnson², Shaunda Kracher¹, Kiley Grona¹

¹ *Métis Nation - Saskatchewan and University of Saskatchewan*

² *University of Saskatchewan*

Métis People, alongside other Indigenous Peoples approach and view the world through different lenses than people from Western, colonial-grounded backgrounds. Respectfully, authentically, and appropriately undertaking and interpreting qualitative research conducted in partnership with Métis communities requires recognition and incorporation of worldviews, approaches, experiences, and voices of community research partners. Moderated by Heather Foulds (Métis), Associate Professor and Canada Research Chair, this symposium will explore and share *theories, stories, steps, and perspectives* of conducting a symbol-based reflection qualitative research project partnering with Saskatoon Métis Local 126 to explore how Métis People describe and represent their cardiovascular health experiences. To begin, Leah Ferguson (Métis), Full Professor, will share *theories* of qualitative research, drawing from her knowledge and experience conducting qualitative research in partnership with Indigenous communities. Shara Johnson, a recent PhD graduate will then share the *story* of her experience partnering, developing, and conducting this research project. Shaunda Kracher (Métis), a research participant and community member will share key *steps* to conduct thematic analysis, specifically exploring similarities and differences identified across five researchers engaging thematic analysis through different modes (i.e., reading or listening to transcripts; coding in Excel, Word, PowerPoint, written). Kiley Grona (Métis), MSc student and community member will then share the importance of *perspectives*, exploring and sharing similarities and differences in themes identified between researchers and community members who are Métis, First Nations, and non-Indigenous. Engaging Indigenous communities and Peoples in research is integral to identifying and authentically understanding research outcomes, and necessary across all stages of the research lifecycle.

Exercise psychology

Symposium: The explanations for why you do certain things”: Theories, Stories, Steps, and Perspectives of Authentic Qualitative Research with Indigenous Peoples

Friday, Oct 2 | 9:45 AM | Ballroom A/B

“It’s just easier to show people than tell them”: Centring Indigenous Qualitative Research Methods

Leah Ferguson¹

¹ *Métis Nation - Saskatchewan and University of Saskatchewan*

Indigenous qualitative research approaches are often misunderstood within Western, colonial-grounded academic traditions that privilege researcher control, standardized procedures, linear designs, and efficiency-driven analytic processes. As a result, Indigenous research methods are frequently framed as methodological add-ons or treated primarily as matters of institutional ethical concern rather than as rigorous scientific systems grounded in distinct orientations to research. In this presentation we address this tension by explaining the foundations that shape Indigenous qualitative research and how they are enacted through community-identified processes and relational accountability. Drawing on Indigenous worldviews and distinctions-based research principles, Indigenous qualitative research methods are positioned as developing through relationships with Indigenous knowledge holders and community, rather than through fixed, linear, or standardized research protocols. Here, rigor is understood through reflexivity, responsiveness, and adaptation as research unfolds, reflecting an understanding of knowledge as relational and collectively held. Rather than adherence to disciplinary convention, rigor is reflected in alignment with Indigenous values, context, governance, and community priorities. In doing so, Indigenous qualitative research methods are made visible as enacted through knowledge holder-led processes, story-based approaches, and relational analytical practices. This framing supports understandings of Indigenous qualitative research methods as distinct, strengths-based, and essential for generating accountable research in Indigenous sport, physical activity, and health contexts.

Exercise psychology

Symposium: The explanations for why you do certain things”: Theories, Stories, Steps, and Perspectives of Authentic Qualitative Research with Indigenous Peoples

Friday, Oct 2 | 10:00 AM | Ballroom A/B

“Métis People always tell a story”: Engaging Métis Community in Health Research

Shara Johnson¹

¹ *University of Saskatchewan*

Métis People have unique histories, identities, cultures, and health experiences from other Indigenous and non-Indigenous groups. However, Métis health knowledge has frequently relied on pan-Indigenous or Western research approaches that obscure Métis-specific realities. Meaningful community engagement is essential to ensuring that research authentically reflects Métis perspectives and priorities. The purpose of this presentation is to describe an exemplar of how community was engaged across the lifecycle of a qualitative research project using symbol-based reflection to explore how Métis People describe and represent their cardiovascular health experiences. Grounded in Métis-specific frameworks, including the Métis infinity symbol that integrates Métis and Western research approaches, the research was guided by principles of respect, reciprocity, and authenticity to ensure study design, interpretation of findings, and knowledge mobilization activities reflected Métis perspectives and priorities. Key community-engagement steps included: (1) Relational partnership - formally partnering with Saskatoon Métis Local 126 and actively involving community across all phases of the research; (2) Capacity building and co-learning - integration of community members on the research team; (3) Centring community strengths and perspectives - using participatory research methods including storytelling and symbol reflections; (4) Researcher reflexivity - ongoing critical self-reflection of positionalities; (5) Research flexibility - being open and prioritizing community-defined changes; and (6) Community-first knowledge mobilization - co-developing community-appropriate strategies to share research findings. Together, these approaches fostered relational accountability and generated knowledge reflecting Métis ways of knowing, strengthening community capacity, and contributing culturally grounded understandings of Métis health and well-being.

Exercise psychology

Symposium: The explanations for why you do certain things”: Theories, Stories, Steps, and Perspectives of Authentic Qualitative Research with Indigenous Peoples

Friday, Oct 2 | 10:15 AM | Ballroom A/B

“I didn't feel pressured to just hurry up and get the words out”: Actualizing Steps in Thematic Analysis

Shaunda Kracher¹

¹ *Métis Nation - Saskatchewan and University of Saskatchewan*

Across qualitative research approaches, similar steps of thematic analysis are often engaged: data familiarization, code generation, collating codes into themes, and reviewing themes. Though conducting consistent steps, *how* these steps are actualized, and if different modes of conducting these steps changes outcome themes is less clear. The purpose of this study was to compare and contrast themes identified through different modes of the same thematic analysis *steps* from symbol-based reflection interviews among 18 Métis adults living in Saskatchewan (21-72 years; 15 women) describing and representing their cardiovascular health experiences. Five researchers conducted data familiarization and code/theme generation through one of: 1) reading transcripts, NVivo coding; 2) listening to transcripts, Excel coding; 3) listening to transcripts, PowerPoint coding; 4) reading then listening to transcripts, Word coding; or 5) reading transcripts, handwriting codes on paper. Resulting themes generated through these five modes of analysis steps were compared and contrasted. Modes engaging listening to transcripts identified themes around toxic impacts of gendered expectations, while these findings were included under themes of empowerment and social impacts on health among researchers who read transcripts. Modes copy/pasting sections of transcripts (NVivo, Word) identified themes of culture and well-being, while modes rewriting/typing transcripts (Excel, handwritten) incorporated these ideas within themes of environment, land, and food as expressions of culture. Foundational ideas were consistently identified across all modes of analysis steps, though how these ideas were consolidated into themes and which ideas centred each theme differed between modes of conducting thematic analysis.

Exercise psychology

Symposium: The explanations for why you do certain things”: Theories, Stories, Steps, and Perspectives of Authentic Qualitative Research with Indigenous Peoples

Friday, Oct 2 | 10:30 AM | Ballroom A/B

“We do feel like we are overlooked”: The Importance of Community Perspectives in Thematic Analysis

Kiley Grona¹

¹ *Métis Nation - Saskatchewan and University of Saskatchewan*

Identifying codes and creating themes from interview transcripts is interpretive. Interpreting meaning and importance of speech is inherently influenced by the language and worldviews of both the speaker and listener. Indigenous worldviews, science, education, and communication practices centre stories, resulting in layered meanings and teachings tying together culture, history, responsibility, and morality. Subsequently, the same story can provide different lessons and meanings for different listeners. Research interpretations of Indigenous stories or interviews by researchers not carrying the worldview and experience of participants and their Indigenous community are thus limited. The purpose of this study was to compare and contrast themes identified by Métis, First Nations, and non-Indigenous researchers interpreted from symbol-based reflection interviews of Métis People describing and representing their cardiovascular health experiences. Two Métis, one First Nations, and two non-Indigenous researchers independently conducted thematic analysis of the same interview transcripts, and themes generated were then compared and contrasted. Themes of moving or living between Métis and Western worlds were consistently identified across researchers. Conversely, non-Indigenous researchers identified themes around trauma, healing, and coping skills, not identified among Indigenous researchers. Indigenous researchers identified themes around community not identified by non-Indigenous researchers. Collectively, these findings highlight themes representing wholistic approaches to health consistent with Indigenous worldviews may be missed without community member involvement in thematic analysis. Additionally, enhanced focus and highlighting of deficits-based themes may be interpreted among non-Indigenous researchers. Including Indigenous community members in thematic analysis is paramount to authentically and accurately interpreting qualitative research partnering with Indigenous communities.

Psychomotor learning

Session 2: Decision-Making, Fatigue & Postural Control

Friday, Oct 2 | 9:45 AM | Chaudière

Reward-penalty asymmetries in MEG-based movement decisions

Sara Thompson¹, Heather Neyedli², Timothy Welsh¹

¹ *University of Toronto*

² *Dalhousie University*

To optimize movement outcomes, actors must integrate potential rewards and penalties when planning and executing movements. Previous work has shown that actors movement endpoints shift in response to payoff structure, determined in part by the potential value of rewards and penalties, suggesting that value information is incorporated into motor planning (Neyedli & LeBlanc, 2017). However, the relative influence of reward and penalty information on motor planning remains poorly understood. The present study examined how movement decisions change when reward, penalty, or both values vary across trials. Participants ($n=15$) completed 360 reaching trials in a motor decision-making task across three blocked conditions: (1) reward-varying/penalty-fixed; (2) penalty-varying/reward-fixed; and (3) both reward and penalty varying. Repeated measures analyses revealed a significant effect of condition on trial earnings, $p < .001$, as participants earned substantially fewer points in the penalty-varying condition ($M = 65$, $SD = 24.0$) than in the reward-varying ($M = 296$, $SD = 38.4$) and both conditions ($M = 287$, $SD = 43.2$). In contrast, condition did not significantly influence endpoint location in the primary axis, $p = .196$, or overall movement bias, $p = .086$. Although both measures were numerically larger in the penalty-varying condition, exploratory comparison analyses did not reach statistical significance ($ps \approx .06$). The divergence between earned outcomes and endpoint behaviour highlights the complexity of how value information is incorporated into action and provides a foundation for subsequent analyses examining whether reward and penalty magnitude exert distinct effects on motor decision-making.

Psychomotor learning

Session 2: Decision-Making, Fatigue & Postural Control

Friday, Oct 2 | 10:00 AM | Chaudière

Brain mechanical properties relate to deliberation expressed via online movement

Truc Ngo¹, Jan Calalo¹, Nicholas Muscara¹, Seth Sullivan¹, John Buggeln¹, Matthew Short¹, Nicholas Pyontek¹, Mary Kramer¹, Curtis Johnson¹, Joshua Cashaback¹

¹ *University of Delaware*

Prior work has shown an integrated network between decision and motor circuits. Complimentary behavioural work suggests that movement reflects ongoing deliberation—prior to a decision (Calalo, 2025). Neuroimaging studies have used magnetic resonance elastography (MRE) to characterize microstructural integrity, by quantifying brain mechanical properties (i.e., stiffness and damping). Microstructural integrity has been linked to cognitive function (Johnson, 2018), but not deliberation and its corresponding expression via movement. Here we tested whether brain microstructural integrity relates to movements that reflect ongoing deliberation.

We used a task that allowed us to probe the influence of deliberation on movement, prior to a decision. Participants continuously moved towards two potential targets. They observed tokens individually move into either target. Participants indicated the target expected to end up with the most tokens by simultaneously pushing a button and hitting the selected target. We manipulated token patterns to influence ongoing deliberation. We measured decision times and lateral hand position, prior to a decision, to test whether deliberation influenced movement. We found that the token patterns significantly influenced lateral hand position, prior to a decision ($p = 0.0443$, CLES = 71.00). That is, there was rightward or leftward lateral hand movement when participants deliberated towards the right or left target, respectively. Participants also underwent an MRE scan. We found a significant correlation between basal ganglia stiffness and lateral hand position ($p = 0.0435$, $r = 0.5699$).

Collectively, our findings suggest that microstructural integrity relates to the expression of deliberation via movement.

Psychomotor learning

Session 2: Decision-Making, Fatigue & Postural Control

Friday, Oct 2 | 10:15 AM | Chaudière

Tradeoffs between instrumental utility and social rewards shape preferences for costly cooperation

Mikayla Lalli¹, Nour Al Afif¹, Jiaqiao Tang¹, Michael M. Croteau¹, Rakshith Lokesh², Scott Rathwell³, Joshua G.A. Cashaback⁴, Michael J. Carter¹

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When deciding between action alternatives, humans seek to maximize rewards while minimizing costs. Past work found strong preferences for completing a virtual “box-clearing” task cooperatively rather than alone, despite incurring greater motor and cognitive demands. Participants completed the task on a shared tablet beside each other, which may have created social pressure to cooperate through a heightened sense of commitment or desire to manage one’s reputation. Here, we investigated the motivations underlying this suboptimal behaviour in Experiments 1-3 (N = 300) in which human pairs—each composed of a “Decision-maker” and “Helper”—completed a virtual “box-clearing” task while varying interpersonal distance and availability of partner visual feedback. In half of the trials, Decision-makers were forced to complete the task alone or cooperatively with their Helper. In the other half of trials, Decision-makers chose whether to complete the task alone or cooperatively. Cooperation required partners to synchronize their movements without communicating and, at times, without online visual feedback of each other’s movements. Decision-makers answered open-ended questions regarding why and when they chose to complete the task alone and cooperatively. Thematic analyses of their responses revealed that Decision-makers prioritized both instrumental utility and social value. In all three experiments, preferences for cooperation were highly individualized, ranging from 0%-100%, and did not differ from chance levels. In contrast, a non-social control experiment (N = 20) showed a significant preference for optimal, non-coordinated action. These findings suggest that cooperative actions may provide additional social rewards that drive preferences for cooperation despite increased costs.

Psychomotor learning

Session 2: Decision-Making, Fatigue & Postural Control

Friday, Oct 2 | 10:30 AM | Chaudière

The Effect of Auditory and Visual Cognitive Load and Visual Biofeedback on Postural Control

Haley Ong¹, Lucas Michaud², Yves Lajoie¹

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² *1. School of Rehabilitation Sciences, Ottawa 2. School of Human Kinetics, Ottawa 3. CISSSO, Gatineau*

Visual biofeedback (Vbf) enhances postural control by providing additional visual information that strengthens sensory-motor integration. In dual-task contexts, auditory cognitive load typically exerts a greater influence on postural control than visual cognitive load. However, it is unknown whether this strategy persists when Vbf is available. This study examined how Vbf influences postural control during dual-tasking with visual (Vis) and auditory (Aud) cognitive modalities in young adults.

Fifteen healthy young adults completed six conditions that manipulated Vbf availability and cognitive task modality in a feet-together stance. Center-of-pressure (COP) behaviour was quantified using area, standard deviation (SD-COP), sample entropy (SampEn), and wavelet-derived frequency composition.

A significant interaction emerged between Vbf and cognitive modality. Both dual-task modalities improved postural control in No-Vbf conditions ($p < 0.05$). Vbf consistently improved postural control, reflected by increased SampEn, frequencies, and lower sway magnitude relative to their no-Vbf counterparts ($p < 0.05$). These results indicate a more unconscious, rapid, and reflexive control system, known as an automatic postural control strategy. The Vbf + Aud dual-task exhibited a more rigid and less adaptable control strategy, with lower sway magnitude, SampEn and frequencies ($p < 0.05$) in comparison to the Vbf + Vis dual-task and Vbf single-task. The Vbf + Vis dual-task also showed reduced complexity (lower SampEn) relative to Vbf single-task ($p < 0.05$), indicating that sensory-specific processing influences postural control mechanisms.

Overall, this study clarifies how modality-specific cognitive load interacts with Vbf during postural control. Understanding this interaction will provide insight into the mechanisms that support or hinder biofeedback-based rehabilitation strategies.

Psychomotor learning

Session 2: Decision-Making, Fatigue & Postural Control

Friday, Oct 2 | 10:45 AM | Chaudière

Neuromuscular responses to ankle fatigue suggest compensatory postural control during challenging backward leaning

Lucas Michaud¹, Martin Bilodeau¹

¹ *University of Ottawa*

Muscle fatigue can compromise balance control and increase the risk of falling. However, the mechanisms underlying fatigue-related postural impairments have mainly been examined during natural standing, which may not fully reflect the demands of situations in which falls are more likely to occur. Backward-leaning tasks may provide a more representative context, as they place the body closer to the limits of stability and require active postural adjustments to prevent falling. The present study examined how fatigue of the medial gastrocnemius (MG) and tibialis anterior (TA), two key muscles involved in balance control, alters postural control during backward leaning, and whether these effects depend on visual information. Twenty healthy young adults stood as still as possible on a force platform while leaning backward at ~75% of their limit of stability, before and after ankle muscle fatigue induced using sustained isometric MG and TA contractions. Trials were performed with eyes open and eyes closed. Results suggested that ankle fatigue had limited effects on centre of pressure (COP) displacement during backward leaning ($p > 0.05$). However, fatigue increased TA activity ($p < 0.05$) and strengthened TA-COP coupling in the anteroposterior direction, indicating that TA activity was more closely linked to COP adjustments after fatigue ($p < 0.05$). TA-MG coherence also increased across multiple frequency bands ($p < 0.05$), suggesting stronger common neuromuscular drive after fatigue. These findings suggest that ankle fatigue induces compensatory changes in ankle neuromuscular control during backward leaning, with limited influence of visual availability or the fatigued muscle.

Sport psychology

Session 2: PROGRAM EVALUATION AND MULTI-STUDY APPRAISALS

Friday, Oct 2 | 9:45 AM | Capitale

Evaluating Mental Health Literacy and Resilience Programming in Elite Youth Hockey

Majidullah Shaikh¹, Ramond Phipps², Katie O'Connell²

¹ *Knowledge in Motion Consulting*

² *Movember Foundation*

Mental health literacy and resilience initiatives can reduce self-stigma, increase coping skills, and strengthen the capacities of parents, coaches, and other supporters to identify concerns and connect athletes with resources. Ongoing evaluation is essential to refine these programs and optimize impact. This presentation, co-presented by an evaluation specialist and a Movember implementation partner, describes a collaborative evaluation conducted on *Ahead of the Game*, a mental health resilience and literacy initiative in the Western Hockey League. Participants included male players, coaches, parents/guardians, and billet families. The resilience component was a seven-module e-learning program focused on mental health knowledge and coping strategies. The literacy component trained in-house facilitators to deliver workshops on symptom recognition and help-seeking. The Knowledge-to-Action Framework guided implementation mapping, while RE-AIM and Implementation Outcomes frameworks informed evaluation indicators, including reach, adherence, appropriateness, and effectiveness. During the 2025–2026 season, facilitators completed surveys, logbooks, and interviews; participants completed pre-post surveys. The data were analyzed using descriptive statistics, comparative tests, and reflexive thematic analyses. The resilience component reached 2,271 participants (85% of WHL), was rated highly appropriate by players (87–94%), and improved self-regulation, positive thinking, and supporting others. The literacy component trained 17 facilitators who delivered 32 workshops to 602 participants. Reach was high for players and coaches but low for parents/guardians and billets. Workshops reduced stigma and increased help-seeking confidence, but effects on definitional knowledge were mixed. Findings informed strategies for fostering facilitators' continued learning, engaging parents/guardians and billets, tailoring content, and sustaining and scaling programming.

Acknowledgements

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Advancing Athlete Maltreatment Research in Sport: Insights from a Multi-Study Program

Michael Jorgensen¹, Sasha Gollish¹, Isabella Tremonte¹, David Brown¹, Roxy O'Rourke¹, Delaney Thibodeau¹, Avery Hinchcliffe¹, Amy Nesbitt¹, Tara-Leigh McHugh², Catherine Sabiston¹

¹ *University of Toronto*

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Despite continued recognition that athlete maltreatment is a critical issue in sport, inconsistencies in how maltreatment is defined, conceptualised, measured, and studied limit ongoing research, policy implementation, and effective safeguarding practices. At the same time, minimal attention has been given to the experiences of equity-owed athletes and the well-being of researchers conducting sensitive sport research.

This research program sought to: (1) examine how athlete maltreatment has been conceptualised and measured within the sport literature; (2) explore gaps and priorities related to equity-owed athlete populations; (3) identify future directions through key knowledge holder engagement; and (4) critically examine researcher experiences conducting maltreatment research.

A multi-study program was conducted. First, a scoping review synthesised athlete maltreatment research and examined conceptual, methodological, and measurement trends. A secondary analysis focused on the inclusion of equity-owed athlete populations. Second, semi-structured interviews were conducted with 15 knowledge holders, including athletes, researchers, policymakers, and sport leaders. Third, a collaborative autophenomenological study employed reflexive journaling and group dialogue among researchers engaged in athlete maltreatment scholarship.

Findings revealed substantial conceptual and methodological fragmentation. Key forms of harm were missing from the disability-specific maltreatment literature (e.g., classification coercion). Knowledge holders identified priorities related to inclusive research, safeguarding, and policy development. Researchers described significant emotional and relational challenges associated with conducting maltreatment research, alongside limited formal supports and safeguards.

Collectively, these findings highlight the need for greater conceptual clarity, inclusive and intersectional research practices, improved, consistent measurement approaches, and proactive systems to safeguard both athletes and researchers involved in maltreatment research.

Evaluating the Acceptability and Feasibility of the More Than Sport – Youth (MTS-Y) Program in Youth Soccer Academy Athletes

Cassidy L. Brooks¹, Meredith Schertzinger¹, Colin D. McLaren², Katrien Fransen³, Brenda Bruner¹, Mark W. Bruner¹

¹ Nipissing University

² Cape Breton University

³ KU Leuven

Participation in organized sport can foster belonging, motivation, and well-being among youth (Swann et al., 2018). However, an exclusive athletic identity may increase vulnerability to identity-related challenges and mental health difficulties during unanticipated sport transitions (e.g., injury, deselection; Gorman & Blackwood, 2025). This study evaluated the acceptability and feasibility of *More Than Sport – Youth* (MTS-Y), a proactive program designed to support identity development and transition readiness among youth athletes. A three-module, group-based intervention was delivered to 146 youth soccer academy athletes (114 males, 32 females; $M_{age} = 15.03$ years) across eight teams. Seven focus group interviews were conducted with 42 athletes (36 males, 6 females) to explore program experiences, acceptability, feasibility, and recommendations. Data were analyzed using reflexive thematic analysis (Braun & Clarke, 2022). Findings suggest MTS-Y was acceptable and feasible. Six themes were identified: *Beyond Sitting and Listening*, highlighting the value of interactive, activity-based learning; *The Power of Relatability*, importance of relatable content and facilitators; *From Fear to Optimism*, reduced fear and a more positive outlook on life after sport; *Shared Passion, Shared Understanding*, importance of peer connection, openness, and support; *Preparing for What Comes Next*, demonstrating increased preparedness for future sport transitions; and *Expanding Your Circle*, increased awareness of identities, interests, and group memberships beyond sport. Participants described the program as engaging and relevant to the academy environment, and beneficial for current and future athletic experiences, supporting its acceptability. Athletes also highlighted the practicality of the activities, discussion-based format, and implementation within academy settings, supporting its feasibility.

Sport psychology

Session 2: PROGRAM EVALUATION AND MULTI-STUDY APPRAISALS

Friday, Oct 2 | 10:30 AM | Capitale

From Strategy to Practice: Evaluating the First Year of Implementation of a National Sport Organization's Mental Health Strategy

Mikaela Papich¹, Natalie Durand-Bush¹, Marie-Josée Bellemare², Janet Petras², Robert B. Shaw³

¹ *University of Ottawa*

² *Tennis Canada*

³ *Peer Program, Spinal Cord Injury British Columbia*

This study is part of a three-phase project involving the collaborative design, implementation, and evaluation of a National Sport Organization's mental health strategy. The Evaluation Phase consisted of examining the first year of implementation of Tennis Canada's strategy and assessing its perceived value. Guided by a Participatory Action Research approach, Tennis Canada leaders formed a Core Leadership Team (CLT; n = 8) and a Task Force (TF; n = 13), contributing data between March and June 2025 through four group discussions (three with CLT and one with TF), six individual semi-structured interviews with CLT members, and an Implementation Progress Chart. A directed content analysis of the data revealed that 66 out of 71 actions (93.0%) in Tennis Canada's strategy were completed. Out of the five priorities in the strategy, completion was highest for strategy implementation, monitoring, and improvement (Priority 5), followed by mental health promotion (Priority 2), prevention (Priority 3), leadership (Priority 1), and diagnosis, treatment and recovery (Priority 4). The strategy's intrinsic value was perceived as a cultural shift within the organization characterized by greater mental health awareness, reduced stigma, and more routine integration of support for athletes, parents, and staff. The extrinsic value extended beyond the organization, shaping mental health practices and dialogue among international players, tournaments, and other sport organizations. A context-specific logic model was developed, synthesizing the inputs, activities, contextual influences, and outcomes of the strategy. Findings offer guidance for sport psychology practitioners and sport organizations seeking to collaboratively implement and evaluate system-level mental health initiatives.

Sport psychology

Session 2: PROGRAM EVALUATION AND MULTI-STUDY APPRAISALS

Friday, Oct 2 | 10:45 AM | Capitale

Advancing Research in Sport Psychology Through Family Partnership – A Process Evaluation.

Alessia Capone¹, Alexandra Walters², Heather Gainforth³, Kelly Arbour-Nicitopoulos¹

¹ *University of Toronto*

² *University of Alberta*

³ *University of British Columbia*

Our Family Engagement in Research (FER) partnership brings together caregivers, researchers, and organizational partners to integrate diverse perspectives and lived experiences for enhancing the relevancy and scalability of sport research involving children and youth with disabilities (CYD). This study examines the partnership mechanisms used to facilitate collaboration among FER members. A process evaluation was conducted that involved reviewing team documents (e.g., meeting minutes, field notes, communication logs, shared files) from Fall 2023 to Spring 2026 for evidence of partnership mechanisms. Mechanisms were organized into the six categories of the RECIPE framework: Resources and time; Engagement strategies in the research process; Communication methods and activities; Initiatives for collaborative meetings, Conferences, and events; Partnership initiation and representation; and Education and training. Mechanisms were deductively coded using the eight Integrated Knowledge Translation Guiding Principles for Partnership in Research. Eight partnership mechanisms were identified: Resources = 1; Engagement = 2; Communication = 1; Initiatives = 2; Partnership = 1; Education = 1. One mechanism aligned with Principle 2 (decision-making), two with Principle 3 (open, honest, and responsive communication), three with Principle 6 (meaningful benefits for all partners), and two with Principle 8 (respecting practical and financial considerations). Challenges with mechanism implementation included: conflicting schedules, limited funding, balancing timely decision-making with group input, and ensuring representation of diverse identities and perspectives. These findings may help inform meaningful engagement practices between sport psychology researchers and families that can ensure more culturally responsive and sustainable research processes and outputs.

Session 3: Oral Presentations

Friday Oct 2, 3:00 pm – 4:30 pm

Exercise psychology

BODY, SELF AND PHYSICAL ACTIVITY

Psychomotor learning

Reaching, Aiming & Sensorimotor Feedback

Sport psychology

GROUPS AND LEADERSHIP

Exercise psychology

Session 3: BODY, SELF AND PHYSICAL ACTIVITY

Friday, Oct 2 | 3:00 PM | Capitale

Embodying self-compassion: An evaluation of an intervention with kinesiology students

Danielle Cormier¹, Paula M. Mazur¹, Jimena E. Lopez Lamas¹, Emily Noton¹, Sara Sereda¹, Amber D. Mosewich¹

¹ University of Alberta

Self-compassion (i.e., responding to personal suffering with self-kindness, mindfulness, and common humanity) is associated with adaptive responses to challenge and suffering. While most self-compassion interventions rely on cognitive approaches such as reflection and journaling, emerging evidence suggests embodied experiences may provide an alternative pathway to skill development. Using a mixed-methods, quasi-experimental design, this study evaluated an embodied self-compassion intervention integrated into an undergraduate kinesiology course. Students participated in either an embodied self-compassion intervention ($n = 15$) or a standard curriculum control condition ($n = 24$) over four weeks. The intervention consisted of psychoeducation and three movement-based experiential learning sessions. Participants completed Neff's Self-Compassion Scale at baseline, post-intervention, and a four-week follow-up. Using repeated-measures ANOVA, a significant main effect of time was observed, indicating increases in self-compassion across participants. Although the Group $\times$ Time interaction did not reach statistical significance ($F[1.52, 56.13] = 3.28, p = 0.058, \eta^2 = .081$), follow-up analyses revealed no significant changes in the control group, whereas the intervention group experienced significant increases in self-compassion from baseline to both post-intervention ($M_{diff} = -0.42, 95\% \text{ CI } [-0.69 - -0.17], p = .001$) and follow-up ($M_{diff} = -0.35, 95\% \text{ CI } [-0.62 - -0.07], p = .009$). No significant differences were observed between post-intervention and follow-up, suggesting that these gains were stable. These findings provide preliminary evidence that self-compassion can be cultivated through movement-based experiential learning and highlight the potential of embodied pedagogical approaches for promoting self-compassion in physical activity settings.

Acknowledgements

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Exercise psychology

Session 3: BODY, SELF AND PHYSICAL ACTIVITY

Friday, Oct 2 | 3:15 PM | Capitale

Appearance and fitness-related self-consciousness during physical activity: A daily diary study of within-person coupling

Zach Staffell¹, Katarina Huellemann¹, Eva Pila¹

¹ Western University

Background: Feelings of self-consciousness during physical activity can entail negative evaluations about how the body looks and functions. While fitness-based self-consciousness have each been linked to physical activity, above and beyond appearance-based self-consciousness, little is known about how these experiences co-occur in daily life. Appearance self-consciousness may become coupled with fitness self-consciousness during physical activity through processes of self-monitoring and body evaluation. Individual characteristics such as self-objectification and interoceptive awareness may influence the strength of this association. **Purpose:** This study examined whether (i) higher-than-usual appearance-based self-consciousness during physical activity was coupled with fitness-based self-consciousness and (ii) trait self-objectification and interoceptive awareness moderated this association. **Method:** Using a 14-day daily diary design, 163 women ($M_{\text{age}} = 33.19$, $SD = 12.14$) completed measures of self-objectification and interoceptive awareness at baseline and reported appearance- and fitness-based self-consciousness during physical activity each day. **Results:** Random slopes mixed models revealed a significant within-person association such that, on days when participants reported higher-than-usual appearance-based self-consciousness, they also reported greater fitness-based self-consciousness ($b = 0.36$, $p < .001$). At the trait level, higher interoceptive awareness, but not self-objectification, was associated with lower fitness-based self-consciousness ($b = -0.56$, $p = .038$). Neither self-objectification nor interoceptive awareness moderated the within-person association ($ps > .682$). However, significant random slope variance indicated that the strength of the association varied across individuals. **Discussion:** Appearance- and fitness-based self-consciousness during physical activity are closely coupled within days, although other individual and contextual factors may help explain variability in this association.

Exercise psychology

Session 3: BODY, SELF AND PHYSICAL ACTIVITY

Friday, Oct 2 | 3:30 PM | Capitale

Beyond mean levels: Exploring within-person variability in physical self-conscious emotions and physical activity in daily life

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Physical self-conscious emotions, including appearance and ability shame, guilt, envy, and embarrassment, are theorized to shape physical activity participation, and ecological momentary assessment (EMA) research has begun to capture these emotions and movement unfold in daily life. To date, however, this research has largely focused on mean levels of emotion, leaving within-person variability unexamined. The purpose of this study was to examine the associations between within-person variability in appearance- and ability-related self-conscious emotions and purposeful physical activity. Older adolescent girls and young women ($N = 148$; $M_{\text{age}} = 20.47$ years, $SD = 2.04$) completed EMA (7 prompts x 7 days), rating momentary physical self-conscious emotions and reporting purposeful physical activity (yes/no) at each prompt. Using a two-stage mixed-effects location-scale approach (MixWILD), the between-subject mean (random intercept) and within-subject variability (random scale) of each emotion were used to estimate the association with each participant's proportion of physical activity occasions. All emotions showed reliable between-person differences in within-person variability ($p < .001$). Within-person variability in appearance shame was uniquely associated with less purposeful physical activity ($\beta = -0.04$, $p = .001$), independent of mean shame ($\beta = 0.01$, $p = .189$). All other appearance and ability emotions were unrelated to physical activity ($p > .22$), as were all mean levels. These findings suggest that how much appearance shame fluctuates may be relevant to physical activity, extending EMA approaches beyond mean levels toward the dynamics of physical self-conscious emotions.

Acknowledgements

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Exercise psychology**Session 3: BODY, SELF AND PHYSICAL ACTIVITY**

Friday, Oct 2 | 3:45 PM | Capitale

Tests of Objectification Theory Constructs Within Inactive Women's Exercise ExperiencesSamantha J. Adler¹, Ruby Kagan¹, MacLean Press¹, Eva Pila¹¹ *Western University*

Women report less and worse exercise experiences than men, which scholars attribute to disproportionate experiences of sexual objectification. Proximal outcomes of objectification like shame and disrupted flow in highly social and evaluative physical activity contexts may lead to distal outcomes like maladaptive exercise or discontinuation. However, there are limited empirical examinations of relationships between objectification-related threats and strong predictors of exercise (re-)engagement. Our purpose was to examine objectification-related factors that associate with inactive women's exercise experiences after an acute lab-based treadmill task. Participants ($N=102$, $M_{\text{age}}=20.2\pm 2.1$ years) engaged in a 20-minute treadmill exercise task, led by an instructor. Following exercise, participants completed a survey examining their psychological states (i.e., self-objectification, body shame, social physique anxiety, flow, interoceptive awareness, self-descriptions) and exercise engagement (i.e., intent to re-engage, exercise enjoyment, intrinsic exercise motivation). Linear regressions revealed that intent to re-engage was significantly associated with flow state (95%CI[12.70,28.98]) and state social physique anxiety (95%CI[0.36,12.89]). Enjoyment was significantly associated only with flow state (95%CI[-1.68,-0.71]). Intrinsic motivation was significantly associated with body shame (95%CI[-1.01,-0.06]), flow state (95%CI[0.67,1.58]), interoceptive awareness (95%CI[0.04,0.77]), and state social physique anxiety (95%CI[0.06,0.76]). The three models explained 23.5-37.4% of the variance in each of the respective exercise engagement variables ($ps<.001$). These findings offer insights into which state-based, objectification-related, psychological factors may influence key determinants of sustained, adaptive exercise behaviors. Findings may help tailor intervention for inactive women, like implementing instructor cues that cultivate flow.

Exercise psychology

Session 3: BODY, SELF AND PHYSICAL ACTIVITY

Friday, Oct 2 | 4:00 PM | Capitale

Do perceptions of identity matter for physical activity? Evidence from samples of undergraduate students in Canada and South Korea

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Background: Physical activity (PA) research often relies on self-identified demographic measures, which may limit understanding of perception-based marginalization processes in real-world settings. Using socially ascribed identities, this study examined how gender (non-)conformity and socioeconomic status (SES) interact and shape PA participation among undergraduate students in Canada and Korea.

Methods: Cross-sectional, self-reported data were collected using convenience sampling with the Socially Ascribed intersectional identities For Equity (SAFE) questionnaire and the Global Physical Activity Questionnaire (Canada: $n=1,094$; $Mean=19.0$ years, Korea: $n=684$; $Mean=21.1$ years). Intersectional identity included socially ascribed gender (non-)conformity and SES. Outcomes included levels of total PA and three PA domains: occupational PA, recreational PA, and active transportation. Covariates included age and socially ascribed identities: sexual orientation, race, and disability. Latent class analysis, generalized linear model, and predictive margins were conducted.

Results: Statistically significant gender (non-)conformity x SES interactions were observed for recreational PA in Canada ($Wald\chi^2=9.16, p=.027$) and for active transportation in Korea ($Wald\chi^2=6.05, p=.048$). In Canada, gender non-conforming individuals perceived as low-SES reported the lowest levels of recreational PA. In Korea, active transportation levels were largely similar across groups, while gender conforming individuals who selected "Prefer not to answer" for SES items showed the highest levels.

Conclusion: Intersectional disparities were more pronounced in socially visible, discretionary settings and less evident in structurally constrained settings. These findings suggest that visible aspects of identity may influence whether individuals feel welcomed or judged in PA settings, thereby potentially shaping participation across sociocultural contexts and PA domains differently.

Psychomotor learning

Session 3: Reaching, Aiming & Sensorimotor Feedback

Friday, Oct 2 | 3:00 PM | Chaudière

Pre-movement beta activity reflects feedback gain modulation during reaching under uncertainty

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When reaching in uncertain environments, such as handling a cup of coffee during a turbulent flight, the motor system must adjust control strategies to ensure success. One proposed mechanism is the upregulation of feedback gains to counter unexpected perturbations. Consistent with this, humans exhibit increased peak forward velocities and enhanced corrective responses to disturbances in uncertain environments, reflecting heightened feedback responsiveness. However, it remains unclear whether such adjustments are reflected in neural activity prior to movement. Here, we investigated how environmental uncertainty influences feedback gains and pre-movement neural dynamics.

Thirty healthy participants performed a planar reaching task while electroencephalography (EEG) and electromyography (EMG) were recorded. Participants completed a baseline block, in which most trials were unperturbed, and an exposure block in which unpredictable, time-varying loads were applied during movement. In both blocks, occasional mechanical perturbations were applied to probe corrective responses. We quantified long-latency responses (LLRs) as an index of feedback gain and examined pre-movement beta-band event-related desynchronization (ERD). We hypothesized that uncertainty would increase both LLRs and beta ERD.

Consistent with this, LLRs were larger in the exposure block ($p < 0.001$), accompanied by increased beta ERD over fronto-parietal regions prior to movement ($p < 0.01$). Critically, across participants, changes in beta power were negatively correlated with changes in LLR magnitude ($r = -0.41$, $p = 0.024$).

Together, these results demonstrate a tight coupling between pre-movement beta activity and feedback gain modulation and support the notion that the motor system configures control policies before movement onset.

Psychomotor learning

Session 3: Reaching, Aiming & Sensorimotor Feedback

Friday, Oct 2 | 3:15 PM | Chaudière

Precision Isn't Always Optimization: Dissociating the Roles of Visual and Reward Feedback in Optimal Aiming

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This study examined whether reward or visual endpoint feedback is required to guide strategic aiming toward an optimal endpoint in a risky reaching task. Participants completed two experimental conditions (2×200 trials) that manipulated feedback type (Visual Only vs. Reward Only), with order counterbalanced. In the Visual Only condition, participants received full visual feedback of their hand and movement throughout the reach but were not shown the point outcome of each trial. In the Reward Only condition, vision was blocked during the movement, but participants were shown the point outcome after each reach. Optimal aim points were computed using a model based on each participant's endpoint variability. Measures included mean horizontal endpoint, deviation from the model optimum, endpoint variability, reaction time, and movement time. Reward feedback led to aiming closer to the model optimum, whereas visual feedback resulted in movement endpoints that deviated further from the predicted optimum, but with reduced endpoint variability. Reward feedback was also associated with faster movement times. These findings suggest that reward signals promote value-directed aiming, whereas visual feedback enhances precision without reliably shifting aim toward the expected-value optimum, highlighting the distinct contributions of each feedback modality to motor decision-making.

Psychomotor learning

Session 3: Reaching, Aiming & Sensorimotor Feedback

Friday, Oct 2 | 3:30 PM | Chaudière

The presence of visual context exerts differential effects on movements to visual and somatosensory targets

Tejiri Inikori¹, Jonathan Pitino¹, Sadiya Abdulrabba¹, Gerome Manson¹

¹ *Queen's University*

Background: When reaching for an object on a crowded table, visual information about the positions of other objects provides important context to help avoid bumps and spills. Although visual context has been shown to increase accuracy for movements to visual targets, it is unclear if this information is important when making movements to non-visual targets, such as positions on the body. When making movements to body positions, also known as somatosensory targets, vision is hypothesized to play a smaller role than non-visual sources of sensory information (e.g., touch or proprioception).

Purpose: The goal of this study was to examine the influence of visual context on movements to body positions.

Methods: Twenty-one participants reached to visual and somatosensory targets in the presence and absence of contextual cues or in a dark environment while maintaining eye fixation on a central location. Reaction time and error in movement direction and amplitude were compared across context and target conditions.

Results: Movements to visual targets were overall more accurate than movements to somatosensory targets. Reaction times were longer for visual targets when contextual cues were present, and shorter for somatosensory targets in the presence of visual context compared to the dark environment.

Discussion: These findings suggest that visual information is processed more when planning movements to visual targets than somatosensory targets, highlighting differences in how the brain processes contextual information for movements to external space versus the body.

Psychomotor learning

Session 3: Reaching, Aiming & Sensorimotor Feedback

Friday, Oct 2 | 3:45 PM | Chaudière

Go Before You Fitts('s Law): Investigating the Influence of Target Size and Movement Amplitude on Reaching Under Uncertainty

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Motor planning under uncertainty has been examined using "go-before-you-know" paradigms, in which individuals initiate a movement before the final target is specified (Chapman et al., 2010). In these tasks, individuals move toward an intermediate location between targets before the final target location is revealed. However, when presented with targets that have differing indexes of difficulty (IDs) based on Fitts's Law, it is unclear whether participants will plan for the movement with the harder or easier ID and whether target size and movement amplitude exert independent influences on behaviour. The present study examines how target size, amplitude, and ID affect motor planning during uncertain reaching tasks. Participants initiated a movement to two potential targets with target location revealed only following movement onset. Two different circular target sizes (diameters = 3.5 cm and 5.08 cm) and target amplitudes (28.5 cm and 41.5 cm) were used to create target pairs that could have the same or different sizes, the same or different amplitudes, or have both parameters vary. Movement trajectories and jerk scores (i.e., the derivative of acceleration) were examined. When the targets had differing movement amplitudes, participants planned an intermediate movement where they overshoot the close target location. Size appeared to have less of an effect on movement trajectories. Jerk score in the primary axis was higher when both the target and distractor were far from the home position. Overall, it appears that participants prepare for the worst-case scenario when targets differ in movement amplitude but not size.

Psychomotor learning

Session 3: Reaching, Aiming & Sensorimotor Feedback

Friday, Oct 2 | 4:00 PM | Chaudière

Attention does not follow the moving hand in older adults: evidence from actual and imagined reaching

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There is considerable evidence that manual reaching is action-centred in young adults. Distractors located within a movement path produce greater interference than distractors positioned beyond a target. However, there is evidence against this action framing in older adults (Bloesch et al., 2013); instead, suggesting a shift toward body-centred coding, consistent with distal-to-proximal models of sensory aging. To replicate and test whether these age effects are due to the actual act of moving, we compared younger (18–30yr) and older (60–80yr) adults physically reaching to a target and imagining those reaches (by recording imagined and actual response times). Participants (N=44) reached (or imagined reaching) a visual target on a 3x3 grid, while ignoring distractors between the body and the target (body-centred) and/or between the hand and the target (hand-centred). We dissociated the hand and body (and hence reference frames) by requiring participants to start with either their hand in front of their body or beyond the grid. Consistent with predictions, younger adults exhibited patterns associated with a hand-centred reference. Distractors between the hand and target resulted in significantly longer response times in execution ($d=.20$) and imagery ($d=.11$). In contrast, for older adults, physical reaching showed that distractors closest to the body, regardless of hand position, had greater interference ($d=.22$). For imagined reaching, older adults performed similarly to young adults (slowing from distractors closest to the hand, $d=.34$). We conclude that age-related online motor execution and offline motor simulation differentially shape spatial reference frames.

Acknowledgements

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Psychomotor learning

Session 3: Reaching, Aiming & Sensorimotor Feedback

Friday, Oct 2 | 4:15 PM | Chaudière

Metacognitive evaluations modulate trial-to-trial error correction

Gabriela Oancea¹, Luc Tremblay¹

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Motor behaviour operates within a feedback loop: we generate an action, evaluate its outcome, and use that information to guide subsequent movements. One form of evaluation is our confidence in our movement outcomes (i.e., metacognition), yet it remains unknown whether confidence serves a functional role in shaping behavior. We examined whether confidence influences how errors are incorporated into subsequent movements.

Participants ($n = 22$) made goal-directed movements toward a target. After each trial, they judged their fingertip endpoint bias (over- or undershoot, relative to the target) and rated their confidence in their judgement. All trials for all participants were categorised based on the alignment between 2 judgement outcomes (correct/incorrect) and 2 confidence levels (low/high). We used two linear mixed-effects models to test whether 1. participants adjusted their movements on trial $n+1$ in response to errors on trial n and 2. whether this relationship was modulated by metacognitive category.

First, participants adjusted their movements on trial $n+1$ in response to errors on trial n ($\beta = -0.31$, $SE = 0.05$, $p < .001$). Second, this relationship was strongest when confidence and performance were aligned (correct-high confidence trials, $\beta = -0.45$) and weakest when confidence and performance were misaligned (incorrect-high confidence trials, $\beta = -0.12$). Thus, adaptive behaviour is driven by how errors are subjectively evaluated, pointing to a role for metacognition in sensorimotor control beyond a passive readout of performance.

Sport psychology

Session 3: GROUPS AND LEADERSHIP

Friday, Oct 2 | 3:00 PM | Ballroom A/B

At the edge of choice” What we can learn from experts about the antecedents, phenomenology, and consequences of group decision-making in mountaineering

Anna Elisabeth Bergauer¹, Svenja Wolf², Andrea Schittenhelm¹, V. Vanessa Wergin³

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Mountaineering, is a group activity occurring under high environmental uncertainty with potentially fatal outcomes. Thus, to navigate safely, groups continuously have to engage in group decision-making. However, laboratory research indicates that groups do not always make better decisions than individuals, mainly due to groupthink and group polarization impairing judgement and decision-making (Janis, 1972; Myers & Lamm, 1976). By nature, group decision-making in mountaineering is more complex and consequential than laboratory settings, yet remains understudied. Experts can provide valuable insights on the phenomenology, consequences and antecedents of group decision-making in mountaineering. Hence, we conducted eight semi-structured interviews with six mountaineering and two sport psychological experts about decision-making during expeditions. We approached group decision-making as a contextually nested group process (IGLOO; Eys et al., 2020; Nielsen et al., 2018) using thematic analysis (small q; Braun & Clarke, 2023). We identified that group decision phenomenology is (a) asymmetric, (b) constant, and (c) accumulative over time. Good decisions are defined retrospectively and as the absence of adverse consequences (e.g., death, frostbite, hunger). Decision antecedents are nested within several IGLOO-levels including knowledge (individuum), trust (group), role modeling (leadership), setting boundaries (organization), and social media (overarching context). Together, these findings show that experts can articulate the antecedents, phenomenology, and consequences of good and bad decision-making and further highlight the need to make this knowledge accessible to the wider mountaineering community and to make mountaineering a safer sport.

Sport psychology

Session 3: GROUPS AND LEADERSHIP

Friday, Oct 2 | 3:15 PM | Ballroom A/B

Towards a sport-specific understanding of negative athlete leadership: Findings from Round 1 of a Delphi Study

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Leadership research in sport has traditionally emphasized positive leadership behaviours that enhance team functioning and performance. However, emerging evidence suggests leadership in sport may also be harmful or counterproductive. Recent sport-specific research has linked destructive leadership to impaired athlete mental health, reduced performance, and dysfunctional team dynamics. Drawing on Einarsen et al.'s (2007) model of destructive leadership, this study explored how negative athlete leadership is conceptualized and manifested within sport. A panel of 28 experts, including U SPORTS athletes ($n = 11$), U SPORTS coaches ($n = 7$), and sport psychology researchers ($n = 10$), participated in the first round of a Delphi study. Participants responded to open-ended questions regarding negative athlete leadership behaviours. Responses were analyzed using directed content analysis guided by Einarsen et al.'s (2007) framework. The results supported the relevance of Einarsen et al.'s model, while identifying several sport-specific behavioural indicators. Tyrannical leadership was characterized by behaviours such as public criticism, coercive accountability, and pressure to prioritize performance over teammate well-being. Supportive-disloyal leadership reflected excessive leniency, preferential treatment, and the protection of teammates from accountability. Derailed leadership involved selfishness, favouritism, exclusionary behaviours, and emotional outbursts that undermined both athlete and team functioning. Communication, accountability, interpersonal relationships, and team standards emerged as recurring mechanisms through which negative athlete leadership was expressed. These findings represent an important first step toward developing a sport-specific conceptual framework of destructive athlete leadership and provide a foundation for future research examining its measurement and consequences in sport.

Sport psychology

Session 3: GROUPS AND LEADERSHIP

Friday, Oct 2 | 3:30 PM | Ballroom A/B

A Narrative Inquiry of Colombian Adult Swimmers' Collective Sense of Community

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Sense of Community (SOC; McMillan & Chavis, 1986; Warner et al., 2012) is associated with long-term engagement and wellbeing in Western Masters (adult) sport (Belalcazar et al., 2026). Scant Masters sport research has examined SOC in collectivist contexts where social life is oriented toward relational interdependence. This is particularly salient in Colombia, where community functions as a fundamental organizing principle that shapes how Masters sport is organized through community-led clubs and peer-led relational practices (Belalcazar & Callary, 2021). The purpose of this narrative inquiry was to explore how coached Colombian adult athletes (40-68 years) in two Masters swim clubs described a collective SOC. Data were collected over 14 weeks, and included 30 sport environment observations, three focus groups with ten swimmers, and semi-structured interviews with seven additional swimmers. Narrative analysis involved iterative reading and coding of transcripts, reflections, and observations to identify shared interpretations and storylines of community. Resultant narratives were synthesized into four overarching collective accounts that described their SOC: (a) *Swimming in Our Later Time of Life*; (b) *Keeping Each Other Going*; (c) *Swimming Side by Side as Family*; and (d) *Carried Beyond the Swimming Pool*. Across narratives, swimmers described experiencing SOC through lived reciprocal interdependence, where everyday relational practices of care and recognition sustained individual swimmers' sense of mattering and belonging. This research extends Masters sport literature by foregrounding the collective experience of community, emphasizing how sport communities function as sites of psychological support and wellbeing, offering insight into the social importance of adult sport participation.

Acknowledgements

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Sport psychology

Session 3: GROUPS AND LEADERSHIP

Friday, Oct 2 | 3:45 PM | Ballroom A/B

The Prospective Relationships Between Teamwork and Athlete Thriving

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Background: A growing body of research has focused on how athlete *thriving* (i.e., joint experience of wellbeing and perceived performance) can be cultivated. Although theory and qualitative research hints at the importance of effective *teamwork* behaviours to enable thriving, a quantitative (multi-timepoint) examination of this relationship has not been conducted.

Purpose: The purpose of this study was to examine the extent to which teamwork prospectively predicts athlete thriving.

Method: The sample comprised 228 athletes from 24 interdependent sports teams. Participants completed questionnaires of thriving and teamwork at two timepoints, approximately one month apart. Regressions were conducted to examine the teamwork-thriving relationship, with time 2 thriving modelled as the dependent variable (with 'team' specified as a covariate to account for the non-independence of data). Time 1 teamwork was specified as the predictor in the first model. To assess the relationship in further detail, five additional models were run with each of the five components of teamwork (preparation, execution, evaluation, adjustments, and management of team maintenance) specified as the predictor variable.

Results: All six models yielded significant results, demonstrating that teamwork, and each of its aspects, were significant predictors of athlete thriving (R^2 s = .03 to .10; β s = .16 to .31; $ps < .05$).

Discussion: Our findings highlight the importance of fostering effective teamwork insofar as it benefits members' subsequent performance and wellbeing. Future research could explore the potential dynamicity of this association (e.g., using intensive longitudinal modelling) and potential multilevel relationships (e.g., *collective* thriving in addition to individual thriving).

Acknowledgements

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Sport psychology

Session 3: GROUPS AND LEADERSHIP

Friday, Oct 2 | 4:00 PM | Ballroom A/B

United in joy and misery?! The experience of collective emotions predicts members' team identification and commitment

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³ *Florida State University*

Sometimes shunned in competitive contexts, teams' social integration (i.e., member identification, commitment; team entitativity, social cohesion) contributes to success, enjoyment, and adherence (Knight & Eisenkraft, 2015). To enhance social integration, coaches and consultants often implement complex and time intensive interventions (Martin et al., 2009). A potentially more efficient agent could be the experience of collective emotions (i.e., members responding to the same event with similar emotions; von Scheve & Ismer, 2013) because emotions are comparatively fast and easy to induce (Niedenthal & Ric, 2017) and seem to be positively related (Tamminen et al., 2016). To investigate the links between collective emotions and social integration more thoroughly, we recruited 200 competitive adult athletes (24 teams, 63% female) who reported their emotional experiences and perceived social integration before and after a match. Controlling for initial integration, these data indicate that collective emotions primarily predict ingroup ties (i.e., perceived similarity to the team; Cameron, 2004) and commitment (i.e., resolve to remain a part of the team; Scanlan et al., 2016) with greater general emotional agreement ($b = .19$) but more deviation on anger and dejection ($b = 1.91 / 1.59$) predicting stronger ties, and greater collective excitement and happiness predicting both stronger ties ($b = .75 / .85$) and greater commitment ($b = .59 / .68$). These results align with self-categorization (Livingstone et al., 2011) and social identity (Tajfel, 1978) theories, suggesting that collective emotions may generally serve as cues for team identification, but discrete collective emotions may determine members' continued team commitment.

Session 4: Poster Session 1 (Odd Number Posters)

Friday Oct 2, 4:30 pm – 5:15 pm

POSTER SESSION 1

Exercise psychology

Session 4: Poster Session 1

Friday, Oct 2 | 4:30 PM | Ballroom C

Poster 1

You've done this before! An experimental study examining the effects of self-efficacy enhancing messaging on university students' intentions to increase activity and decrease sitting

Bailey Gitzel¹, Kate Jarotski¹, Ava Radics¹, Kevin S. Spink¹

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To improve promotional physical activity (PA) messages, employing theoretical determinants of behaviour change such as self-efficacy (SE) (Bandura, 1977) has been suggested (Latimer et al., 2010). In university settings, drawing attention to previous successful on-campus activity behaviour may act as a SE source by highlighting mastery (Bandura, 1977). Adding social norms (SN) (Cialdini et al., 1990) may further enhance SE by serving as a SE vicarious experience (Bandura, 1977). The primary purpose was to examine if SE-enhancing messages would increase students' intentions to increase PA/decrease sedentary behaviour (SB) on campus. The secondary purpose was to determine if adding a norm to the SE-message would produce a stronger effect. University students (N= 113) completed an online survey assessing MVPA (control variable) and were randomly assigned to one of three message conditions (SE, SE+SN, or attention control). Participants then completed intentions to increase PA and decrease SB on campus. Results from a MANCOVA predicting PA and SB revealed that messages significantly increased intentions, $F = 5.434$, $p = <.001$. Follow up ANCOVAs revealed that messages for both PA ($p = .004$) and SB ($p < .001$) contributed. Those who received the SE or SE+SN message both reported greater intentions to increase PA ($p < .05$) and decrease SB ($p < .05$) than control, with no difference between the two SE conditions. These findings provide preliminary evidence that SE-enhancing messages highlighting past successes may increase university students' on-campus intentions to increase PA and decrease SB.

Exercise psychology

Session 4: Poster Session 1

Friday, Oct 2 | 4:30 PM | Ballroom C

Poster 3

Exploring Participant Experiences in a Self-Led Nordic Walking Program for Adults with Parkinson's Disease: A Qualitative Study

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Improving quality of life (QoL) is a central focus in Parkinson's disease (PD) care, with physical activity (PA) recognized as an effective intervention for managing motor and non-motor symptoms and enhancing QoL. PA modalities focused on aerobic training and postural balance, like Nordic walking which uses specially designed poles in a reciprocal pattern, provide a full-body workout that improves functional capacity, gait, and proprioceptive control. We explored the experiences of adults with PD who participated in a 6-week self-directed Nordic walking program with 3 sessions per week, 30-45 minutes each, and how it affected their motivation to engage in PA, behaviour, and QoL. Eight adults with PD ($m_{age}=65.9$ years, 62.5% male) were interviewed in person within 1 year of program completion. The interviews were audio-recorded, transcribed verbatim, and analyzed using hybrid thematic analysis informed by self-determination theory. Participants identified two main motivators for PA: *availability of companionship support* and *desire to mitigate physical deterioration*. Main barriers preventing consistent PA included: *challenges with commitment and prioritization*, and *PD-related symptoms and physical limitations*. Participants valued the program's *schedule*, *helpful support* (*monitoring*, *informational*, *instrumental*), and *novelty*, but found it *lacked companionship*, *failed to keep them motivated long-term*, and *did not provide lasting benefits*. Findings highlight that companionship and program structure are critical for sustaining PA in adults with PD. While self-led formats offer flexibility and cost-efficiency, they may not fully address social and motivational needs. Future iterations of Nordic walking programs should incorporate group-based activities to enhance social connection and long-term engagement.

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Poster 5

Effects of Combined Cognitive-Physical Warm-Ups on Pre-exercise Psychological and Affective States in Older Adults

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Older adults are encouraged to engage in at least 150 minutes of moderate-to-vigorous physical activity weekly. Exercise that is engaging and enjoyable promotes better adherence. Research with competitive athletes and recreational exercisers shows combining cognitive and physical activities together in a warm-up prior to exercising enhances psychological readiness and motivation. This study examined effects of incorporating brief, mildly challenging cognitive tasks into a pre-exercise warm-up on psychological and affective states in older adults. Using a counterbalanced, within-subject design, 16 older adults (72.8±6.6 years; 10 women) completed a combined warm-up or a physical-only warm-up prior to exercising on separate occasions. Warm-ups were performed on a recumbent cycle ergometer at a moderate intensity (RPE ~ 3) for ten minutes. For the combined warm-up, participants completed three, 3-minute cognitive tasks (Stroop; Tachistoscope; Switched-Attention) on an iPad while cycling. Self-efficacy, motivation, mental fatigue, arousal, affect, and enjoyment were assessed pre- and post-warm-up. Electroencephalographic (EEG) activity was recorded during the warm-ups in a sub-sample of participants (n = 10). The combined warm-up was associated with increased self-efficacy, arousal, and enjoyment ($p < .001$), and lower mental fatigue ($p = .04$) compared to the physical-only condition. Motivation and affect increased but did not differ between conditions. EEG data analyses revealed a significant difference between conditions with frontal theta activity decreasing during the physical-only warm-up and increasing during the combined warm-up. Integrating brief cognitive engagement to pre-exercise warm-ups is feasible and may be an effective way to promote adherence by enhancing psychological and affective states of older adults.

Acknowledgements

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Poster 7

Stories of Success from Inclusive Municipal Recreation Programs

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Municipal recreation contexts are important social and community spaces wherein physical activity may occur. Inclusive opportunities within municipal recreation programs are therefore essential to ensuring Canadians with disabilities enjoy the psychological, physical, and social benefits of physical activity. However, a plethora of barriers restrict access and reduce the experience quality of participants. While the barriers to participation are well documented, facilitators of inclusive recreation opportunities have yet to be described in the literature. Therefore, we sought to investigate how inclusive programs are structured and conceptualized by recreation programmers. Secondary analysis of semi-structured interviews with six recreation programmers from municipalities across Canada, including representatives of both rural and urban recreation programs, was conducted. Our reflexive thematic analysis showed that successful programs prioritize inclusivity, work in partnership with community, and evolve over time. Prioritizing inclusivity requires investing and allowing time for program growth and development. Partnerships built on mutual trust and respect allowed recreation programmes without lived experience of disability to work together with members of the community to identify and meet the communities' unique needs and address regional priorities. Lastly, success was described not as the absence of barriers or challenges but the intentional gathering and application of feedback from the community to refine program offerings over time.

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Poster 9

Gynecologic Cancer Survivors' Experiences of a 12-Week Yoga Program: An Exploratory Qualitative Study Reveals Potential Mechanisms of Action

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Background: Gynecologic cancer survivors may be particularly susceptible to negative thoughts and feelings about their bodies due to changes in body appearance and function that conflict with societal norms. Research suggests yoga may promote a positive relationship with one's body by shifting focus from external, self-objectification to internal awareness.

Objective: The purpose of this study was to explore if and how a co-created yoga program influenced gynecologic cancer survivors' relationship with their bodies.

Methods: Twenty gynecologic cancer survivors ($M_{\text{age}}=62.4$ years, $M_{\text{years since diagnosis}}=7.6$) enrolled in and completed a 12-week bi-modal Hatha yoga program (morning or evening) with optional group discussions, journals, and pre-recorded videos for at-home practice. Post-program, 18 completed a semi-structured interview. Data was analyzed using reflexive thematic analysis.

Results: We developed three main themes: (1) discovering my body as an informant worth consulting, (2) cultivating trust in the physical and emotional strength of my body, (3) fostering self-compassion through emotional safety with self and others. Spatial and relational elements of the program helped reshape participants' relationship with their body through instruction on internal awareness, graduated movements, and mutual care, which all served as a pathway to increased emotional awareness and self-confidence.

Discussion: Yoga may offer gynecologic cancer survivors the ability to reflect on their bodies' capability and the space to process emotions despite negative experiences. Importantly, the program provided participants a community with shared mutual understanding of experiences with gynecologic cancer, providing emotional and physical safety that may not be found in public yoga classes.

Acknowledgements

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Poster 11

Excellencism and Perfectionism Show Different Patterns Across Physical Activity Behaviour and Identity: An Exploratory Study

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We explored the unique relationships of excellencism and perfectionism with self-reported physical activity (PA) and dimensions of PA identity. University students (N=393; Mage=20.20 years; SD=4.9; 70.7% woman) completed self-report measures at one time. After exploring the factor structures of PA identity and excellence and perfectionism scores, we estimated two separate structural equation models (one with self-report PA as an outcome and one with three identity dimensions as outcomes). Unexpectedly, we found that higher perfectionism was uniquely associated with higher self-reported PA ($B_{\text{perfectionism}}=.17, p < .01$; $B_{\text{excellencism}} = -.05, p = .43$; $R^2 = .02$) and PA centrality/acknowledgement ($B_{\text{perfectionism}} = .22, p < .01$; $B_{\text{excellencism}} = .09, p = .14$; $R^2 = .08$). Higher excellencism was associated with PA commitment/compatibility ($B_{\text{excellencism}} = .42, p < .01$; $B_{\text{perfectionism}} = -.04, p = .49$; $R^2 = .16$). Both excellencism and perfectionism were associated with PA exploration ($B_{\text{perfectionism}} = .23, B_{\text{excellencism}} = .16, ps < .01, R^2 = .12$). Overall, perfectionism was a stronger correlate of PA quantity and PA centrality/acknowledgement, whereas excellencism was a stronger correlate of PA commitment and compatibility. These mixed findings suggest that merely engaging in physical activity or identifying as physically active may be distinct from experiencing physical activity as a valued, integrated, and personally meaningful aspect of one's life. This research requires replication and extension. Researchers are encouraged to explore quality indicators of PA engagement and PA identity processes to further explore links with excellencism and perfectionism in different populations of physically activity people.

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Poster 13

Sociocultural Factors of Physical Activity Behaviour Change Among University Students with Chronic Conditions: A Preliminary Thematic Analysis

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It is known that university students with chronic conditions often face barriers to physical activity participation (e.g., intrapersonal, interpersonal, and sociocultural factors). However, less is known about how social, cultural, and structural realities shape students' experiences of attempting to change their physical activity behaviour during an academic semester. The purpose of this study was to explore how university students with chronic conditions perceived and experienced physical activity behaviour change within the context of their sociocultural realities. Following a four-month observational daily diary study, 12 ($M_{\text{age}} = 25$ years; $SD_{\text{age}} = 4.48$) university students with chronic conditions completed a 60-minute semi-structured interview. Participants included individuals from diverse racial backgrounds (7 White, 5 Person of Colour). Interview data were analysed using a reflexive thematic analysis, informed by a hermeneutic phenomenological paradigm. Four themes highlighted the participants' experiences and perceptions of their physical activity behaviour change within their sociocultural settings; 1) family and cultural values shaping physical activity experiences (e.g., discouraged vulnerability), 2) navigating disability in a non-disabled world, 3) social expectations of the "Ideal Body" and "Ideal Person," (e.g., gendered expectations of physical appearance), and 4) structural opportunities and constraints (e.g., accessibility barriers). These findings suggest that the participants' sociocultural contexts served as a lens through which their behaviour change was enacted and interpreted; emphasizing the impact of these contexts on both the processes of physical activity behaviour change and its meanings and interpretations. Insights can inform physical activity behaviour change interventions to incorporate sociocultural inclusive supports for university students with chronic conditions.

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Poster 15

A scoping review of sedentary behaviour among older adults living with and beyond cancer

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Background: Sedentary behaviour (SED) has been an increased area of focus within cancer research. Older adults (≥ 65 years) living with and beyond cancer (LWBC) may particularly benefit from reducing SED as cancer and treatment-related symptoms or side effects and aging may preclude this population from safely engaging in unsupervised physical activity. The purpose of the current study was to summarize how SED has been conceptualized and operationalized among older adults LWBC and explore outcomes that have been studied.

Methods: A scoping review was conducted to systematically identify relevant literature across multiple databases, addressing SED among older adults LWBC. Results were summarized qualitatively. Consultation meetings were conducted with an Advisory Council to improve the applicability of the review findings.

Results: 64 publications met inclusion criteria and were predominantly observational. A wide range of SED concepts were represented, and studies relied on self-reported measures of SED. Cancer risk, incidence, and mortality were the most frequent outcomes while biologic outcomes were the least reported. $<15\%$ of studies tested interventions; all aligned with the message of “sit less, move more”. Consultation meetings highlighted the need to consider the whole person, rather than specifically focusing on the cancer diagnosis. Patient-centered intervention delivery and fair access to care and information was also deemed necessary.

Conclusion: These results highlight the heterogeneity in SED definitions and measurement and may be used to inform future research. There is a need for experimental research to understand the impacts of SED interventions on SED and cancer-related outcomes.

Acknowledgements

We would like to acknowledge the Advisory Council for their input and feedback throughout this study.

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Poster 17

Sleep matters: Sleep as a buffer of intersectional identity-linked mental health concerns among 52,880 South Korean adolescents

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Background: Adolescent mental health is shaped by multiple factors. This study examined the association between intersectional identity based on gender and family-socioeconomic status (SES) and mental health, and whether this association differs by the function of health behaviors (i.e., physical activity, screen time, and sleep) among Korean adolescents.

Methods: Nationally representative, cross-sectional, self-reported data from the 2023 Korea Youth Behavior Web-Based Survey (n = 52,880, 12–18 years) were used. Intersectional identity included gender and family-SES. Mental health included stress, depressive symptoms, and loneliness. Health behaviors included physical activity, recreational screen time, and sleep. Covariates were age, academic performance, and parental educational attainment. Decision tree models, logistic regressions, and moderation analyses were conducted.

Results: Compared to boys, more girls reported high stress (31% vs 44%), depressive symptoms (21% vs 31%), and loneliness (49% vs 63%). A statistically significant interaction between gender × family-SES was observed only for loneliness, with girls with low-family-SES reporting the highest likelihood (OR=3.60, 95% CI=3.28–3.95). Physical activity and sleep moderated the association between intersectional identity and loneliness, with sleep showing more salient results. Specifically, not meeting the sleep recommendation was associated with greater loneliness, especially for more marginalized identity groups in a linear manner (boys×mid-family-SES: OR=1.65, boys×low-family-SES: OR=2.75; girls×high-family-SES: OR=2.46; girls×mid-family-SES: OR=3.01, girls×low-family-SES: OR=5.24).

Conclusion: Meeting sleep recommendations may buffer intersectionality-linked loneliness, particularly for girls across SES levels and boys with mid-family-SES. Sleep-focused strategies may offer opportunities to address the adolescent loneliness epidemic nationwide.

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Poster 19

A Scoping Review of Coaching Strategies for Youth Athletes with Attention-Related Challenges

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Recognizing that sport environments demand rapid decision-making in dynamic and unpredictable contexts, these demands can disproportionately affect athletes with attention-related challenges. This presentation details a scoping review, guided by Arksey and O'Malley's methodological framework, that identified 13 relevant peer-reviewed articles across SPORTDiscus, PsycInfo, and Web of Science. Findings indicate that existing research remains limited and fragmented, with varied terminology complicating the consistent application of inclusive theories in sport settings.

To address these research-to-practice gaps, we synthesized the literature into three interconnected domains: preparation for learning and performance, delivery of instruction, and maintenance of desired behaviors. First, proactive preparation involves structuring the physical environment to reduce distractions, establishing clear expectations and routines, and pre-teaching relevant knowledge to minimize cognitive load. Second, effective instructional delivery emphasizes the use of consistent terminology, multiple modes of representation (e.g., visual, auditory, kinesthetic), and appropriate pacing through concise, chunked communication. Third, maintaining desired behaviors requires anticipating challenges through active and engaging practice structures, alongside reinforcement strategies such as praise, feedback, and peer support.

Ultimately, we argue that thoughtfully designed coaching practices reduce barriers for athletes with attention-related challenges while benefiting all youth participants regardless of ability. By integrating preparation, execution, and consistency, coaches can foster more inclusive and responsive environments.

Acknowledgements

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Poster 21

Establishing initial structural and external validity evidence of the Negativity Bias in Sport Scale

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Negativity bias is the tendency for negative stimuli, factors, and events to have a stronger psychological impact than positive counterparts. Pervasive across domains, manifestations of negativity bias appear to influence a variety of psychological processes relevant to athletes' experiences (Lautenbach et al., 2025; Sereda et al., 2026). Although understanding of negativity bias in sport is growing, the absence of a validity supported measure of negativity bias limits many avenues for future research (e.g., intervention assessment, causal relationships). Guided by Messick's (1995) validity framework, the present study builds on existing content and substantive validity evidence by developing initial structural and external validity evidence for a sport-specific measure of negativity bias. To do so, 416 competitive athletes completed a questionnaire package that consisted of the newly developed Negativity Bias in Sport Scale as well as measures of constructs relevant to external validity (e.g., optimism, self-compassion, perfectionistic concerns, rumination). Factor analysis and exploratory structural equation modeling were used to evaluate the structure of the scale, resulting in the identification of a single-factor model that fit the data closely (RMSEA = .027, SRMR = .019, CFI = .996, TLI = .994). Statistically significant correlations between the Negativity Bias in Sport Scale (NBSS) and measures of theoretically related constructs provided preliminary evidence for external validity, as the pattern of observed relationships was generally consistent with theoretical expectations. Thus, the present study contributes initial structural and external validity support to the continued development of construct validity evidence for the use of the NBSS with competitive athletes.

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Poster 23

More Than a Spectator: Perfectionism, Excellencism, and Parents' Identity Investment in Their Child's Sport Journey

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In recent years, parents of children in organized sports have become increasingly involved in their offspring's sport journey and there are growing concerns about their behaviors when attending their children's competitions. One potential driver of these negative behaviors is the inclusion of their child in their self-concept. In this study, based on the Model of Excellencism and Perfectionism (MEP), we recruited 336 parents with a child participating in organized sports ($M_{parents} = 43.28$ years old; $SD_{parents} = 6.48$). Our second goal was to assess the relationships of perfectionism and excellencism with the inclusion of the child and their sport in the self-concept, child-invested contingent self-esteem, authentic pride, and hubristic pride. In our regression, on the one hand, excellencism positively predicted identification with the child, child-invested contingent self-esteem, authentic pride, and hubristic pride which means that excellence strivers experience significantly more than parents who strive for low standards. On the other hand, perfectionism was positively associated with inclusion of the child in the self-concept, inclusion of the sport of the child, and child-invested contingent self-esteem, while negatively predicting authentic pride. Consistent with our hypothesis, perfection strivers are more identity invested in their child's sport journey compared to excellence strivers. Overall, the results of the study supported our hypothesis that perfection strivers are at a higher risk of overidentifying with their children who compete in youth sports. This makes them more likely to engage in problematic behaviors when they attend their child's sport competitions.

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Poster 25

Coach Leadership Reflection Tool: An Examination of a Structured Reflective Intervention for Youth Coaches

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This study examined competitive youth coaches' perceptions of a structured reflective intervention designed to enhance interpersonal and intrapersonal coaching behaviours. Drawing on models of structured reflection used in medicine and education (e.g., pre-briefing, in situ observation, reflection cards, and debriefing), the Coach Leadership Reflection (i.e., CLR) tool integrated systematic observation using an adapted Coach Leadership Assessment System – Global Rating Scale (CLAS-GRS) and guided self-reflection.

12 competitive youth coaches participated in interviews conducted before and after engaging with the intervention. The study explored coaches' experiences with the CLR tool, with a focus on usability and perceived impacts on awareness, confidence, motivation, and behaviour change related to their interpersonal and intrapersonal practices.

Findings indicate that the CLR tool supported meaningful reflective practice and contributed to perceived improvements in coaching effectiveness. Coaches reported increased confidence in their reflecting abilities and a heightened awareness of the importance of interpersonal skills in fostering positive coach–athlete relationships. Participants also described the structured reflection process as helpful in prompting deeper consideration of their coaching behaviours and reinforcing the value of relational aspects of coaching that are often underemphasized in traditional coach education.

Overall, the results highlight the positive potential of structured reflective interventions to support coach development beyond technical and tactical knowledge. The study underscores the importance of integrating interpersonal and intrapersonal skill development into coach education and provides evidence for the CLR as a practical tool to facilitate reflective learning and behaviour change in applied coaching contexts.

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Understanding the real-world effectiveness of psychological skills training programs: A scoping review

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Research on psychological skills training (PST) programs lacks evaluation on how athletes acquire, perceive, and apply psychological skills into real-world scenarios (Park & Jeon, 2023; Reyes-Bossio et al., 2022). As such, this scoping review aimed to identify how researchers evaluate the effectiveness of PST programs with athletes in sport contexts: specifically, the methods used to assess the effectiveness beyond the assessment of program outcomes (e.g., psychological measures [confidence, anxiety], performance measures [shooting accuracy]). Following the population, concept, context framework (Peters et al., 2020), and Arksey & O'Malley's (2005) 5-step process, a systematic database search identified papers describing PST program implementation with athletes of any age, sex, ability, sport, and performance level, and included an evaluation of program effectiveness beyond measurement of program outcomes. The search yielded 17,806 articles, from which we selected 807 for full-text review, and 220 for inclusion. Across the included studies, 157 were peer-reviewed articles, 25 were published case studies, and 38 were grey literature (i.e., theses/dissertations), highlighting that research evaluating PST program effectiveness beyond outcome measurement remains methodologically diverse. However, as only 1.2% of the studies were included in the analysis, this suggests the evaluation of PST programs is scarce, with most studies relying solely on pre-post psychological or performance measures to quantify effectiveness. Themes suggested considerable variability in the methods, timing, and rigor of program evaluation across sport contexts. Future research should aim to integrate best practice recommendations from alternative disciplines to develop processes that adequately assess the effectiveness of PST programs in sport.

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What do athletes want to feel in practice? Using the PNA-77 to describe athletes' emotional preferences across types of practice and competition

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Athletes have emotional preferences that best support performance, which should vary across contexts (Hanin, 2000). Whether and how an athlete's emotional preferences differ between practice and competition contexts remains unknown (Radowits et al., 2026), which is surprising given that practices are designed around differing goals (Hodges & Lohse, 2022). We explored athletes' emotional preferences across competition and four practice contexts. Sixty-seven Canadian university track and field athletes ($M = 19.7$ years-old) completed five Positive and Negative Affect List (PNA-77; Hanin, 2000) profiles, one for each of the contexts, at different points across a season. Data represented their preferred and non-preferred emotions, and the commensurate intensity of those emotions. Analyses describe frequently selected emotions, with between-context comparisons exploring overlap in emotions, and differences in emotional intensity. Of 132 distinct emotions identified by the sample, each athlete averaged 44 distinct emotions across their five profiles. On average, of the emotions each athlete selected, 37.1% were considered helpful and 40.4% harmful in all contexts, and 22.4% were harmful/helpful depending on context. Overlap of emotions between any two contexts was low, with 16.6-30.9% of all emotions contrasted representing the same emotional preference. Athletes had higher overlap in helpful emotions (26.3%) than harmful emotions (20.7%), $p < .001$. Athletes rated the intensity of unpleasant-harmful emotions higher in competition than in each of the practice contexts, $p < .001$. Ideographically, findings demonstrate that athletes' preferences were mostly context specific, that emotions and their intensities differ between practice and competition, and also between types of practice.

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Poster 31

Self-Compassion in Sport: Closing the Gap Between Evidence and Practice

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Self-compassion is a promising psychological resource within sport, with evidence linking it to enhanced well-being, adaptive coping, resilience, and sustainable performance. Despite these benefits, many athletes remain hesitant to engage with self-compassion, often perceiving it as incompatible with high-performance sport. Drawing on existing evidence and recent advances in the field, this presentation examines challenges that continue to limit the application of self-compassion in sport and highlights promising directions for addressing them. First, we argue that advancing self-compassion research and practice may require consideration of both leading conceptualizations. While Kristin Neff's (2003) three-component framework has provided an important foundation for research and practice, greater attention to how self-compassion works may support its effective application in sport. Paul Gilbert's (2009) evolutionary model offers a complementary perspective that may help explore the processes through which self-compassion influences responses to challenge. Second, athlete resistance to self-compassion may be rooted in concerns that it promotes passivity or complacency. To address these concerns, we highlight emerging approaches to intervention design, including performance-relevant framing, mechanism-informed programming, embodied approaches, and context-sensitive tailoring, to better align self-compassion with sport contexts. Finally, we argue that self-compassion cannot be sustained through individual-level interventions alone. Instead, coaches, teammates, support staff, and sport organizations help create environments that support or inhibit self-compassionate responding. Collectively, these perspectives suggest that closing the evidence-practice gap will require advances in how self-compassion is conceptualized, communicated, and implemented, alongside efforts to create sport systems that position excellence and compassion as compatible.

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Poster 33

Applying Neurofeedback Training in Sport: A Case Study on the Use of a Consumer-Grade Device

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Neurofeedback training (NFT) has been shown to enhance athletic performance through improvements in self-regulation and attentional control (Cheng et al., 2015; Christie et al., 2020; Rydzik et al., 2023). However, traditional NFT requires costly, laboratory-grade equipment and advanced expertise, limiting its feasibility for mental performance consultants (Jubair, 2025). Accordingly, this case study evaluated the impact of a NFT intervention using consumer-grade equipment on athletic performance, attention, and brainwave activity.

A single-subject pre-post design was employed with a collegiate volleyball athlete. The intervention consisted of 10 NFT sessions, using a consumer-grade Muse neurofeedback headband (InteraXon Inc, n.d.) and application (Myndlift Inc, n.d.) to enhance sensorimotor rhythm (SMR), a brainwave associated with focused, relaxed attention (Xiang et al., 2018). To assess intervention outcomes, SMR amplitude, attention (assessed via a Continuous Performance Task), and volleyball serving performance were recorded (Shay, 1969).

Results indicated improvements in sport-specific performance and SMR amplitude. The participant's serve test score increased by 42.9%, while errors decreased by 50%. SMR amplitude increased from pre- to post-intervention by 37.5% and 28.8% in the eyes open and under-task conditions, respectively. Additionally, SMR amplitude showed a significant positive linear trend across the 10 NFT sessions ($\beta = .427$, $p < .001$, $R^2 = .182$). Finally, commission errors on the CPT decreased by 60%, indicating improvements in attentional control and response inhibition.

The observed improvements suggest that consumer-grade NFT may be a feasible psychophysiological tool for mental performance consultants.

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Coaching the human: A mixed-methods study of compassionate coaching and women athletes' thriving

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Women athletes' thriving incorporates performance and well-being, yet coaching in competitive sport often overlooks well-being. Compassionate coaching may be a strategy that promotes both facets of thriving, but the athletes directly impacted by it have received limited attention. As such, this exploratory mixed methods study explored competitive women athletes' conceptualizations of compassionate coaching and its effects on thriving. From phase 1 qualitative interviews with 11 women athletes (ages 21-32 years), one overarching theme was generated, *Coaching the human*, with four sub-themes: (1) *Taking the fear out of making mistakes*, (2) *Offering unconditional support*, (3) *Meeting athletes where they're at*, and (4) *Striking a balance between compassion and accountability*. These findings informed the design of an experimental vignette used to examine the effect of compassionate coaching on women athletes' thriving in phase 2. Using a between-subjects post-test design, participants were randomly assigned to read either a compassionate coach vignette ($n = 92$, $M_{age} = 28.65$ years) or a control vignette ($n = 92$, $M_{age} = 28.49$ years), after which they completed well-being and performance measures. Independent samples t -tests indicated participants in the compassionate coach condition had higher hedonic ($M_d = 0.26$, $p = .02$, $d = 0.33$) and eudaimonic well-being ($M_d = 0.44$, $p = .03$, $d = 0.33$) than participants in the control condition. There were no differences between conditions on performance measures. These findings indicate that compassionate coaching strengthens athlete well-being, creating optimal conditions for sustainable performance. It also contributes to ongoing efforts foregrounding women athletes' voices in sport research.

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Poster 37

It's Not Easy to Ask for Help: A Meta-Study of Athletes' Mental Health Help-Seeking Experiences

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Background: Scholars have reported various factors which may facilitate or impede athletes' willingness to seek help for mental health. However, there has yet to be a review of qualitative literature exploring competitive athletes' experiences seeking help for mental health.

Purpose: We sought to critically evaluate and synthesize the existing literature on the subjective experiences of competitive sport athletes seeking help for mental health concerns.

Method: A meta-study approach was utilized wherein we analyzed primary research data, including theoretical and philosophical underpinnings and methodological approaches. These analyses were then synthesized to provide a reinterpretation of help-seeking for mental health in competitive sport.

Results: A total of 40 studies (34 qualitative, 6 mixed methods) were included in the review. We engaged in thematic synthesis, developing four core themes which illustrate the complex experiences of competitive athletes, including: (1) *"Deny, deny, deny": Athletes' self-perceptions in seeking help*; (2) *"Lean on me": Social support and athletes help-seeking*; (3) *"It should be easier: Athletes' experiences seeking help*; and (4) *"Everyone thinks elite athletes are superhumans": Cultural expectations placed on athletes*. Our synthesis of existing literature proposes athlete help-seeking as a process, delineating the factors that impact this behaviour as barriers and facilitators.

Discussion: Future research would benefit from integrating theoretical frameworks, transparent reporting of the researcher's philosophical position, and methodologically coherent approaches to data collection and analysis. Implications include applied interventions that target both athlete mental health literacy as well as skill development for stakeholders to better facilitate help-seeking.

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Athlete-Informed Assessment of Mental Health & Wellness Priorities in Canadian Varsity Sport

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Competitive athletes face increased rates of mental health challenges compared to the general population (Purcell et al., 2020; Rice et al., 2016). Performance pressures, perfectionism, body image concerns, and physical injuries contribute to an elevated prevalence of depression, anxiety, disordered eating, and stress (Castaldelli-Maia et al., 2019, Nuetzel, 2025 & Hughes & Leavey, 2012). Furthermore, historical sport stigma emphasizes resilience over vulnerability, leading to reduced rates of help-seeking behaviour (Brown et. Al., 2023). Varsity athletes are an at-risk population for mental health challenges with the addition of academic demands, social pressures, and barriers in accessing support.

Western University represents the largest varsity sport program in Canada: over 1,200 student-athletes. The Mustangs Wellness Leads (MWL) program, launched in 2024, created a peer-support network across 41 teams to address mental health concerns among student-athletes, reduce crisis incidents, and remove stigma and cultural norms around accessing support. MWLs are provided comprehensive mental health training, advised and delivered by clinicians and wellness professionals, to support their respective teammates.

MWLs participated in a semi-structured group priority setting session to identify areas in which additional education, resources, or support would benefit student-athlete mental health. Findings suggest that student-athlete mental health needs are unique and they may benefit from embedding specific support related to: nutrition, sleep, technology habits, performance psychology, and career transition. Engaging athletes in priority-setting may help in better understanding their unique mental health experiences and needs and grant them agency to thrive.

Acknowledgements

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Mapping the Intellectual Architecture of Social Identity Research in Sport and Exercise: A Citation Network Analysis

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The systematic analysis of academic publishing and citation practices serves as an indication of the conceptual and intellectual structure of a defined field of study. To highlight the structure of research in social identity within the broader sport and exercise psychology field, 1,143 peer-reviewed empirical research articles (published between 1986 and 2026) were subject to citation network analysis. This analysis used *Bibliometrix*, an open-source *R* package that used metadata drawn directly from Web of Science database entries. Descriptive analyses highlighted a steady increase in publication frequency across four decades (average annual growth rate = 10.64%) and outlined the most prominent contributors to social identity research in sport and exercise as a function of authors, articles, sources, and references. Further, we represent the structure of the field using a co-occurrence network of keywords to illustrate three conceptual themes (i.e., sport and development, health and physical activity, and fan behavior) and a co-citation network, which highlighted two main clusters of articles more likely to be cited together. In all, this review of publishing and citation practices is the first to bring together the social identity research in sport and exercise settings to map the emergence of conceptual trends over time as well as the authors, articles, and journals associated with these developments. Overall, the life cycle analysis suggests that the field appears to be entering the Maturity phase, at an estimated 55% publication saturation (i.e., maximum total number of publications produced on a research topic).

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Evaluating the Impact of a Mental Health Champion Intervention in University Athletics

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Despite its importance, mental health is often overlooked in university student-athletes (Celebre et al., 2026). These athletes face a unique combination of sport-, academic-, and social-related stressors, which may develop into mental health disorders (Hasni et al., 2021). Accordingly, Celebre et al. (2026) piloted a mental health intervention for university athletes in which a designated team member served as the team's Mental Health Champion. These individuals provided peer mental health support to athletes while working closely with a Mental Health Coach. The intervention included workshops to recognize individuals with thoughts of suicide, discuss suicide with those at risk, and connect them with mental health resources. Previous literature has observed no significant effects for the athletes partaking in the intervention (Celebre et al., 2026). As such, the purpose of the study is to examine the impact the intervention had on the Mental Health Champions. A total of 11 Mental Health Champions were evaluated across three time points on gatekeeper self-efficacy, referral self-efficacy and mental health literacy. A repeated measures ANOVA revealed that Mental Health Champions significantly improved in gatekeeper self-efficacy as the intervention progressed ($p < .05$). Separate repeated measures ANOVAs demonstrated no statistically significant effect for referral self-efficacy and mental health literacy. The gate-keeper self-efficacy results suggest that the intervention positively influenced the Mental Health Champions' confidence and perceived ability to support individuals experiencing a mental health crisis, including recognizing warning signs and connecting individuals with support resources.

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Supporting Coach-Led Delivery of the Together for Us (T4Us) Intervention: Co-Development of an Implementation Guide and Video Resource

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Research in youth sport demonstrates that a strong shared identity contributes to athlete well-being and positive developmental outcomes. The Together for Us (T4Us) intervention is a values-driven workshop designed to help youth athletes identify and enact shared team identity. Although T4Us has demonstrated efficacy in facilitated settings, resources to support independent coach-led delivery are needed. This study co-developed and refined implementation resources to support sustainable coach-led delivery of T4Us. Eight youth sport coaches representing diverse sports participated in a three-phase integrated knowledge translation (iKT) development process involving three semi-structured interviews and brief surveys. Across phases, feedback from coaches informed iterative refinements to the T4Us Coach Guide. Between Phases 1 and 2, coaches observed a live T4Us workshop and provided further feedback on the updated guide in Phase 3. Interview guides were informed by the Consolidated Framework for Implementation Research (CFIR). Coaches identified a need for practical, accessible implementation supports that balanced comprehensiveness with usability. Key updates to the T4Us Coach Guide included enhanced instructions, implementation examples, adaptations, troubleshooting resources, and supplementary materials. The workshop observation increased coaches' confidence and highlighted the importance of understanding the workshop's tone and delivery style, leading to the development of a brief Video Guide. Final evaluations indicated that the Coach and Video Guides worked synergistically to enhance implementation confidence, perceived feasibility, and readiness for coach-led delivery. Findings demonstrate the value of engaging end-users in the co-development of implementation resources and highlight practical strategies for supporting the translation of an evidence-informed intervention into youth sport settings.

Acknowledgements

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Visualizing lived experience: Participants' insights on using arts-based methods within sport psychology research

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While scholars have increasingly advocated for moving beyond traditional methodological practices within sport research, the use of arts-based approaches remains limited. Arts-based research is a form of qualitative inquiry that incorporates artistic practices to illustrate meaning and generate data from lived experiences. Arts-based approaches aim to portray the complexity of human experience, enhance understanding of phenomena using various creative expressions, and increase accessibility of research for diverse audiences. This presentation reflects on the use of arts-based methods within three qualitative studies, which explored mentorship, life skills development, and social media use in sport and physical activity contexts. A range of arts-based approaches were used in the studies, including personal meaning maps, visual timelines, and drawings. All methods were used in combination with semi-structured interviews or focus groups. Each interview guide included questions that invited participants to reflect on their experiences with the arts-based methods. Across studies, participants highlighted how arts-based activities encouraged in-depth reflection and enabled alternative ways of communicating the complexity of their experiences through visual and textual expressions. Arts-based methods supported participants with organizing their thoughts and ideas meaningfully, allowing them to build upon prior experiences, capture how their perspectives evolved over time, and expand their understandings of the phenomena being explored. In addition to prompting insightful follow-up discussions, participants often described the arts-based process as enjoyable and interactive. Collectively, these studies highlighted the value of arts-based methods within sport psychology research and the importance of expanding methodological approaches to capture the complexity of participants' lived experiences.

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Factors and Intervention Approaches in Athletes' Yips Experience: A Scoping Review with Focus on Emotional Factors

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The yips is a psychoneuromuscular phenomenon disrupting skilled motor execution among athletes, addressed through neurological, biomechanical, psychological, surgical, and pharmacological approaches. Among psychological accounts, anxiety has dominated, yet clinical evidence has challenged an anxiety-disorder explanation while acknowledging anxiety's contribution, and personality predictors of yips susceptibility have been traced to perfectionistic self-presentation, a construct adjacent to shame that remains unexamined as a distinct emotion. Despite this attention, how emotional factors figure within the broader landscape of yips-related factors and interventions remains unmapped.

This study aimed to map factors and intervention approaches addressing athletes' yips experience, with particular attention to how emotional factors have been addressed within this landscape.

Following Arksey and O'Malley's scoping review framework, we searched PubMed, SPORTDiscus, PsycINFO, and Scopus combining yips and athlete terms, identifying 545 records; adding intervention- and emotion-related terms yielded 97 records. After removing 23 duplicates, 74 records were screened, yielding 13 records meeting inclusion criteria.

Among 545 yips-related records, only 97 (18%) intersected with intervention- or emotion-related terms. Identified factors spanned neurological, biomechanical, and psychological domains, with interventions ranging from surgical to psychological. Among the 13 included records, emotional factors were predominantly reduced to anxiety despite inconsistent associations, and qualitative interviews identified negative emotional patterns without differentiating discrete emotions.

Emotional factors remain narrowly and inconsistently addressed around anxiety, with socially evaluative processes implicated yet undifferentiated into specific emotions. This gap suggests that emotions such as shame warrant explicit attention, informing future research and shame-sensitive interventions.

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Exploring Concussion Symptom Profiles Among Canadian Special Olympics Athletes

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Although there is research to describe concussion symptom profiles and response patterns among neurotypical athletes, there have been no similar studies in athletes with intellectual disability (ID). The aim of this study was to examine concussion symptom profiles in athletes with ID and examine whether demographic and sport-related factors were associated with profile membership. Survey data from a larger cross-sectional study were used for this secondary analysis. Data included concussion history, symptoms, and demographic and sports participation characteristics from Special Olympics (SO) athletes at Provincial and National Games. Descriptive statistics characterized the sample, and latent class analysis (LCA) was used to explore concussion symptom response patterns across physical, emotional, cognitive, and sleep-related domains. Binary logistic regression was conducted to determine whether demographic or sport-related factors were significantly associated with LCA-identified symptom profiles. One hundred fifty-one respondents (Mage=36.49 years $\pm$ 20.66) reported a diagnosed and/or suspected concussion (67.8% male; 78.9% White). LCA supported a two-class solution: Class 1 ("Multidomain Symptom Profile") and Class 2 ("Physical-Dominant Symptom Profile"). Team sport participation was significantly associated with lower odds of Class 2 membership ($OR=0.25$, 95% CI [0.078, 0.767], $p=.016$). Concussion symptom profiles and response patterns exist among athletes with ID, and demographic and sport-related characteristics (e.g., team sport, non-athletes not identifying as male, and younger athletes) may support earlier identification of concussion based on symptom presentation. Findings are unique to athletes with ID and can inform future concussion education in collaboration with SO Canada, crucial to improving concussion recognition and management.

Acknowledgements

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Masculinity Under Pressure: Examining Football Athletes' Psychological Readiness to Return to Sport After a Sport-Related Concussion

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Football has often been regarded as a place where constructions of masculinity (e.g., toughness, dominance, suppression of emotion) are produced, reinforced, and performed. Following a sports-related concussion (SRC), this masculine culture may shape how athletes perceive their injury and determine when they are psychologically ready to return to sport (RTS). Previous research indicates that football not only exhibits the highest prevalence rates of a SRC, but also a high rate of premature RTS, highlighting a need to examine the socio-cultural contexts influencing football athletes' injury recovery experiences and deleterious RTS decisions. The purpose of this study was to study explore athletes' perceptions of masculinity in relation to their psychological readiness (PR) to RTS following an SRC in Canadian university football. Twenty semi-structured interviews were conducted with (17) current and (3) recently retired U Sports football athletes who had sustained an SRC in season within the last five years. Using a realist approach to a reflexive thematic analysis, findings demonstrate masculinity being a central focus in U Sport football culture, acting as a regulatory force influencing athletes' PR to RTS following an SRC. Findings extend current conceptualizations of PR by demonstrating readiness being a state influenced by personal, social, and cultural contexts, such as dominant constructions of masculinity shaping athletes decision making following injury. This work accentuates the reasoning behind football athletes' deleterious behaviours and PR after sustaining an SRC and highlights the importance of considering sociocultural influences during rehabilitation and the RTS process in men's football.

Acknowledgements

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Learning to Live with Uncertainty: A Phenomenological Study of Coaches' Experience

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Uncertainty is a state of not knowing, which emerges from limited information, interfering with the ability to understand, predict, and control situations (Mishel, 1984). Recent studies have started exploring athletes' experiences of uncertainty (e.g., Assa & Reizer, 2026). Even though coaching is recognized as a complex and dynamic profession (Jones & Wallace, 2005; Cushion, 2010; Mallett & Lara-Bercial, 2016), no empirical research has examined coaches' lived experiences of uncertainty. Following preliminary findings (Fortin-Delisle & Rodrigue, 2025), this study adopted a phenomenological approach to explore how elite coaches experience and respond to uncertainty in their practice. Twelve elite coaches (3 women, 9 men) with at least 5 years of elite-level experience were purposefully recruited. The lead researcher performed and transcribed semi-structured interviews lasting approximately 60 minutes. Transcripts were analysed using reflexive thematic analysis (Braun & Clarke, 2021), with the second author acting as a critical friend (Feldman et al., 2018). Findings suggest that coaches' experience of uncertainty is an inherent condition of their work arising from a variety of professional, relational, and decisional demands. Initially destabilizing, uncertainty induces emotional, cognitive, and bodily tensions that hinder their ability to keep coaching effectively. Despite the pressure, coaches generally reported focusing on the controllables and continuing to act without knowing. Through experiences, coaches gradually learn to live with uncertainty (i.e., coexisting) rather than trying to eliminate it. Therefore, results suggest that coach development initiatives should help coaches improve their ability to reflect, adapt, and act effectively when facing uncertainty.

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Mental Health Literacy in Canadian High-Performance Sport

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While traditional mental health approaches in sport have focused on individual-level deficits such as mental illnesses, research and practice have also advocated for developing mental health *assets* in addition to reducing detriments (Durand-Bush & Van Slingerland, 2021; Whiting et al., 2012). Mental health literacy, or “knowledge and beliefs about mental disorders that aid in their recognition, management or prevention” (Jorm et al., 1997, p. 182), has been noted to be a particularly relevant asset for elite sport participants (Gorczynski et al., 2019). The current study aimed to assess the current level of mental health literacy of high-performance athletes in Canada. A total of 178 athletes (91 national team athletes, including 14 Paralympians; 87 USPORTS athletes) completed an online survey which includes the revised Multicomponent Mental Health Literacy Measure (Sullivan et al., 2021). Factorial ANOVAs were conducted to examine the effect of sex and sport level on the mental health literacy factors of beliefs, knowledge, and awareness of resources. There were no significant main effects or interaction with respect to resources; females and USPORT athletes showed significantly more literate beliefs, and there was a significant sex by level interaction for knowledge whereby female national team athletes showed significantly higher literacy than males, but no such difference existed at the USPORTS level. These results provide evidence that mental health literacy as a valued health asset and outcome for policy and interventions, may require more nuanced policy and programming than may have been previously supposed.

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Do explicit aim reports influence implicit adaptation?

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Humans adjust their movements to maintain accuracy in changing environments, relying on both explicit strategies and implicit adaptation. Understanding how these processes interact across contexts is critical in interpreting sensorimotor adaptation behaviour and for designing experiments and interventions that effectively target specific learning mechanisms. Recent adaptation protocols attempt to break down explicit and implicit contributions to adaptation, often by using verbal aim reports on a number circle to estimate the explicit adaptation. Studies using this protocol have shown that implicit adaptation across movement directions is largest around a participant's intended aim direction, rather than the target direction; however, aim reporting could shift focus toward the aim point and, as a result, alter implicit adaptation and the generalization across directions. The current study compared the generalization of implicit adaptation during a visuomotor rotation task for participants who provided a verbal report of their aim with those who did not. Implicit adaptation and its generalization were isolated on probe trials where participants were instructed to move their unseen hand to a target. Participants who reported their aim displayed a significant shift in the peak of implicit adaptation away from the target and toward the reported aiming direction, along with a decrease in the magnitude of adaptation compared to the control group. These findings challenge the assumption that implicit adaptation is rigidly centered on the target or aiming location and highlight that commonly used measurement techniques like aim reporting can meaningfully affect the implicit adaptation being quantified.

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Identifying Neuromotor Determinants of Vertical Jump Performance: A Phase-Based Analytical Framework for Personalized Coaching

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Background/Purpose:

Current vertical jump assessments typically quantify performance outcomes but provide limited insight into how specific neuromotor execution variables contribute to performance or how training priorities should be individualized. This work presents a phase-based analytical framework designed to link movement mechanics, neuromotor execution, and coaching application.

Methods:

The countermovement jump was modeled as a sequence of mechanically defined phases linked through force-driven propagation of motion variables. The framework separates athlete-specific structural coefficients, representing physical characteristics, from execution-dependent neuromotor parameters, representing movement strategy and coordination. Analytical propagation and sensitivity analyses were developed to quantify both performance and responsiveness to training interventions.

Results:

Propagation analysis predicts jump performance from athlete-specific and execution-dependent inputs. In a representative application of the framework, a 1 m/s^2 increase in countermovement descent acceleration was estimated to increase jump height by approximately 4 cm for a specific athlete configuration. Sensitivity analysis predicts performance improvement by quantifying the influence of individual execution variables on performance outcomes. The analysis further demonstrated that identical execution improvements may produce different performance gains across athletes due to differences in structural coefficients.

Conclusions:

The proposed framework provides a quantitative link between movement mechanics, neuromotor execution, and individualized coaching. By distinguishing athlete-specific structural characteristics from trainable execution variables, the framework provides a quantitative basis for identifying athlete-specific performance determinants and prioritizing neuromotor training interventions. Beyond vertical jumping, the underlying propagation and sensitivity-analysis principles may provide a foundation for future applications to other multi-phase athletic movements.

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Developing the Effect-Engage-Evolve framework: Qualitative insights into motor imagery and the role of imagined action effects

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Background: Research in motor imagery is largely informed by objective and post-positivist perspectives grounded in theories of motor control and learning. Thus, the development of motor imagery theory has relied predominantly on quantitative evidence, with limited attention to individuals' lived experiences. To address this gap, we propose the Effect-Engage-Evolve framework as an evidence-informed framework that integrates theoretical, empirical, and qualitative insights into motor imagery experience.

Purpose: To examine one theme from our qualitative study exploring the subjective experience of motor imagery, considering how this theme informed the ongoing development of the Effect-Engage-Evolve framework.

Methods: Using a qualitative multiple case study design, ten participants completed two sessions involving guided imagery scenarios, simple and complex motor imagery tasks, and semi-structured interviews. Individual and cross-case analyses were completed to develop an in-depth understanding of subjective motor imagery experiences.

Results: The theme, *What We Know About Performance*, illuminated how participants imagined the sensory consequences of action. Participants described imagery through anticipated actions, bodily sensations, and environmental interactions (e.g., “The bounciness of the keys”, “This is very plasticky”, and “the feeling of like air moving on my skin”), suggesting that the imagination of action effects plays an important role in experiences of motor imagery.

Discussion: This theme informed the ongoing development of the Effect-Engage-Evolve framework by highlighting the central role of anticipated action effects in motor imagery. These findings extend dominant conceptualizations of motor imagery and suggest that attending to action effects may offer a useful direction for motor imagery theory, research, and practice.

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Explicit Engagement During Learning to Reach with a Small Mirror Reversed Distortion: Generalization, Savings, and Interference

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Reaching with mirror reversed (MR) feedback, in which cursor feedback is reflected across the body midline (i.e., the y-axis), has primarily been studied using large distortions that engage explicit (conscious) learning processes. However, it remains unclear whether learning to reach with a small MR distortion engages explicit processes and what role these processes play in generalization, savings, and interference. To address this question, we examined explicit contributions to learning to reach with a 20° MR distortion (N = 90). We also assessed whether these processes generalized to novel targets, contributed to savings upon re-exposure to the same distortion, and interfered with learning to reach with a 20° visuomotor rotation (VR), in which visual feedback was rotated relative to actual hand motion. Results revealed that explicit processes were engaged during learning to reach with the small MR distortion and generalized to novel targets. Further, re-exposure to the same MR distortion resulted in faster re-learning, consistent with savings. Prior learning to reach with the MR distortion interfered with subsequent learning to reach with the VR distortion, resulting in greater movement variability and longer reaction times. Overall, these findings demonstrate that learning to reach with a small MR distortion engages explicit processes that generalize beyond the trained context, contribute to savings, and influence subsequent motor learning.

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Caregiver perceptions of sensorimotor decline in Alzheimer's disease

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Alzheimer's disease and related dementias are among the most debilitating and burdensome health conditions, affecting not only diagnosed individuals but also their family and friends. Growing evidence suggests that changes in sensory and motor function, such as vision and gait, may occur years before clinically detectable cognitive decline. However, it remains unclear whether, and to what extent, sensory and motor changes influence the decision to seek medical consultation for a loved one. Here, we conducted semi-structured interviews with caregivers (n = 14; Mage = 60.9 years, SD = 14.1) regarding their experiences supporting a loved one living with Alzheimer's disease or mild cognitive impairment (Mage = 84.7 years, SD = 9.2). Based on our inductive thematic analysis, we identified three main themes: 1) cognitive and memory changes are the primary motivator to seek medical consultation, 2) changes to sensory and motor functions are not associated with concerns for Alzheimer's disease, and 3) there is a significant desire for more knowledge translation and mobilization efforts, in particular those highlighting sensorimotor decline as early indicators. Our findings suggest that sensory and motor issues currently play a minimal role in concerns for Alzheimer's disease compared to the more traditional cognitive and memory issues. Motor changes seemed to be associated with concerns about other disorders such as Parkinson's disease, whereas sensory changes were most often associated with normal aging or pre-existing issues. Overall, participants indicated a need for educational resources regarding the sensorimotor system and Alzheimer's disease for both healthcare providers and the general public.

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The CHAMPS Project: Laying the Foundation through a Scoping Review of Strategic Mental Health Initiatives

Caitlyn Brannon¹, Rebecca Misiasz¹, Natalie Durand-Bush¹

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As mental health becomes an increasing priority across sport and society, strategic initiatives are needed to guide systematic and sustainable approaches to prevention, support, and care. Although reviews have examined interventions to support athletes' mental health, none have focused on the design, implementation, and evaluation of large-scale mental health initiatives, such as the Mental Health Strategy for High Performance Sport in Canada. It also remains unclear how sectors beyond sport have used strategic initiatives to advance mental health and inform sport research and practice. In this scoping review, we assessed how large-scale strategic mental health initiatives have been designed, implemented, and evaluated across sectors. Informed by the PRISMA-ScR checklist, four databases were searched in November 2025, followed by a grey literature search of Google Scholar and citations. Sources were included if they described the design, implementation, and/or evaluation of a population-, community-, system-, nation-, or organization-wide mental health initiative published in English after 2000. The final sample included 39 sources: 25 peer-reviewed articles and 14 grey literature documents. Most sources focused on evaluation, while fewer addressed design or implementation. Findings showed that initiatives emphasized mental health literacy, promotion, and prevention, with limited evidence of long-term and system-level impact. This review highlights limited evidence on large-scale mental health initiatives across sectors. It lays the foundation for the CHAMPS Project, a SSHRC-funded, national, multi-partner evaluation of Canada's Mental Health Strategy for High Performance Sport. By identifying common approaches, gaps, and evaluation considerations, we offer guidance for future large-scale mental health initiatives.

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Response timing and sequencing are selected in advance but compiled just prior to response initiation

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Skilled movements require the order of elements and their timing structure to be integrated into a complex pattern of muscle activation, yet little is known about how and when these processes occur. A recent two-phase model of response preparation posits that although timing goals can be selected and stored in advance, implementation/compilation of the selected timing parameters is a volatile process that must occur just prior to movement initiation. It is currently unclear whether the advance selection of timing includes the muscles required to execute the movement or is abstract/nonspecific. To address this question, participants (n=32) performed a simple reaction time (RT) task, performing a three key-press sequence with either a simple (isochronous) or complex (non-isochronous) timing structure and either simple (1-Hand) or complex (2-Hand) muscle sequencing. Study time (ST) was used to assess the time required to prepare a response, whereas RT measured the time required to initiate the prepared response. Results indicated that increasing timing and sequencing complexity produced longer ST, indicating there are processes associated with both timing and sequencing that occur in advance. Increasing timing and sequencing complexity also led to increased RT, which was attributed to additional timing and sequencing processes occurring during the RT interval. Collectively, the data support the two-phase model whereby the abstract selection of both sequencing and timing goals can occur before the movement; however, implementation of the specific musculature and associated timing cannot occur in advance and thus must be compiled just prior to response initiation.

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Flexibility in Hand Selection but Stability in End State Comfort: Effects of Object Location in Perihand Space

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Object location is a fundamental constraint in object manipulation. Peripersonal space representations centered on the hands (i.e., perihand space) support hand-object interaction, allowing an actor to visually monitor objects available near the hand in relation to the hand itself. This research considered how objects are grasped from perihand space in second-order planning tasks, as per the end-state comfort effect (i.e., the tendency to plan a movement to end in a comfortable posture, even if it requires an initially uncomfortable one). Overturned cups were placed 5-cm in-front, to the left, and to the right of participants' (N = 26, Mean age = 20.85, 13 female) right- and left-hands. Participants were asked to pick-up a cup to pour water into it. Three trials were completed in 3 conditions (right-, left-, and preferred-hand) across the 6 locations (54 total trials). The proportion of trials with end-state comfort was recorded. Data were analysed via generalized linear mixed models. The model with the interaction term provided a better fit than the main-effects-only model and was retained for interpretation. The overall effect of predictors was significant, $F(12, 1386) = 11.588, p < .001$; however, neither condition ($F(2, 1386) = 0.282, p = .754$), location ($F(5, 1386) = 1.884, p = .094$), nor the interaction ($F(10, 1386) = 1.083, p = .372$) predicted the proportion of grasps with end-state comfort. Results indicate that the end-state comfort is robust to hand use and object location in perihand space.

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“I, robot”. Self-other body mapping occurs with bodies with differing upper limb morphologies.

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In social situations, humans map the observed bodies of other individuals onto the sensorimotor representation of their own body. It is not fully understood to what extent this mapping depends on the biological similarity of the observed body. Understanding the constraints on this mapping is especially important as humans increasingly interact with robots, avatars, and other non-human agents. The present study examined if differences in upper-limb morphology influence self-other sensorimotor mapping. Participants (n=20) completed a body-part compatibility task in which they responded to the colour of targets appearing on five avatars that varied in upper-limb structure: a human, a humanoid robot with mechanical arms, a humanoid robot with pincer arms, a humanoid robot with tentacle arms, and an octopus. Targets appeared on upper or lower limbs of the avatars. Participants responded to the coloured target using their hands regardless of the location of the target on the avatar's body. Compatible and incompatible trials were defined as those on which the targets appeared on the hand or foot of the avatar, respectively. A repeated-measures ANOVA showed a significant body-part compatibility effect, with shorter response times on compatible than incompatible trials. Although response times differed across avatars, the interaction between avatar and body-part compatibility was not significant, indicating that the compatibility effect did not significantly differ across morphologies. These findings suggest that self-other mapping can occur across both human and non-human forms, even when upper-limb morphology differs substantially. Overall, human-like limb structure may not be strictly required for self-other body mapping.

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Poster 77

The Effect of Height and Hydration Status on Transcutaneous Spinal Stimulation Responses in Healthy Female Participants

Catrina Chebae¹, Gerome Manson¹, Jermyl Acuzar¹

¹ *Queen's University*

Transcutaneous spinal stimulation (TSS) is a non-invasive neuromodulation technique used in research and rehabilitation. Although promising for motor recovery, there remains limited understanding of whether individual differences in anatomy or physiology affect response to TSS. This study explored the influence of height and total body water (TBW) on response to TSS in healthy female participants. We hypothesized that a shorter stature and greater TBW would be associated with lower motor thresholds. Lower-limb muscle responses to lumbar TSS were recorded in twenty-five healthy female participants using electromyography (EMG). Height and TBW were measured using a stadiometer and a bioelectrical impedance analysis machine respectively. The main dependent variable was common motor threshold (CMT), defined as the lowest amount of current that elicited a response in all muscles bilaterally. Correlation analyses revealed height exhibited a very weak positive association with CMT ($r_s = 0.114$) that was not statistically significant ($p=0.5880$). TBW demonstrated an insignificant positive trend with motor threshold ($r = 0.367$, $p = 0.0715$), suggesting that participants with greater TBW tended to require higher stimulation intensities. Contrary to our hypothesis, neither height nor hydration status significantly influenced motor threshold. However, an unexpected positive relationship between L1-L2 skinfold thickness and motor threshold suggests that local tissue characteristics may play a more important role and warrant further investigation.

Acknowledgements

Jermyl Acuzar and Dr. Gerome Manson, School of Kinesiology and Health Studies at Queen's University

Psychomotor learning

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Poster 79

Pre-crastination during perceptual decision-making

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Pre-crastination refers to the tendency of completing, or at least initiating, tasks as soon as possible even at the cost of extra effort. Using a double-response task where participants were required to make yes-no decisions twice per trial, Rosenbaum and colleagues (2022) found that participants invested more time on their first decision and rarely changed their minds, which they interpreted as evidence of pre-crastination. However, the shorter latency of the second response may instead reflect an incomplete reset of the decision variable following the first response, thereby facilitating the second response. A more direct test of pre-crastination is whether the first decision is prolonged in the double-response task relative to a single-response task. To test this, participants completed single- and double-response conditions in Experiment 1. In Experiment 2, we investigated whether pre-crastination persists under time pressure as past work has not limited decision time. In both experiments, participants made left-right decisions about the direction of coherently moving dots within a cloud of randomly moving dots. In the double-response condition, participants were required to respond twice per trial. In the single-response condition only one decision was required. First responses in the double-response condition were longer than the responses in the single-condition; however, this effect did not persist under the decision deadline. Across experiments, first responses were longer than second responses, and this effect increased as dot coherence decreased. Overall, our findings suggest that people may only pre-crastinate when decisions are made in the absence of a time constraint.

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Poster 81

Reticular contributions to lower-limb voluntary responses: Evidence from startle

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When performing a simple reaction time (RT) task, RT decreases as the intensity of the go-signal increases due to the well-known stimulus-intensity effect. However, if the stimulus is sufficiently intense to elicit a startle reflex, even greater RT speeding is typically observed, due to increased activation in reticulospinal pathways causing involuntary triggering of the prepared response. This “StartReact effect” is usually confirmed by showing faster RT on trials in which a startle reflex is elicited (SR+), compared to when no startle reflex is observed (SR-). While the StartReact effect is commonly reported for upper-limb movements, it appears to be smaller or absent in lower-limb responses, potentially due to weaker reticulospinal contributions to voluntary lower-limb actions. Indeed, the few studies that have involved lower-limb responses have been equivocal as they either did not distinguish between SR+ and SR- trials (Nonnekes et al. 2014) or reported no significant differences between trials with and without a startle reflex (Coppens et al. 2018). The present study directly investigated the presence of a StartReact response in the lower limbs by having participants prepare to react with either unilateral or bilateral plantar flexion or dorsiflexion while seated with the legs supported. A right wrist-extension task was used as an upper limb comparator. Results demonstrated a robust StartReact effect in all tasks, whereby RT for SR+ trials was significantly shorter than for SR- trials. These results show that reticular structures can contribute to lower-limb voluntary responses – at least in non-weight-bearing contexts.

Acknowledgements

Supported by NSERC

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Poster 83

Perceptual Skills in Movement Education: Discrimination as a Prerequisite for Appraisal and Behavioural Change

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Movement instruction predominantly targets technique, muscular, or cardiovascular outcomes, placing little emphasis on perceptual processes despite their critical role in motor learning (Proske & Gandevia, 2012). Learners with low body awareness struggle to interpret and execute instructions, creating learning bottlenecks (Bernstein, 1967); no standardized framework exists to develop the underlying discrimination capacities. We propose three trainable perceptual skill domains—localized proprioceptive, spatial, and interoceptive—and show that discrimination (D) within each domain is a necessary prerequisite for appraisal (A) and skilled use (U), extending beyond motor performance to self-regulation and behavioural change.

The framework was developed through the naturalistic study of Baseworks, a movement method refined over 10 years across 10,000+ learners under a single constraint: communicability. We applied systematic observation, thematic and D-A-U coding of learner feedback (n=39), kinematic analysis of trained versus untrained participants, a survey of muscular sensation awareness (n=36), and time-coded instruction analysis of instructional modalities.

Necessary condition analysis confirmed D necessary for A (consistency=0.941) and U (consistency=1.000) in the interoceptive domain. Kinematic data showed positional errors 8-15× larger in untrained participants, improving from 8.3% to 36.4% over 7 sessions. Localized proprioceptive awareness showed high individual variation, independent of athletic activity. Instruction analysis revealed Baseworks uses 60% micro-movement cues versus 1% in Pilates—a quantifiably distinct pedagogical profile.

A discrimination-first instructional model aligns with the affordance competition hypothesis (Cisek & Pezzulo, 2024) and produces behavioural outcomes that generalise beyond motor performance, offering a translatable framework for movement pedagogy and motor behaviour research.

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Poster 85

Beat-Coupled Grip Routines Improve Timing in Bass Drummers

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Percussion performance requires precise temporal control, yet little is known about whether brief pre-performance routines can enhance rhythmic accuracy in marching percussionists. Grounded in sensorimotor synchronization theory, this study examined whether a rhythmically structured grip routine improved bass drum performance relative to a non-rhythmic grip routine or passive rest. Twelve marching band bass drummers completed beat-coupled concentric gripping, sustained isometric gripping, and rest conditions in a repeated-measures design. Both grip routines were performed at 20–30% maximum voluntary grip force for approximately two minutes. The concentric condition was synchronized to a 130-bpm metronome matching the performance excerpt, whereas the isometric condition involved sustained contractions at the same relative intensity without metronome pacing. After each condition, participants performed a standardized bass drum excerpt for 10 trials. Temporal error and variability were derived from audio onset analyses, hand and mallet kinematics were obtained using motion capture, and post-condition surveys assessed exercise sentiment, perceived exertion, and willingness to implement each routine. Temporal error differed by condition, with lower error following concentric gripping than rest. Temporal variability also differed by condition, again favoring concentric gripping over rest. Isometric gripping did not significantly differ from either condition. Exercise sentiment was higher following concentric gripping than rest, and interest in four-week implementation was higher for concentric than isometric gripping. No kinematic variables differed by condition. Findings suggest that a brief, beat-coupled concentric grip routine may improve bass drum timing by supporting temporal organization rather than altering movement kinematics.

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Poster 87

A Prelude to Action: How Static Emotional Expressions Shape Our Willingness to Engage in an Object Handover Task

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Emotional expressions strongly shape our willingness to engage in joint action. While previous research has relied on point-light displays (PLDs) to isolate motion, this study used static images of full facial and bodily emotional expressions to enhance ecological validity and examine how real-world biases affect interactions. Participants rated their willingness to engage in an object handover task (give/take a knife/spoon) across two experiments using facial (Exp. 1; $N = 36$) or bodily (Exp. 2; $N = 36$) expressions of emotion (angry, sad, happy, neutral). Across both experiments, robust main effects of Emotion ($ps < .05$) indicated that affective cues strongly influenced baseline willingness. Positive expressions facilitated willingness to engage, whereas threatening and distressed expressions uniquely deterred it. Importantly, these emotional biases were fundamentally modulated by functional context, as evidenced by significant Emotion $\times$ Action $\times$ Object interactions across both experiments. For example, avoidance of angry actors was amplified during high-threat handovers (give, knife). Beyond emotion, unique omnibus effects emerged: facial expressions (Exp. 1) were uniquely biased by target Race and Sex, whereas bodily expressions (Exp. 2) shifted variance toward physical context via a Sex $\times$ Action $\times$ Object interaction. Ultimately, these findings demonstrate that facial and bodily emotional expressions convey overlapping constraints on joint action. This suggests that both faces and bodies offer a shared set of cues that people seemingly combine with social and situational context to establish their willingness to interact.

Acknowledgements

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POSTER SESSION 2

Exercise psychology

Session 5: Poster Session 2

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Poster 2

Does movement need to stop when we get to work? Examining the effects of physical activity messages on employees' intentions to move more at the office

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Amid worsening global inactivity trends (WHO, 2024), examining physical activity (PA) determinants is necessary, particularly in environments where PA is not the norm. In work settings, PA varies by occupation with those in office settings reporting less energy expenditure (Prince et al., 2019). While in-office norms often portray being less active (e.g., sitting) as associated with increased productivity, could other PA norms be more appropriate (Goyder & Mackenzie, 2025)? Traditional PA guidelines provide structured recommendations (≥ 150 minutes MVPA/week, Ross et al., 2020). However, emerging research highlights “Everything Counts” messaging (EC). EC legitimizes PA of any duration/intensity, including unplanned and unstructured movement also known as non-exercise activity thermogenesis (NEAT) (Eskildsen et al., 2026). Emphasizing daily tasks as a source of movement may reduce barriers to in-office PA participation. The study purpose was to explore the effects of two norm messages – 150MVPA or EC versus an attention control (AC) message on office employees' intentions to increase PA. In an online survey, office employees ($N = 151$) were randomly assigned to receive one of three messages: 150MVPA ($n = 55$), EC ($n = 54$), or AC ($n = 42$). Following message receipt, participants completed future in-office PA intentions. Controlling for prior MVPA, a significant ANCOVA main effect ($p = .003$) revealed that the messages affected PA intentions with the 150MVPA ($p = .003$) and EC ($p = .03$) messages increasing PA intentions versus AC. These results further support norms messaging as a strategy to change in-office PA (Priebe & Spink, 2015).

Acknowledgements

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Poster 4

Validity of the Kinarm Approach-Avoidance Task for Assessing Automatic Approach-Avoidance Tendencies Towards Physical Activity and Sedentary Behaviours

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Background. A new bimanual robotic task has been proposed to provide a continuous, multidirectional, and ecologically relevant assessment of the spatiotemporal dynamics that characterize approach-avoidance tendencies.¹

Purpose. To assess the construct, convergent, concurrent, and predictive validity of the Kinarm Approach-Avoidance Task (KAAT).

Methods. 96 healthy young adults performed the KAAT and the keyboard-based Manikin Task with physical activity and sedentary stimuli. Approach-avoidance tendencies were quantified using reaction time, time to peak velocity, x-flips, and opposite displacement. Physical activity was assessed with accelerometers. Questionnaires measured intentions, explicit attitudes, automaticity, and the valuation of physical effort. Trial-level approach-avoidance tendencies were analyzed using mixed-effects models. Convergent validity between the KAAT and Manikin Task and predictive associations with physical activity and related psychological constructs were evaluated using correlations and hierarchical regressions.

Results. Reaction times from the KAAT revealed an approach bias toward physical activity ($p < .001$) but no significant bias toward sedentary behavior ($p < .27$). Time to peak velocity indicated an avoidance bias toward sedentary behavior ($p < .001$). Conversely, x-flips suggested avoidance of physical activity ($p < .001$), and opposite displacement indicated approach toward sedentary behavior ($p < .001$). We found a small correlation between tasks only for physical activity ($r = .23$, $p = .023$).

Discussion. The KAAT is valid to detect approach-avoidance tendencies toward physical activity and sedentary behaviour, and kinematic variables provide additional information potentially related to decisional conflict.

Reference. Park K, Boisgontier MP. *Peer Community Journal* 2025;5:e25.

<https://doi.org/10.24072/pcjournal.530>

Exercise psychology

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Poster 6

Crafting physical activity experiences: Psychological need crafting is associated with psychological needs, mental health, and self-reported physical activity

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¹ Carleton University

Researchers study the role of coaches or parents in supporting psychological needs for competence, autonomy, and relatedness. Need crafting is the process in which a person proactively cultivates their own experiences to enhance psychological need satisfaction. We examined if need crafting in physical activity (PA) is associated with higher need satisfaction, well-being and PA behaviour, and lower need frustration and ill-being. University students ($N=387$; $M_{age}=20.20$ years; $SD=4.9$; 71.6% woman) completed self-report measures at one time. The modified need crafting in PA scale did not provide a good fit to the data due to high correlations between competence and autonomy crafting. As such, an overall need crafting variable was created comprising all three needs. Results from path analysis indicated that higher need crafting was associated ($p<.05$) with higher need satisfaction ($B=.59$), well-being ($B=.25$), and self-report PA ($B=.19$) and lower need frustration ($B=-.30$) and ill-being ($B=-.16$). Higher need frustration was associated with lower well-being ($B=-.25$), higher ill-being ($B=.33$) and unexpectedly, higher PA ($B=.17$). Higher need satisfaction was associated with higher well-being ($B=.27$). The model accounted 8-35% of the variance in outcomes. Results were robust to sensitivity analysis (i.e., removing outliers and including covariates of age, family wealth, and gender). More work is needed to examine the factor structure of need crafting scores and extend these results across time. Overall, in addition to studying social factors that impact psychological needs during PA, researchers should investigate individuals' attempts at crafting their own experiences.

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Poster 8

More Than Just Gym Intimidation: How Gender, SPA, and Self-Efficacy Shape the Perceptions of the Campus Recreation Facility Environment and Exercise Behaviour

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Background: Addressing the decline in physical activity during the post-secondary transition, this study investigated how gender, task self-efficacy, and social physique anxiety (SPA) shape student perceptions and use of campus recreation facilities (CRFs).

Methods: A cross-sectional online survey was completed by 703 students (160 men, 543 women; M age = 21.36, SD = 4.00), which assessed task self-efficacy (Wilson et al., 2020), SPA (SPAS-7; Motl & Conroy, 2001), and perceptions of social and physical environmental characteristics within CRFs. Three-way ANOVAs with bootstrapping were conducted to examine the main and interaction effects of gender (women vs men), task self-efficacy (high vs. low), and SPA (high vs. low) on perceptions of gym environments and CRF use.

Results: No significant three-way interactions emerged. Women with high SPA perceived same-gender exercise environments more positively than women with low SPA and men with high SPA, whereas men with low SPA viewed patrons who lift heavy weights more positively than men with high SPA. Participants with lower task self-efficacy reported more negative perceptions of intimidating gym characteristics, while to a lesser degree those with higher SPA reported more negative perceptions of interpersonal stressors, including unwanted attention and overcrowding.

Discussion: In conclusion, while gender and social physique anxiety act as highly localized modifiers of social comfort, task self-efficacy emerged as the predominant psychological factor dictating how gym environments are perceived and drove actual exercise behaviors across all primary gym zones.

Exercise psychology

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Poster 10

Do 24-hour movement behaviours buffer gender × socioeconomic status intersectional identity-linked mental health concerns among Canadian adolescents? Evidence from the 2023 Health Behaviour in School-aged Children study

Heejun Lim¹

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Background: Mental health concerns, shaped by multiple factors, often emerge during childhood or adolescence. This study examined the association between intersectional identity and mental health and whether this association is modified by 24-hour movement behavior among Canadian adolescents.

Methods: This study used nationally representative, cross-sectional, self-reported data from the 2023 Health Behaviour in School-aged Children study (n=26,362, 6–10 grades). Gender identity (non-cisgender vs cisgender) and family-socioeconomic status (SES) were used to create an intersectional identity. Mental health included depressive symptoms and loneliness; 24-hour movement behaviours included physical activity, screen time, and sleep. Covariates included sex, school grade, immigration status, race/ethnicity, and use of cigarettes, e-cigarettes, and alcohol. Logistic regressions and moderation analyses were conducted.

Results: Non-cisgender adolescents reported higher depressive symptoms (68% vs 32%) and loneliness (86% vs 55%) than their cisgender counterparts. Sleep was the only movement behaviour that moderated the association between intersectional identity and loneliness. Non-cisgender adolescents who did not meet the sleep recommendation showed higher odds of reporting loneliness regardless of family-SES (high-family-SES: OR=11.21; mid-family-SES: OR=8.52; low-family-SES: OR=5.24). Across all intersectional identity groups, meeting the sleep recommendation was associated with lower odds of reporting loneliness compared to those who did not meet the sleep recommendation, particularly for non-cisgender adolescents with high-family-SES (met: OR=11.21 vs unmet: OR=2.40).

Conclusion: Meeting the sleep recommendation may buffer the intersectionality-linked mental health among adolescents in Canada. Equity-oriented, family-based interventions that promote healthy sleep may support adolescent mental health, particularly among gender minority groups with varying family-SES backgrounds.

Acknowledgements

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Exercise psychology

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Poster 12

Self-Compassion Change is Associated with Behavioural and Psychological Outcomes Among Adults with Prediabetes in a Physical Activity Intervention

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Self-compassion (SC) aids self-regulation and may help people with prediabetes engage in physical activity (PA) to reduce type 2 diabetes (T2D) risk. Findings for SC-PA relationships and effects of SC interventions on PA are mixed. We examined whether SC changes during a PA intervention were associated with PA and psychological variable changes, and whether associations differed by condition. In this RCT, 108 sedentary Canadians with prediabetes (Mage = 55.93, SD = 8.90; 95% female), recruited via social media, were randomly assigned to one of two 8-week online, weekly 90-minute group interventions. Intervention participants (n = 56) received PA behaviour change plus SC training; controls (n = 53) received PA behaviour change plus health topics. SC, 7-day accelerometry-measured PA, negative affect related to PA and T2D risk, and fear of SC were assessed at baseline, intervention-end, and 6 and 12 weeks post-intervention. Linear mixed-effects models controlling for age, sex, BMI, group, and time tested whether within-person SC changes were associated with PA and psychological variable changes. SC increases associated with higher PA ($\beta = 13.45$, $F(1,153) = 4.35$, $p = .039$), and lower PA-related negative affect ($\beta = -3.41$, $F(1,145) = 10.41$, $p = .002$), T2D risk negative affect ($\beta = -1.51$, $F(1,201) = 4.88$, $p = .028$), and fear of SC ($\beta = -0.47$, $F(1,140) = 27.89$, $p < .001$). No SC change x group interactions emerged ($ps > .05$). Increases in SC relate to benefits, but ingredients driving SC change remain unclear.

Acknowledgements

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Poster 14

Can Self-Compassion Training Help People with Prediabetes Increase Physical Activity? A Qualitative Study

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Physical activity (PA) can help people with prediabetes manage their health and type-2 diabetes risk but many people with prediabetes engage in insufficient PA. Self-compassion (SC) is associated with PA, yet there is little research on the need and usefulness of SC training within this population. In this qualitative study, we interviewed nine sedentary control participants (M age = 52, SD = 6.88) in a PA intervention to determine if they already use SC to increase PA and whether they could benefit further from SC training. Audio-recorded group sessions from one control wave of an 8-week online, weekly 90-minute group PA intervention were transcribed and analyzed using a deductive thematic analysis. We looked for examples relevant to the 3 SC components (self-kindness; mindfulness; common humanity) and their 3 counterparts (self-criticism; over-identification/avoidance; isolation) to identify when participants already used SC and where they could benefit from it. Themes showed participants already employed mindfulness (e.g., awareness of how PA made them feel), self-kindness (e.g., fierce SC; recognition of success) and common humanity (e.g., drew strength from others' PA struggles). Evidence of self-criticism (e.g., about not meeting PA goals), isolation (e.g., feeling alone in their lack of PA), and overidentification/avoidance (e.g., watching T.V. to distract from bad feelings about PA) showed where SC could be applied. This research adds to the SC and PA behaviour change literature, showing that there is a need for this training, as well as informs future potential SC interventions for people with prediabetes.

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Poster 16

Mental Fatigue, Planning, and Persuasive Message Exposure: A Unique Perspective in the Context of Physical Activity

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Intentions to engage in physical activity (PA) often do not translate into behaviour. Planning, a self-regulation strategy, helps close the intention-behaviour gap but requires cognitive resources. Mental fatigue may lessen motivation and planning quality. Using the psychobiological model and Health Action Process Approach (HAPA), three experiments explored relationships between mental fatigue, PA planning, and persuasive messaging in university students.

Study 1 (N=252) compared action-planning, action-plus-coping, and control groups on mental fatigue. Study 2 (N=94) assigned participants to fatiguing or control tasks to test effects on planning choice and quality. Study 3 (N=108), after a fatiguing task, assigned participants to a no-message control, PA-participation message, or PA-planning message; self-efficacy was measured before and after.

Planning was no more fatiguing than daily tasks ($p=.64$, partial $\eta^2=.004$), and fatigue did not affect planning choice ($p=.99$) or quality ($p=.29$, $d=.30$). Trait self-control and grit negatively correlated with fatigue ($p=.05$). In Study 3, persuasive messaging increased planning likelihood via self-efficacy ($p<.001$). Action and recovery self-efficacy increased in all groups ($p=.003$; $p=.001$). Maintenance self-efficacy rose only with persuasive messages ($p<.001$, partial $\eta^2=.13$). Participants with increased maintenance and recovery self-efficacy were over three times as likely to plan (OR=3.3, $p=.03$; OR=3.1, $p=.02$).

Brief persuasive messaging appears effective for motivating PA planning even when fatigued. Maintenance and recovery self-efficacy may serve as potential levers for motivating PA planning.

Sport psychology

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Poster 18

Enjoyment in Youth Sport: A Scoping Review

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Enjoyment in sport has been defined as a psychological state reflecting feelings of liking, pleasure and the experience of fun. Central to sport experiences, enjoyment can both influence a range of sport outcomes, including participation and dropout, and be influenced by various intrinsic (e.g., perceived competence) and extrinsic (e.g., parental involvement) factors. While enjoyment is frequently invoked in relation to these antecedents and outcomes of sport, it is unclear how enjoyment itself has been conceptualized in youth sport. The purpose of this scoping review was to identify and synthesize existing knowledge on enjoyment in youth sport by examining how it has been conceptualized and operationalized. Following scoping review guidelines from the Joanna Briggs Institute and the PRISMA-ScR extension, we conducted a search of three databases in November 2025 for English, empirical, peer-reviewed articles that measured enjoyment in organized sport environments among youth (ages 5-25). The initial search returned 1613 studies, of which 251 were included for extraction. Within current sport enjoyment research, most studies offered no clear conceptualization of enjoyment (34%), while the remainder embedded it within broader constructs, including motivation (30%), or frameworks (27%) that were either specifically about enjoyment (5%) or treated it as part of a larger model. While 19% of studies used an unvalidated or single-item measure, 70% used a validated instrument (or sub-scale) to measure enjoyment (e.g., Sport Commitment Questionnaire). By conceptualizing enjoyment consistently, future research can effectively measure and operationalize enjoyment in youth sport, resulting in a deeper understanding of its role in participation.

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Poster 20

Co-designing a self-compassion imagery resource for competitive athletes

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Athletes often face failure and setbacks in their sport (Mosewich et al., 2014). However, increasing athletes' levels of self-compassion has been shown to enhance psychological well-being and improve responses to setbacks (Cormier et al., 2025). The purpose of our study was to co-design a self-compassion imagery resource for competitive athletes. We purposefully sampled three men athletes from one university team. Our study utilized a co-design strategy of inquiry, based on the framework of Jorgensen et al. (2024) and informed by the TIDieR-PHP checklist (Campbell et al., 2018), comprising an initial focus group, creation of a prototype resource, follow-up focus group, and creation of a final resource. Both focus groups employed semi-structured questions, and the data was analyzed using Elo and Kyngäs' (2008) qualitative content analysis process. The inductively generated categories from the initial focus group were the need for individuality, simplicity, and a hesitance to embrace self-compassion. The three main categories that organized our feedback from the follow-up focus group were titled—"it should stay," "that's a nay," and "change it this way," in addition to an overarching category of simplicity. We applied these findings to create three cue card decks tailored to different times of the sport season. Each cue card contained a compassionate imagery script followed by reflection questions to be completed asynchronously and individually. Our study provides an example of how to implement men athletes' self-compassion imagery preferences into a practical resource, and highlights simplicity as a critical preference to be considered in the resource development process.

Acknowledgements

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Poster 22

Exploring The Implementation of Co-Designed Resources to Enhance Quality Participation in Special Olympics Canada Sport Programs

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Quality participation (QP; i.e., positive subjective experiences) is achieved through repeated exposure to the six building blocks of quality experiences (autonomy, belongingness, challenge, engagement, mastery, meaning). Enhancing QP in sport for persons experiencing intellectual disabilities can increase the quantity of physical activity they engage in, leading to physical, psychological, social, and subjective wellbeing benefits. Special Olympics (SO) Canada provides sport opportunities for persons experiencing intellectual disabilities. SO has expressed a desire to foster QP in programming; however, coaches require guidance and support. Accordingly, the research objective was to explore the acceptability, adoption, and feasibility of co-designed resources for QP enhancement in existing SO Canada programs.

Alongside SO Ottawa program head coaches ($N=2$), 7 swim-specific and 8 soccer-specific QP resources tailored to program desires (e.g., soccer group games fostering team belongingness) were produced. Meetings ($n=6$ for soccer, $n=5$ for swim) between the research team and coaches offered opportunities for identification of program needs, resource refinement and feedback. Inductive thematic analysis was used to identify themes from meetings regarding implementation outcomes and QP enhancement. Acceptability and appropriateness were highest for resources that prioritized belongingness for QP enhancement among SO athletes. Time within program sessions was identified as a barrier to feasibility of implementation. Conversely, resource implementation itself was not considered a hindrance to feasibility.

This research explored the implementation outcomes of co-designed resources for SO sport programs, highlighting important considerations for QP enhancement among persons experiencing intellectual disabilities. Future research should consider observing athlete perceptions of QP to validate coach-reported QP data.

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Poster 24

The Development of Interpersonal and Intrapersonal Knowledge, and Social Learning Facilitation: Assessing the Needs of Coaches and Learning Facilitators

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Canadian soccer coaches and learning facilitators expressed a desire to participate in communities of practice (CoPs; Wenger et al., 2002) focused on developing their interpersonal and intrapersonal knowledge, and for the facilitators, their social learning facilitation (Aslimani, 2022). The ultimate purpose of having these thematic communities of practice (TCoPs) was to support soccer coaches' effectiveness to enhance competence, confidence, connection, and character in their athletes (Côté & Gilbert, 2009).

As the first study of a three-part participative/collaborative research project, this presentation reports on a needs assessment conducted through 15 semi-structured individual interviews with 10 purposively selected soccer coaches and 5 soccer learning facilitators, and refined through three focus groups (two for coaches and one for facilitators). The collected data were analyzed using reflective thematic analysis (Braun & Clarke, 2019). Furthermore, a set of criteria (Smith & Caddick, 2012) was used to support quality (Burke, 2016).

Six themes (topics/needs) were developed through the analysis. Four were interpersonal-related topics: emotional intelligence, transformational leadership, effective communication and feedback, and the quality of the coach-player relationship. Two were intrapersonal-related topics: self-awareness and critical reflection, and reflective practice and decision-making. In addition, a seventh topic was identified by the facilitators: social learning facilitation. These identified topics were used to guide the social learning process in the subsequent studies, which aimed to co-create practical knowledge within the two TCoPs (for coaches - Study 2, and facilitators - Study 3).

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Evaluating the content of an online athlete leadership development training program: A pilot study

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Athlete leadership plays a critical role in effective team functioning, influencing satisfaction, cohesion, motivation, and performance (Cotterill et al., 2022; Loughead, 2017). Contemporary athlete leadership frameworks emphasize developing leadership capacity across multiple team members, leading to the creation of leadership training programs designed to strengthen athlete leadership behaviours. However, many existing programs rely on in-person delivery, which can be resource intensive and limit accessibility. To address these challenges, the research team developed the Leadership Excellence Athlete Driven (LEAD) Program, an online athlete leadership training intervention. The purpose of this pilot study was to evaluate the acceptability, appropriateness, usability and feasibility of the first five LEAD modules among 30 U Sports athletes. Following completion of each module, athletes completed questionnaires assessing these implementation outcomes. Data were analyzed using descriptive statistics and repeated-measures analyses comparing ratings across modules. Results indicated no statistically significant differences across modules in acceptability, usability, or feasibility, suggesting that the modules provided a relatively consistent participant experience. In contrast, appropriateness ratings for the module labeled Team Goal Champion were significantly lower than the other modules: Be the Standard, Fuel the Team, Raise the Bar, and Lead Together ($p < .001$). As such, athletes believed Team Goal Champion aligned less with the team's needs and performance contexts than the other modules, highlighting a potential area for further refinement. Findings will be used to refine the LEAD Program prior to broader implementation and contribute to the creation of accessible, scalable, and evidence-informed athlete leadership training opportunities within sport.

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Player-coaches in the Cape Breton Women's Hockey League

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The “Home of women’s hockey” arena at Cape Breton University (CBU) was formed in 2025, devoted to advocacy for equity and inclusion in hockey. The arena reimagines ice hockey culture around inclusive forms of personal and collective flourishing often absent in mainstream hockey cultures. Its major user groups include the Blizzard female hockey association (girls’ programming), the Caper’s women’s high-performance hockey team (including student-athletes, emerging adults), and the Cape Breton Women’s Hockey League (CBWHL) – a new group of five teams made up of women from the community who are Masters athletes ages (25+). Masters sport is organized sport for adults past the age of peak performance. Whereas the former two groups still have mostly men coaching girls and women, the CBWHL has all women player-coaches. Player-coaches are leaders in Masters sport who act as coaches for their teams but also athletes on these same teams. The purpose of this study is to explore how women player-coaches in the CBWHL have supported women players who start or return to playing hockey in adulthood. Five semi-structured two-person interviews were conducted with the player-coaches of each team. The interviews were analyzed using reflexive thematic analysis as they pertain to player-coaches’ development of a quality masters sport experience, including meaningful competition, mastery, validation, empowerment, fun and fitness, social relationships, intellectual stimulation, and opportunities for personal challenge. Findings suggest that women player-coaches play a critical role in shaping inclusive hockey cultures by challenging ageism, building community, and promoting lifelong sport participation among adult women.

Acknowledgements

The authors gratefully acknowledge the women player-coaches of the Cape Breton Women's Hockey League for their participation in this research.

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Poster 30

Initial confirmatory factor analyses of the AIMS3G demonstrate its promise for assessing athletic identity among adult athletes

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The AIMS3G (Brewer et al., 2022) offers a multidimensional account of athletic identity, comprising Athletic Identity 'proper', two Properties (Prominence, Self-worth Contingency), and two Processes (Self-presentation, Social Reinforcement). The AIMS3G factor structure has not been examined in adult athletes, the purpose of this study ($N = 989$, 25-94 years). Using confirmatory factor analyses, we evaluated the AIMS3G as three distinct models (unidimensional 'proper' scale, two-factor Properties, and two-factor Processes), and as a full, five-factor model. Examined separately, the distinct models showed adequate fit: the Processes model met all five criteria ($\chi^2/df = 3.15$, CFI = .96, TLI = .94, SRMR = .05, RMSEA = .07), the Properties model met four of five ($\chi^2/df = 4.94$, CFI = .93, TLI = .91, SRMR = .06, RMSEA = .09), and the unidimensional 'proper' model met three of five criteria ($\chi^2/df = 7.57$, CFI = .98, TLI = .93, SRMR = .03, RMSEA = .12). The five-factor model met one of five criteria ($\chi^2/df = 6.62$, CFI = .87, TLI = .85, SRMR = .08, RMSEA = .08), with three weakly loading items ($\beta < .46$) on Social Reinforcement and Self-worth Contingency. In the multifactor models, discriminant validity was supported, and reliability was acceptable (except Social Reinforcement). Excluding the three weak items, model fit met four of five criteria and convergent validity improved. Rather than evidence against the AIMS3G, findings suggest the measure is promising yet not fully confirmed, warranting further evaluation or content extension before use in adults.

Acknowledgements

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Seeing Through Uncertainty: The Role of Experience in Sport Officials' Eye Movements During Ambiguous Decisions

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Decision-making is a critical skill for sport officials (e.g., referees, umpires, judges), requiring officials to make rapid decisions in ambiguous situations (Kittel et al., 2021). Although previous research has examined visual search behaviours among officials (Hancock & Ste-Marie, 2013), the effects of ambiguity remain unclear. This study examined how ambiguous clip scenarios and officiating experience affect decision-making accuracy and eye movements among hockey officials. Participants ($N = 19$; 17 male) viewed 80 video clips that had previously been recorded from a referee's on-ice perspective during live hockey games. During the task, participants wore Tobii Pro 3 Glasses and indicated their decisions (penalty or non-penalty) following each clip. Decision accuracy, average fixation duration, number of fixations, and number of saccades were analyzed using mixed-effects models. A significant Ambiguity $\times$ Expertise interaction was observed for decision accuracy, $OR = 2.02$, 95% CI [1.29, 3.15], $p = .002$. Less experienced officials demonstrated similar accuracy for ambiguous ($M = .67$) and non-ambiguous clips ($M = .70$), whereas experienced officials were less accurate during ambiguous clips ($M = .58$) than non-ambiguous clips ($M = .76$). No significant effects of ambiguity, expertise, or their interaction were observed for eye movements ($p > 0.05$). Findings suggest that ambiguity has a differential impact on decision-making accuracy, with experienced officials demonstrating performance declines in ambiguous situations. Consistent with previous officiating research (Hancock & Ste-Marie, 2013), the absence of corresponding eye-movement differences suggests that ambiguity influences how visual information is interpreted rather than how it is visually acquired.

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A Comparative Analysis of Emerging Technologies for Developing Decision-Making in Interdependent Sport

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In team sport, competitive success depends on athletes' perceptual-cognitive skills and the ability to make decisions under time pressure and environmental uncertainty. Despite recognition of decision-making as a key determinant of expert performance, the rapid adoption of technology-based learning tools has outpaced empirical guidance on their theoretical foundation and balancing methodological considerations with practical implications, particularly among teams. As such, we conducted a comparative analysis exploring how technologies can be used to study and enhance decision-making in situ, within dynamic environments representative of team sport. We discuss four popular technologies: 2D video analysis, 360-degree video, mobile eye-tracking, and immersive virtual reality (VR), alongside four main criteria: fidelity, implementation cost, time investment, and appropriateness for individual and team-based learning. Our analysis suggests that 2D and 360-degree video provide accessible, time-efficient tools for retrospective decision review and team-based learning, though their limited perception-action coupling might constrain functional fidelity. Mobile eye-tracking provides valuable insights into athletes' visual search behaviours during in-situ performance, enhancing ecological validity; however, this method is constrained by cost, technical complexity, and challenges associated with team-level application. Immersive VR demonstrates the greatest potential for high-fidelity, repeatable decision-making learning that preserves representativeness while allowing experimental control, though significant barriers remain related to development time, cost, and athlete tolerance. We conclude by discussing theoretical and methodological implications for researchers, coaches, and other invested sport partners by outlining future directions focused on hybrid approaches, longitudinal designs, and collective decision-making processes that better align technological innovation with sport psychology principles.

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Poster 36

How is Attentional Focus Operationalized and Defined Among Experienced Participants in Motor Performance Research? A Scoping Review.

Quinten Carfagnini¹, Philip Sullivan¹, Jae Patterson¹

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Attentional focus has been broken down into many different elements in the past as a way to help understand the mechanisms between attention and motor learning/performance (Morgan & Pollock, 1977; Nideffer, 1976; Wulf & Prinz, 2001). The current scoping review aims to map the current operationalizations and definitions of different types of attentional focus concepts used in motor performance research among an experienced participant population. The scoping review was adapted utilizing JBI methodology (Peters et al., 2020) in conjunction with the Arksey and O'Malley framework for scoping reviews (Arksey & O'Malley, 2005). A search for peer-reviewed journal articles, pre-print articles, grey literature, theses/dissertations and book chapters was conducted on March 3rd, 2026, from SPORTDiscus, PsycINFO and Web of Science Core Collection among other databases. Of the 7,071 total records imported, 105 studies were included. A review of the literature showed that attentional focus has been operationalized in terms of several established dimensions (Direction, Distance, Relevance). These attentional focus dimensions have also been broken down into several elements including Internal/External, Proximal/Distal, Relevant/Irrelevant, Process/Outcome, Skill/Environment, Skill-Focused/Dual-Task etc. Of the 105 studies, 87 defined their attentional focus conditions in terms of either internal or external focus. Newer evidence has suggested holistic focus as an emerging concept in the literature with 9 studies included in the review, all published within the last three years. A major gap in the literature is a lack of research surrounding attentional breadth, with zero studies including broad/narrow focus conditions among experienced participants.

Acknowledgements

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**Program evaluation of quality participation at the OneAbility Games:
Creating meaningful experiences for individuals experiencing disability
engaged in sport**

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In May 2026, the inaugural OneAbility Games occurred in Richmond, British Columbia, where 1200 students and athletes experiencing disability engaged in various sport offerings. Individuals attended within two streams: PLAY (students supported by their educators) and ACHIEVE (provincial and national athletes). During the Games, participants reported their quality participation experiences using surveys (students, athletes, and educators) and drawings (students only). Surveys used the Measure of Experiential Aspects of Participation (MeEAP) to assess the six experiential elements of quality participation, using a 1 (strongly disagree) to 7 (strongly agree) scale. Ten students (6 males, 3 females, 1st grade to 10th grade), 53 educators (mean age 41.46 years, 44 females, 9 males), and 69 athletes (mean age 28.18 years, 35 females, 33 males) completed the surveys. Students and athletes reported moderate levels of quality participation experiences at the Games (mean MeEAP scores of 5.82 for students and 5.71 for athletes). High levels of enjoyment were captured across all sport offerings. Educators reported a mean MeEAP score of 4.83 for their perceptions of their students' quality participation at the Games. Mean range for MeEAP scores fell between 5.61-6.28 for students, 4.51-6.61 for athletes, and 4.53-5.09 for educators. These findings suggest that the inaugural OneAbility Games provided meaningful opportunities for quality participation experiences for students and competitive athletes. Findings also help to identify areas for future development of the Games, including improved focus on athlete engagement across teams at the Games, alongside improving levels of challenge and overall engagement for students in the Games.

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Poster 40

"It's worth every penny in the end": Making meaning of parental sacrifice in youth sport

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Supporting children's sport participation often requires parents to manage substantial financial, logistical, and emotional demands, sometimes by sacrificing time, money, and other valued family resources. Sacrifices are often seen as a normal part of parenting but may be understood and experienced in different ways. Guided theoretically by intensive parenting ideology (Hays, 1996), this study explored how parents made meaning of the sacrifices involved in supporting their children's sport participation. Interviews were conducted with nine parents (seven mothers, two fathers) with at least two children in sport. Interviews were analysed using reflexive thematic analysis (Braun & Clarke, 2022). Findings demonstrated that parents viewed the sacrifices of youth sport as a means to express care, commitment, and investment in their children, which was reflected in four themes: First, parents constructed sacrifice as part of 'what committed parents do', normalising extensive financial, logistical, and emotional labour. Second, parents framed 'sacrifice as a developmental investment', viewing sport as an avenue to cultivate life skills and future opportunities that made sacrifices worthwhile. Third, sacrifice was justified by positioning 'childhood and sport participation as temporary', an opportunity parents might later regret not supporting. Finally, sacrifice had 'limits and expected returns' with continued investment contingent on children demonstrating effort and commitment in sport. These findings suggest that parental sacrifice in youth sport is not simply a cost of time and money, but a moral and relational negotiation through which parents negotiate good parenting, children's development, and competing family needs.

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Relational Adaptability in Sport Psychology Consultants: Conceptualizing Trust-Cue Diagnosis and Calibration in Multi-Stakeholder Contexts

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Background: People form near-instant judgments of others along two universal dimensions, warmth and competence, persisting despite new information (Fiske, Cuddy, & Glick, 2007; Maliqi, Lalot, & Quiamzade, 2025). The same signal can read as warmth or competence differently across contexts (Asch, 1946). Sport psychology consultants (SPCs) work with athletes, parents, coaches, and club staff, each applying different standards. Prior research separately examined SPC-athlete relationships (Sharp, Hodge, & Danish, 2015), relationship maintenance (Rhind & Jowett, 2010), and SPCs amid stakeholder conflict (Males, Kerr, & Hudson, 2020), but none integrates these into one competency for diagnosing and calibrating trust cues across stakeholders.

Purpose: The purpose of this study was to conceptualize Relational Adaptability by applying impression-formation theory to sport psychology consulting's multi-stakeholder context.

Methods: A narrative conceptual synthesis of impression-formation theory, counseling trust theories (Bordin, 1979; Mayer, Davis, & Schoorman, 1995), and sport psychology literature on multi-stakeholder relationships, organized along entry, development, and termination.

Results: Three cyclical components emerged: (1) trust-cue diagnosis—reading what signals trust for each stakeholder, not a fixed formula; (2) interactional calibration—adjusting communication and intervention style, required because first impressions tend to persist; (3) consistent professional identity—maintaining a coherent professional self across stakeholders and through termination (Rhind & Jowett, 2010).

Discussion: Relational Adaptability reframes SPC expertise as relational performance, not skill alone. Unlike interpersonal competence, which emphasizes the possession of effective social skills, Relational Adaptability emphasizes ongoing interpretation and calibration of trust cues across relational contexts. Future grounded theory research should examine how SPCs experience this in practice.

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The Affective and Motivational Experiences of Student-Athletes During a Swimming Season: A Longitudinal Exploratory Study

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Student-athletes experience meaningful affective and motivational changes throughout a season. Self-determination theory (SDT) suggests that satisfaction and frustration of basic psychological needs may explain some variations. To examine this, we followed university swimmers ($N=21$) during their season using an ecological momentary assessment (EMA) design. Athletes completed pre- and post-season measures of motivation, emotions, and goals for swimming and academics, along with daily assessments of need satisfaction and frustration for 1 week, each month of the season (42 total). Given limited research in this context, the present analysis adopts an exploratory approach focused on pre- and post-season measurements to outline changes, and a multi-level longitudinal model to explore fluctuations across the season. Preliminary results indicate that athletes beginning the season with higher controlled motivation for swimming demonstrated increases in intrinsic motivation ($r=.55$, $p=.01$) and decreases in extrinsic motivation ($r=-.50$, $p=.02$). Satisfaction with training increased significantly, $t(20)=2.01$, $p=.049$, $d=0.54$, while contingent self-esteem decreased, $t(20)=4.50$, $p<.001$, $d=0.90$. Academically, participants reported a decrease in autonomous motivation to study, $t(20)=-3.08$, $p=.006$, $d=0.44$, alongside reduced competence frustration, $t(20)=-2.26$, $p=.04$, $d=0.55$. These findings provide an initial snapshot of seasonal motivational and affective changes. Drawing on SDT, we expect that need satisfaction, and frustration will exhibit meaningful within-person fluctuations across the season. Ongoing analyses of the EMA data will allow modelling of the timing, variability, and potential predictors of change in greater detail.

Keywords: basic psychological needs, motivation, sport, university student

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Perfectionism vs. Excellencism in Sport: Emotional and Motivational Outcomes Across

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Perfectionism is an increasing issue in youth which is also linked to an array of negative outcomes (Limburg et al., 2017). The goal of this study is to examine how perfectionism and excellencism are differently associated with performance expectations, emotional well-being, and perfectionistic concerns in a perfectionistic motivational climate compared to an empowering motivational climate. A sample of N=594 (286 sample A (empowering climate), 308 sample B (perfectionistic climate)) participants were divided into two groups where they were presented with a scenario depicting either the empowering motivational climate or a perfectionistic climate. Participants completed measures of perfection/excellence (MEP, Gaudreau 2019) and psychological outcomes (e.g. anticipated enjoyment/success, positive/negative affects, perfectionistic concerns). Multiple regression analyses were conducted separately within each experimental condition. In the perfectionistic climate, results show that perfectionism is positively and significantly associated with better enjoyment, success, and positive affects while showing a negative association with negative affects. In the empowering motivational climate, excellencism was linked to better perceived enjoyment, success, positive affects and showed a negative association with perfectionistic concerns. Overall, the empowering climate is associated with more positive outcomes regardless if an individual strives for perfection or excellence. Furthermore, individuals who strive for excellence tend to prosper in empowering climates relatively to those who strive for perfection. Finally, in the perfectionistic climate, perfectionism is associated with more positive outcomes when compared to excellence strivers.

Acknowledgements

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Gaudreau, P. (2019). On the distinction between personal standards perfectionism and excellencism: A theory elaboration and research agenda. *Perspectives on Psychological Science*, 14(2), 197–215. <https://doi.org/10.1177/1745691618797940>

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Exploring the Conceptual Overlap between Transformational Coaching and Quality Participation

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Despite preliminary evidence of the conceptual relationship between the Transformational Leadership (TFL) and Quality Participation (QP) frameworks, little research has demonstrated the specific overlapping components of the TFL coaching behaviours and QP strategies. Quality participation in sport and physical activity is particularly important for individuals with disabilities. Therefore, understanding how various approaches to coaching may contribute to quality experiences represents an important area of investigation. Thus, the purpose of this study was to examine the conceptual overlap between QP and TFL through in-situ observations of coaches and athletes, and interviews with disability sport coaches. Specifically, this research aimed to identify how the components of TFL align with the dimensions of QP, providing a foundation for future research exploring how transformational coaching behaviours may enhance quality participation in disability sport. An exploratory qualitative design was employed, utilizing observations and semi-structured interviews with disability sport coaches. Data were analysed using a deductive content analysis approach guided by the TFL and QP frameworks. Findings showed the most significant overlap of coaching behaviours occurred between the TFL tenet of idealized influence and the QP block of belongingness (60%), followed by intellectual stimulation and autonomy (48%), inspirational motivation and challenge (41%) and individualized consideration and autonomy (37%). These findings indicate that TFL may provide a practical framework for identifying and supporting coaching behaviours that create quality experiences for individuals with disabilities and represents a promising direction for future research and practice in disability sport.

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Employment of Certified Mental Performance Consultants in Canada: An Update

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Mental performance consulting (MPC) is a growing field in North America with recent advances in its professionalization. In Canada, the number of Certified Mental Performance Consultants (CMPCs) has grown drastically since the introduction of the new certification pathway in 2020. While there are data showing the educational background, employment setting, and income of CMPCs from other countries (e.g., USA, Vosloo et al., 2023), only one presentation to date (Harenberg et al., 2025) has provided information on Canadian CMPCs using a rather small sample. The purpose of the present study was to update the data presented by the authors with a larger sample. In total, 77 participants (mean age=42.0 SD=11.47) completed a survey assessing educational background, employment setting, and income. Half of the respondents held a Master's degree (n=39, 50.6%) while the other half completed a doctoral degree (n=38, 49.4%). The average annual income was \$118,351.56 (SD=\$56,513.36, Median=\$110,000). The income derived from applied mental performance consulting was \$49,039.06 (SD=\$44,762.54, Median=\$32,500). The gross and applied income did not differ between Western, Central, and Eastern Canada. Mental performance consultant charged an average rate of \$151.69 per hour (SD=\$51.35, Median=\$140) for individual sessions and \$343.75 (SD=\$193.47, Median=\$300) for team workshops. The results indicate that many practitioners may be engaged in another career and pursue mental performance consulting work part-time. Outreach efforts should be undertaken to grow the field and create more full-time employment opportunities.

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Exploring Canadian Athletes' Experiences in Mixed-Gender Sporting Dyads

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Although mixed-gender dyadic sport events have become increasingly prominent at both professional and amateur levels, most research on sport dyads has been limited to same-sex or coach-athlete dyads. Further, the extant group dynamics literature has primarily centered on individual and interdependent team sports. As such, the current study, as part of a larger cross-cultural project, qualitatively explored the experiences of athletes participating in mixed-gender dyadic sports. Eight Canadian athletes (4 women; $M_{age} = 37.6$), who have trained and competed as part of a mixed-gender dyad for at least one year, participated in individual semi-structured interviews. Template analysis (King, 2016) was undertaken to analyze participants' responses to questions pertaining to group dynamics, the challenges and benefits of being a member of a mixed-gender sporting dyad, and the characteristics of successful mixed-gender partnerships. The analysis yielded several categories related to gendered experiences within mixed-gender dyads, including: (a) gender-related individual characteristics and sport environment (e.g., physicality, ego, game dynamics); (b) mixed-gender partnership functioning (e.g., role expectations, positioning and targeting strategies); and (c) perceived individual and group outcomes (e.g., personal growth, partnership termination). Participants reported challenges (e.g., gender stereotypes, limited involvement) and benefits (e.g., increased confidence, greater sense of inclusion), and identified factors associated with successful mixed-gender partnerships (e.g., communication, partner knowledge). Overall, these findings highlight how member attributes (e.g., gender) and group environment (e.g., dyads) shape group dynamics within the context of mixed-gender dyadic sports while also offering insights into gender-informed approaches to fostering successful mixed-gender partnerships.

Acknowledgements

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Poster 54

Learning through innovation: Understanding value creation for varsity sport members in a Design Thinking project

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Background. Design Thinking (DT) can be a catalyst for organizational innovation and a powerful pedagogy for building individuals' innovation capabilities. Only recently has its potential for professional development in sport been recognized (Culver et al., 2026), and few studies have explored sport members' experiences with DT and the value created from such engagement.

Purpose. This presentation shares insights from the Innovate to Elevate (I2E) Design Challenge, a 10-month DT project that brought together interdisciplinary teams from three Canadian post-secondary institutions to reimagine student-athlete mental health and performance support. Drawing on social learning theory, we asked: What value was generated through participation in a DT project, and for whom?

Methods. Eleven participants from the I2E Design Challenge engaged in 60-minute online focus groups to reflect on their experience and discuss practical implications. The eight value cycles in Wenger-Trayner et al.'s (2020) value creation framework deductively guided data analysis to interpret participants' learning outcomes.

Results. Positive value in the form of empathy was created as participants engaged with student-athletes to gain a deeper understanding of their daily realities, leading some participants to reimagine their supportive role. Additionally, facilitative leadership and workshop structure drove engagement, while technological barriers and scheduling conflicts hindered participation.

Discussion. As innovation becomes a growing priority in sport organizations, understanding how DT creates value (or not) for sport members is critical. This study extends DT scholarship by leveraging social learning theory to examine its pedagogical value and offers practical insights for cultivating innovation capabilities in sport.

Acknowledgements

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When competition stops being competitive: A quantification of (dis)parity in women's junior ice hockey

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Parity refers to competitive balance, wherein the top teams within a league are not significantly better than those at the bottom. While standings provide a measure of team performance, they may not fully capture competitive balance in a league. Advanced ranking systems can provide a more comprehensive assessment of parity, accounting for opponent quality and game outcomes (Skinner & Freeman, 2009). This study examined changes in competitive balance within the Ontario Women's Hockey League (OWHL) U22 Elite division. Data from 2197 games, including team records, game outcomes, goal differential, and goals for and against per game, were collected from owhlu22elite.ca across four seasons (2022-2026). Seasonal data were analysed using Massey ratings and Bradley-Terry computational models, which rank teams based on performance and each team's relative strength, and degree of home ice advantage. While Massey rating model outputs suggest a reduction in the number of extremely weak teams, the league's highest ranked team also improved, limiting overall improvements in league parity [2022-2023 Massey rating parity range: 7.77 (-4.25 - 3.52); 2025-2026 Massey rating parity range: 8.6 (-3.62 - 4.98)]. Goal differential increased from 261 to 430 goals across seasons, supporting a lack of parity, as did the lack of a home ice advantage (2025/26 Bradley Terry model home ice advantage = -0.32%). Overall, improvements among lower ranked teams were insufficient to offset growing dominance at the top of the league, negating opportunities for league parity, and potentially limiting exposure to meaningful competition, talent identification, and development.

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Mental Health Promotion in Canadian Community Sport: Evidence, Resources, and Gaps in Evaluation

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Background: Community sport is a common setting for Canadian youth and may offer opportunities for mental health promotion. However, it remains unclear whether current practice in Canadian sport settings aligns with evaluated evidence.

Purpose: This study examined peer-reviewed evidence and publicly available practice resources related to youth mental health in Canadian sport contexts.

Methods: We conducted a rapid review of peer-reviewed Canadian youth sport mental health studies and an environmental scan of publicly available mental health resources developed by Canadian sport and sport-adjacent organizations. Eligible studies and resources focused on youth, sport or community sport settings, and mental health promotion, prevention, or support.

Results: Six peer-reviewed studies and 21 publicly available resources were identified. Evidence from the rapid review primarily linked organized sport participation with psychosocial and well-being outcomes, including social connection and positive youth development. Evidence for reductions in mental ill-health outcomes was limited. The environmental scan identified resources emphasizing mental health awareness, supportive environments, coach education, inclusion, and referral guidance. However, few resources reported formal evaluation, and limited evidence was available regarding implementation, effectiveness, or adaptation within Canadian youth sport contexts.

Discussion: Findings suggest that community sport is a promising but under-evaluated setting for youth mental health promotion in Canada. Although many resources are available to support sport organizations, stronger and more feasible evaluation strategies are needed to determine whether these tools improve youth mental health outcomes and support evidence-informed practice in community sport.

Sport psychology

Session 5: Poster Session 2

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Poster 60

“Eggs don't last forever. Fertility is just as important as sports”: Female athletes’ experiences of egg freezing and In Vitro Fertilization

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Assisted reproductive technologies (ART), including egg freezing and In Vitro Fertilization (IVF), are increasingly used by female athletes to preserve their fertility while maintaining their athletic careers. For athletes who want to continue training during ART, current recommendations to limit or avoid exercise can cause significant distress, which may be exacerbated by the logistical hurdles and side effects of fertility treatments. Research is needed to understand how female athletes navigate training and ART. Semi-structured interviews were employed to describe athletes’ experiences undergoing egg freezing and/or IVF and identify recommendations for better supporting athletes pursuing ART. Twenty-five athletes (8 elite, 17 recreational) participating in a variety of team (e.g., soccer, rowing, rugby) and individual sports (e.g., CrossFit, dance, triathlon) were interviewed. Participants were primarily from North America (n = 21, 84%). Transcripts were analyzed via inductive content analysis. Five categories were generated from the data: 1) The Weight of ART and (Not) Training, 2) Modifying Training during ART, 3) Adapting Expectations, 4) Competing Interests, and 5) Creating Supportive Environments. Together, findings suggested ART were difficult and overwhelming processes that were further intensified by training restrictions and concerns about the potential risks of continuing to train despite clinical guidance. Athletes described adjusting performance expectations and modifying training to manage the physical, emotional, and logistical demands of ART, ultimately prioritizing their fertility. Although participants believed it was possible to balance ART and sport-specific training, they identified a need for greater support from sport organizations (e.g., funding, job security) to do so successfully.

Psychomotor learning

Session 5: Poster Session 2

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Poster 62

Enhanced implicit adaptation in an isometric visuomotor rotation task reduces explicit contribution to adaptation

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Implicit sensorimotor adaptation is thought to be driven by error signals created by discrepancies between various sensory information sources. The clamped visuomotor rotation task, where the visual cursor is rotated invariantly relative to the target independent of the participant's explicit reach direction, has been used to isolate implicit adaptation. We recently employed an isometric version of the task, designed to dissociate proprioceptive afferent and motor-based efferent contributions to signals of reach position. Participants moved a cursor to targets by applying horizontal forces to a fixed handle. Participants implicitly adapted in the isometric task, even when the hand never actually moved to the target. More importantly, the level of implicit adaptation exceeded levels typically observed in the clamped paradigm. In the present study, we used our isometric task in a contingent visuomotor rotation paradigm to 1) investigate adaptation in a situation where both explicit and implicit processes contribute to adaptation, and 2) to determine if there would also be increased implicit adaptation, and if so, see its influence on explicit processes. During perturbation trials the cursor was rotated 45 degrees relative to the isometric force direction. Participants were instructed to get the cursor to hit the target and report where they were isometrically aiming to. All participants fully adapted to counteract the visual rotation, despite some participants not noticing the rotation and reporting no use of explicit strategies. Moreover, compared to previous visuomotor rotation studies, participants again exhibited higher levels of implicit adaptation, and consequently, reduced contributions from explicit aiming.

Psychomotor learning

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Poster 64

The effect of acute short-form video viewing on go/no-go performance

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¹ Dalhousie University

Background: Consuming short-form videos on smartphone applications like TikTok and Instagram has become increasingly popular among younger generations. However, there is growing concern, both colloquially and in the literature, that overconsuming this form of media may negatively impact cognitive function, particularly within the domains of inhibitory control and attention. The current study tested the hypothesis that, relative to reading control, 15 minutes of short-form video viewing would impair Go/No-go performance, a task known to require inhibitory control and attention abilities, among young adults.

Methods: Thirty-six young adults were recruited to complete a single-session counterbalanced crossover design in which all participants completed 15 minutes of short-form video viewing and a 15-minute reading control condition on a smartphone. Immediately following each condition, participants completed a Go/No-go task. Participants also reported the time that they spent watching short-form videos in their daily lives.

Results: Participants reported 110.4 (SD = 75.8) minutes of short-form video viewing per day over the month preceding testing. On the Go/No-go task, participants displayed lower sensitivity (d') following short-form video viewing relative to reading control, indicating that their ability to correctly identify and respond or not respond to “Go” and “No-go” trials was impaired following a 15-minute bout of short-form video viewing.

Conclusion: Sensitivity on Go/No-go tasks is an established measure of attention control. In this context, the current study suggests that a bout of short-form video viewing impairs aspects of inhibitory control and attention in young adults relative to reading control.

Acknowledgements

We would like to thank the individuals who volunteered their time as pilot participants during the piloting of this research design. We also thank all individuals who participated in this study.

Psychomotor learning

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Poster 66

Assessing hand pose estimation accuracy in augmented reality applications for hand impaired populations during real-object interactions

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In the context of rehabilitation, augmented reality (AR) applications allow for ecologically valid tasks where individuals can interact with real-objects and see their real environment. AR head mounted displays (HMD) offer markerless prediction of hand joint positions (i.e., pose estimation) and can be leveraged to build hand rehabilitation applications. However, there is a gap in understanding: 1) the impact of hand impairment on the pose estimation accuracy of an AR HMD, 2) the influence on accuracy of occlusion caused by real-object interactions, and 3) how accuracy of the AR HMD compares to state-of-the-art pose estimation methods. Thus, in the current study, pose estimation accuracy of the HoloLens 2 and state-of-the-art pose estimation methods (WiLoR, HaMeR, WildHands, and MediaPipe) was assessed during interactions with clear (i.e., no occlusion condition) and opaque objects (i.e., occlusion condition). Two groups of participants included uninjured controls (n = 15) and individuals with cervical spinal cord injury (cSCI: n = 13, Neurological Level of Injury: C3–C6; AIS: A–D). A multi-camera setup was used to generate the ground truth 3D estimates via triangulation. While predictions from WiLoR and HaMeR offered a ~2 mm accuracy advantage over the HoloLens 2, the clear-opaque difference was significant but minimal (~0.1 mm) and pose estimation accuracy did not differ between the cSCI and uninjured groups. Overall, these results suggest that the HoloLens 2 may be a viable option when designing rehabilitation applications that include real-object interactions for hand impaired populations.

Acknowledgements

Funding: Craig H. Neilsen Foundation

Psychomotor learning

Session 5: Poster Session 2

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Poster 68

The intensity of an irrelevant acoustic stimulus influences perceptual decision making when visual information is sparse

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An inspection time (IT) task can be used to measure the duration that a visual stimulus must be shown in order to make accurate perceptual judgements. Typically, a pi figure with differing leg lengths is briefly presented and participants must judge which leg was longer. When presentation times are short (15-30ms), responses are made at the chance level. However, accuracy improves with longer display durations, reaching asymptote around 90ms. One previous study demonstrated that an irrelevant acoustic stimulus could influence visual perceptual decisions in an IT task. At short visual presentation times a tone presented to the left or right ear via headphones led to an increase in the proportion of responses made to the side of acoustic stimulus presentation. It remains unclear whether participants simply chose the side of the acoustic stimulus voluntarily, or whether the acoustic stimulus involuntarily influenced the response. The current study addressed this by varying the intensity of the tones (either quiet: 55 dB, or loud: 85 dB). If involuntary processes contribute to decision making, it was predicted that a louder tone would produce a larger proportion of responses to the presentation side. Alternatively, if participants simply chose the side with the irrelevant tone, then the intensity should have no impact on decision making. Results showed that at the shortest IT durations (15, 35ms) participants were significantly more likely to choose the side of the acoustic stimulus when it was loud, suggesting that irrelevant accessory stimuli can subliminally/involuntarily affect perceptual decision-making processes.

Acknowledgements

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Psychomotor learning

Session 5: Poster Session 2

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Poster 70

Not quite the same: Cognitive process in skill acquisition versus visuomotor adaptation

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Motor learning involves implicit, unconscious processes, as well as explicit, conscious strategic processes. In skill acquisition, early learning is associated with cognitive processing, with performance influenced by perceived choice, verbalizable strategies, and focus of attention. Drawing from this work, we examined whether engaging cognitive processes produce benefits in visuomotor adaptation. We pooled data across three experiments in which participants reached when cursor feedback was rotated 40° clockwise relative to hand motion. Cognitive engagement was manipulated by requiring participants to choose their reach target, report their intended movement strategy, or modify the locus of their focus of attention. Explicit and implicit adaptation were assessed using the process dissociation procedure. Target choice did not benefit adaptation during training but led to greater explicit adaptation following training. Reporting a movement strategy, particularly when related to initial direction, benefited adaptation and led to greater explicit adaptation. An internal focus of attention benefited adaptation during training but had no effect on explicit adaptation. Across manipulations, implicit adaptation did not differ between groups, demonstrating independence between explicit and implicit processes when assessed following training. These results only partially aligned with predictions from skill acquisition research: target choice and reporting a strategy benefitted explicit adaptation, whereas the benefit of attentional focus diverged from predictions within skill acquisition favouring an external focus. Together, this work supports the need for a broader motor learning framework that integrates cognitive processes into models of motor adaptation, while recognizing that predictions from skill acquisition may not always generalize to visuomotor adaptation.

Acknowledgements

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Psychomotor learning**Session 5: Poster Session 2**

Friday, Oct 2 | 5:15 PM | Ballroom C

Poster 72**Condition-Specific Movement Signatures in a Quantitative Lower-Limb Coordination Task**Igor Neder Serafini¹, Natalie McIntosh¹, Gerome Manson¹¹ *Queen's University*

Common lower-limb clinical assessments may not fully capture how different disruptions alter movement execution. Quantitative tasks characterizing accuracy, speed, and temporal control may provide more sensitive markers of impairment and support clinical translation, particularly in settings where active-marker systems are impractical. We examined whether a seated lower-limb square-tracing task detects distinct movement signatures under sensory and cognitive challenges in neurologically healthy adults, and whether a markerless motion-capture pipeline recovers comparable patterns. Nineteen adults completed the task under five within-participant conditions: eyes open (EO), eyes closed (EC), mental arithmetic (MA), working memory (WM), and paresthesia (PA). Primary outcomes included root-mean-square error (RMSE), mean velocity, and dwell time, and an EO-referenced multivariate framework summarized deviations in accuracy, velocity, and dwell from baseline. Linear mixed-effects models tested condition effects with participant random intercepts and Holm-adjusted comparisons, and a secondary analysis compared video-derived outcomes with a Codamotion marker-based model. Univariate analyses showed that MA impaired performance, resulting in a significantly larger RMSE and lower mean velocity than the EO condition, whereas dwell time did not differ across conditions. Using multivariate analyses, we found that all conditions (EC, MA, WM, and PA) significantly deviated from EO. MA had the largest deviation, followed by EC, then WM and PA. The markerless pipeline showed strong agreement with Codamotion (ICCs of 0.97, 0.93, and 0.90). Taken together, these results show that multivariate analyses characterized disruption more completely than univariate outcomes alone. These multidimensional signatures, recoverable without active markers, support the translation of the task toward accessible bedside assessment.

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Poster 74

Multimodal brain imaging of mild traumatic brain injuries in athletes: a systematic review

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Mild traumatic brain injury (mTBI) is a neurological event caused by external mechanical force to the head. Athletes in contact sports are at particular risk for repeated mTBI which can lead to cognitive symptoms and long-term adverse health outcomes such as persistent post-concussive symptoms or dementia. This risk is increased by the lack of objective biomarkers as computed tomography and conventional magnetic resonance imaging (MRI) are blind to microstructural and functional brain alterations upon mTBI. Moreover, research is challenged by the heterogenous nature of mTBI and comorbid psychiatric conditions. To address these limitations, multimodal brain imaging approaches are needed. This study systematically reviewed multimodal imaging studies of athletes and summarized key neuroimaging findings. The databases Web of Science and PubMed (MEDLINE) were searched between January and March 2026 (all years). 14 studies were included in the analysis. The main neuroimaging modalities used were (f)MRI, diffusion tensor imaging and magnetic resonance spectroscopy to assess changes in functional connectivity and cerebral blood flow, diffusion metrics and brain metabolites respectively. Altered neuroimaging findings were identified beyond the acute and subacute phase. However, no consistent neuroimaging pattern emerged due to heterogeneity in study design and sample characteristics underlying the need for standardized acquisition and analysis protocols.

Psychomotor learning

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Poster 76

Preparation of response timing and sequencing involves two independent sub-processes

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When making multi-component responses, adding more components increases reaction time (RT) even when the sequence is fully known in advance. The current study examined theoretical processing constraints involved in preparing the sequencing and timing of these responses. Participants (n=29) performed a RT task involving a three key-press sequence with either a simple (isochronous) or complex (non-isochronous) timing structure and either simple (1-Hand) or complex (2-Hand) sequencing structure. A precue provided either all features of the movement (simple-RT), no features of the movement (choice-RT), or a partial precue of either sequencing or timing information only. Under both partial precue conditions, RT decreased significantly relative to choice RT, indicating some aspect of timing and sequencing can be prepared in advance. However, even when the timing or sequencing structure was known, RT was still affected by the complexity of the response timing or sequencing, indicating some aspect of these preparatory processes cannot occur before the go-signal and must occur during the RT interval. These results support a two-phase model of preparation, whereby selection of the response goals (including timing and order of elements) can occur well in advance and be retained in working memory, but implementation/compilation of the selected parameters is a volatile process that must be compiled just prior to response initiation. These two phases of response preparation appear to be independent, and the inability to preprogram certain aspects of the movement may represent a fundamental limitation on the types of information that can be stored in working memory.

Acknowledgements

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Psychomotor learning

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Poster 78

Robotic and Clinical Assessments of Visuospatial Working Memory are Associated with Proprioceptive Function After Stroke

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Everyday upper limb movements require the use of working memory to encode, store, and retrieve relevant information; proprioception to monitor and correct movements; and motor function to execute motor commands. Notably, impairments to each of these are common after stroke, which can make it challenging to perform movements as desired. Previous research has focused on addressing sensorimotor impairments, but few have investigated how impaired (visuospatial) working memory impacts upper limb sensorimotor function after stroke. The purpose of the current study was to test a novel robotic assessment of visuospatial working memory and its relationship to 1) robotically-assessed sensorimotor function, and 2) a validated clinical assessment of visuospatial working memory, to characterize and validate robotically-assessed visuospatial working memory after stroke. We tested individuals with stroke (N=30) and age-matched controls (N=21) using the Kinarm Robotic Exoskeleton. Visuospatial working memory was assessed using the Paired-Associates Learning (PAL) task and was compared to proprioceptive (Kinesthetic Matching (KIN)) and motor (Visually Guided Reaching (VGR)) function. Individuals with stroke (N=22) also completed the Spatial Addition task, a validated, clinical assessment of visuospatial working memory. We found that PAL was significantly related to KIN ($\rho=0.43$, $p<0.01$), but not VGR ($\rho=0.21$, $p=0.14$). PAL was also significantly related to Spatial Addition ($\rho=-0.54$, $p=0.03$). These results suggest that impaired visuospatial working memory after stroke may selectively affect the storage and use of proprioceptive information needed to produce movements, independent of motor function ability. Further, Kinarm PAL is an effective tool to quantify visuospatial working memory in individuals with stroke.

Acknowledgements

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Psychomotor learning

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Poster 80

"Slow and steady still loses": gradual learning disrupts consolidated motor memory

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Adapting to a new visuomotor rotation can disrupt the memory of a previously acquired rotation, particularly when competing actions are learned close together in time. This disruption, termed interference, occurs when a learned mapping is no longer retained after a competing one is acquired, such that performance returns to a naïve-like state. We have previously shown that interference emerges when the competing mapping is acquired implicitly (error-clamped), whereas explicitly acquired mappings (delayed-feedback) are retained. Interference is often attributed to insufficient consolidation of the first memory and a 24-hour delay between competing adaptations is typically assumed to protect it. The purpose of the present study was to determine whether interference would emerge when the second rotation is learned through implicit processes after a consolidation period. Participants completed an ABA paradigm in which an abrupt 30° rotation A was learned on Day 1, an opposing rotation B was learned 24-hours later on Day 2 and finally rotation A was retested on Day 3. Rotation B was introduced gradually (0.15°/trial, reaching 30° over 200 trials), driving implicit recalibration while keeping participants unaware of the perturbation. Results revealed a robust interference effect: hand deviations during re-exposure to A did not differ from initial adaptation of A, resembling naïve learning rather than retention. Thus, interference does not require awareness of error: implicit recalibration alone disrupts a consolidated sensorimotor mapping even after a 24-hour delay. Susceptibility to interference depends on how competing memories are acquired, not consolidation time alone.

Psychomotor learning

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Poster 82

Developmental Differences in Rapid Online Motor Corrections: A Kinematics Comparison of Children and Adults

Shujing Zhang¹, Haemee Chae², Lucas Hart², Anna Calegari², Will Filippo², Ariel Kim², Ella Mucciolo², Elizabeth O'Neal², Joseph Kearney², Jodie Plumert²

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Rapid online motor control (ROC), the ability to modify an ongoing movement when a target unexpectedly shifts, relies on feedforward planning and feedback integration. ROC improves markedly during middle childhood, yet developmental comparisons remain limited.

To quantify ROC kinematic differences across 7-, 8-, and 9-year-old children and adults using a double-step reaching paradigm. 71 children and 40 college-aged adults ($M = 18.6$ yr) performed computer-based double-step reaching to targets that remained stationary (75%) or jumped early or late in the movement (25%). Four kinematic variables were analyzed: correction latency, maximum trajectory deviation, post-correction duration, and time-to-peak velocity.

Correction latency decreased with age (7-year-olds: 308 ms; 8-year-olds: 284 ms; 9-year-olds: 261 ms; adults: 223 ms), with all child groups significantly slower than adults (all $ps < .01$); among children, only the 7- and 9-year-old groups differed significantly ($p < .001$), supporting a smooth developmental gradient. Children also showed greater maximum trajectory deviations, longer post-correction durations, and higher time-to-peak velocity than adults (all $ps < .05$). Late-jump trials produced greater trajectory deviations and longer correction latencies than early-jump trials (both $ps < .001$), while post-correction durations were longer for early- than late-jump trials ($p < .001$).

Findings suggest a continuous developmental trajectory in ROC through middle childhood, indicating gradual maturation of feedforward planning and feedback integration. Late-jump timing further constrained performance, reflecting greater reliance on feedback-driven correction and limited predictive motor control in children. These multi-variable kinematic findings advance understanding of ROC development across middle childhood.

Psychomotor learning

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Poster 84

Different control points on a tool facilitate the formation of multiple motor memories: A replication of Heald et al. (2018)

Michael M. Croteau¹, Nour Al Afif¹, Joshua G.A. Cashaback², Michael J. Carter¹

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Past research has consistently shown that adapting to two opposing dynamics (i.e., force-fields) for identical movements results in substantial interference and no learning. However, object manipulation and tool use highlight real-world examples of successfully learning opposing dynamics, such as using different parts of a claw hammer to strike or remove a nail. Heald and colleagues (2018) recently showed that separate motor memories for opposing force-fields can be learned when each force-field is associated with a distinct control point on a virtual object. Here, we tested the replicability of this finding. Participants were randomly assigned to either the single-control-point group or the two-control-point group, and made straight-ahead reaching movements while controlling the same virtual object. The object had three visible control points: two lateral circles and a central “x”. In the single-control-point group, participants moved the central control point to a central target, while left and right targets served only as cues indicating force-field direction. In the two-control-point group, participants moved one of the lateral control points to its corresponding lateral target, which indicated the force-field direction. Critically, the hand’s start and end positions were the same for both groups. Consistent with Heald et al. (2018), we found that participants in the two-control-point group successfully learned the opposing force-fields, whereas participants in the single-control-point group were unable to learn. These findings replicate previous work and provide further evidence that linking different dynamics with distinct control points on the same object facilitates the formation of multiple motor memories.

Psychomotor learning

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Poster 86

OVER THE TOP OR WAY TOO LONG: SEX DIFFERENCES IN CHUCK GRIP REGULATION WITHIN DISCRETE AND CONTINUOUS CONDITIONS

Michelle Campbell¹, Steve Hansen¹

¹ *Nipissing University*

Sex differences in motor performance are often contextualized under socio-cultural or evolutionary models. In manual control contexts, males exhibit larger maximum force production and overshoots of submaximal target forces. Females are typically more accurate acquiring target force, but at a lower rate of force development. We aimed to elucidate mechanisms behind sex differences in chuck-grip force regulation during submaximal force production within both discrete and continuous movement conditions. Using a chuck grip, participants pinched a force transducer to match target profiles. Eighty different right-handed individuals (40 female, 18-30 years) completed one of the two experiments. For both experiments, participants completed six MVCs before and after twelve experimental trials. Discrete experimental trials consisted of 6 trials with three randomly ordered (30N, 45N, and 60N) target pulses (500ms in duration) and 6 trials with three consistent pulses (45N). In the continuous task, target force continuously shifted over nine 500ms-plateaus in a consistent pattern, with three plateaus each of 15N, 30N, and 45N. Males produced larger maximum force. In the discrete task, males (0.5N) had higher deviation from target force compared to females (-1.4N). In the continuous task, males overshoot less over time when switching from a low to a higher submaximal target force. In contrast, females were more accurate over time for plateaus with a preceding higher force plateau. Results are contextualised within a framework proposing the development of a learned causality between the self-awareness of the efficiency of one's own underlying neurological functioning and regulation of the observed behaviour.

Psychomotor learning

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Poster 88

Quantifying Neuromotor Contributions During the Countermovement Descent: A Sensitivity Analysis Within a Phase-Based Vertical Jump Framework

Arianna Masala¹, Eugene Masala²

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² *Canadian Nuclear Laboratories*

Background/Purpose:

Coaches often seek to identify which movement actions contribute most to jump performance and therefore warrant training emphasis. This study demonstrates the application of a phase-based analytical framework for quantifying descent-phase execution parameters and evaluating their contribution to vertical jump height.

Methods:

The countermovement descent phase was modeled within a broader framework linking jump phases through force-driven propagation of motion variables. Parameters under neuromotor control—including active unloading, arm-swing acceleration, trunk-fold acceleration, and countermovement depth—were propagated analytically to jump height. Sensitivity coefficients were derived to quantify the effect of each parameter while retaining athlete-specific physical characteristics within the model.

Results:

Using representative values for an elite female athlete and plausible improvements in execution parameters, the framework predicted jump-height increases of 2.5 cm from active unloading, 1.5 cm from arm-swing acceleration, 1.6 cm from trunk-fold acceleration, 3.2 cm from countermovement depth. The corresponding cumulative increase was 8.8 cm. These values serve as a demonstration of the framework's ability to quantify and compare movement contributions rather than as definitive performance predictions. Sensitivity coefficients ranked the relative influence of the analyzed variables, enabling athlete-specific prioritization of training interventions and demonstrating that projected gains depend on athlete-specific characteristics.

Conclusions:

The framework provides a quantitative link between neuromotor execution and performance outcomes. By separating physical and execution-related factors, it enables individualized sensitivity analysis and may assist coaches in prioritizing technical interventions. Future applications may extend this sensitivity analysis to examine potential interactions among execution variables and their propagation across subsequent jump phases.

Session 6: Oral Presentations

Saturday Oct 3, 8:30 am – 10:00 am

Exercise psychology

EXPERIENCES AND MEANINGS OF PHYSICAL ACTIVITY

Psychomotor learning

Motor Learning, Practice & Individual Differences

Sport psychology

NOVEL APPROACHES TO RESEARCH METHODS AND INTERVENTION

Exercise psychology

Session 6: EXPERIENCES AND MEANINGS OF PHYSICAL ACTIVITY

Saturday, Oct 3 | 8:30 AM | Capitale

Queer Women's Experiences in a Group-Based Physical Activity Intervention

Megan Sutton¹, Jade Bailey², Seairra Němeček¹, Eva Pila¹

¹ *Western University*

² *McGill University*

Queer women report the lowest levels of engagement in, and enjoyment of, physical activity compared to all other sexual minoritized groups. These disparities may reflect the unique intersectional effects of social identities, heteronormativity, sexism, overt discrimination, and safety concerns within conventional physical activity settings. Queer-inclusive physical activity programs may offer a promising context for supporting quality physical activity. The present study explored the reflections and experiences of inactive queer women participating in a queer-inclusive physical activity intervention. Self-identified queer women ($N = 22$; $M_{age} = 23.78$) participated in a 6-week physical activity program involving 12, 1-hour sessions, led by queer facilitators. Following moderate-to-vigorous aerobic and resistance exercises in each session, participants engaged in a group-based post-activity facilitated discussion exploring the interconnections between gender identity, sexual orientation and physical activity. Group-based discussion data were analyzed using reflexive thematic analysis. Participants described how histories of avoiding, assimilating, and navigating male-dominated, heteronormative fitness environments shaped experiences of (in)visibility, safety and hypervigilance. Within queer-inclusive physical activity settings, participants reported relational safety, opportunities for body appreciation, and the importance of shared identities. Findings suggest that queer-inclusive physical activity programs can support more enjoyable and affirming engagement among inactive queer women. Recommendations for queer leadership, cultural sensitivity, intentional language, and active resistance of heteronormativity were identified as factors that can support safe and welcoming physical activity environments for queer women.

Exercise psychology

Session 6: EXPERIENCES AND MEANINGS OF PHYSICAL ACTIVITY

Saturday, Oct 3 | 8:45 AM | Capitale

"It's like putting frosting on a cake of shit.": Exploring How Exercise Is Experienced and Discussed in the r/depression Subreddit

Jérôme Sayeur¹, Jason Dellatolla¹, Lindsay R. Duncan¹

¹ *McGill University*

Individuals experiencing depression often engage in less exercise and face unique barriers to physical activity compared to the general population. Much of our understanding of these barriers stems from structured surveys and research interviews, limiting a more ecologically valid understanding of actual lived experiences related to physical activity. This study aims to explore the lived experiences of physical activity among individuals with depression, as they share and discuss them on online forums offering unsolicited, real-world accounts of experience. We conducted a thematic analysis of 16 Reddit threads (initial posts and associated comments) with high engagement and relevance to the research question. We identified four themes regarding how individuals with depression experience physical activity in diverse ways 1. "I feel good moving my body" highlights how exercise can enhance perceived well-being. 2. "I've been working out for the last 150 days. I want to kill myself even more" shows the negative effects some users associate with exercise on their mental health. 3. "It's like putting frosting on a cake of shit" describes that exercise may serve as a temporary distraction rather than a solution for overall well-being. 4. "Even the low-hanging fruit is hard to reach." examines how depression itself acts as an overlooked barrier to exercise. This study highlights the importance of exercise interventions tailored to the unique challenges faced by individuals with depression. These findings can help develop strategies to enhance engagement, adherence, and potential mental health benefits.

Exercise psychology

Session 6: EXPERIENCES AND MEANINGS OF PHYSICAL ACTIVITY

Saturday, Oct 3 | 9:00 AM | Capitale

“Gym Days Are Good Days”: Quality Participation and Exercise Maintenance Among People with Disabilities

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Background: Quality participation (QP) has been suggested as important for sustaining motivation and participation in exercise. QP is defined as a person’s appraisal of their exercise experiences satisfying their values and needs across one or more of six elements: autonomy, belongingness, challenge, engagement, mastery, and meaning. Aligning with Self-Determination Theory, PERMA Theory of Well-Being, and Social Cognitive Theory, quality exercise participation experiences should be linked to exercise maintenance among people with disabilities. However, minimal research has explored these relationships.

Purpose: The objective of this study was to qualitatively explore the relationship between QP elements and exercise maintenance among people with disabilities.

Methods: Eight participants living with multiple sclerosis, cerebral palsy, or spinal cord injury (3 women, 5 men; 50% under 50 years, 50% aged 50 years or older) who completed at least one exercise session as part of a university-based exercise research project were recruited. Individualized data-summary reports, created with QP-data collected from the university-based exercise project, were used to inform semi-structured interviews. Data were analysed using narrative analysis.

Results and Discussion: Participants who re-enrolled in the exercise project described more meaningful QP experiences than those who stopped/dropped the exercise project. Valued QP experiences (i.e. challenge and belongingness) appear to influence exercise maintenance and exercise non-maintenance depending on individual preferences and the exercise context. The QPF provides a useful framework for understanding exercise experiences and exercise maintenance among people with disabilities. Exercise programmers should consider intentionally fostering QP elements to promote exercise maintenance among people with disabilities.

Exercise psychology

Session 6: EXPERIENCES AND MEANINGS OF PHYSICAL ACTIVITY

Saturday, Oct 3 | 9:15 AM | Capitale

The Affective Exercise Experiences instrument (AFFEXX) in women: Psychometric evidence and associations with body image

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¹ Western University

Background: The Affective-Reflective Theory proposes that repeated experiences of pleasure and displeasure shape automatic affective evaluations of physical activity. To assess these experiences, the Affective Exercise Experiences (AFFEXX; Ekkekakis et al., 2021) questionnaire was developed and has demonstrated strong validity evidence and associations with physical activity behaviour. Continued examination of the AFFEXX in novel samples is needed to build validity evidence for its use across populations and contexts. Additionally, despite evidence linking body image experiences with exercise enjoyment, pleasure, and affective judgements, little is known about how AFFEXX scores are associated with body image among women. **Purpose:** This study examined the factor structure of the AFFEXX at two timepoints in a sample of adult women and explored associations between AFFEXX scores, body image, and physical activity behaviour. **Method:** Adult women ($N = 389$; $M_{age} = 33.58$, $SD = 12.18$) completed two online surveys delivered one month apart. Results: Confirmatory factor analyses indicated excellent model fit for the AFFEXX at each timepoint (CFI's $> .95$, TLI's $> .95$, SRMR's $< .04$, RMSEA $< .09$) and temporal stability over one month (r 's = .83 to .87). More positive affective experiences in physical activity were negatively associated with internalized weight stigma, self-objectification, and body social comparisons (r 's = -.16 to -.45) and positively associated with body compassion, interoceptive awareness, and physical activity behaviour (r 's = .21 to .40). **Discussion:** Findings contribute validity evidence for the AFFEXX among women and suggest that body image experiences may shape women's automatic affective evaluations of physical activity.

Acknowledgements

SSHRC

Psychomotor learning

Session 6: Motor Learning, Practice & Individual Differences

Saturday, Oct 3 | 8:30 AM | Chaudière

Fitts' Task as a Window into Developing Visuomotor Control in Childhood

Dildare Yurtsever¹, Xiaoxin Chen¹, Lisa Christian¹, Ewa Niechwiej-Szwedo¹

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Background: Visuomotor control improves throughout childhood, enabling gains in movement speed and accuracy. Fitts's law characterizes the trade-off between movement time and task difficulty, helping studying sensorimotor development. This study examined age-related changes in visuomotor control from childhood to adolescence using a Fitts' task combined with limb kinematics.

Methods: Typically developing children (n=62; 7–15 years) with normal or corrected vision completed a reciprocal tapping task, alternating between targets both quickly and accurately. Hand and eye movements were recorded using Optotrak motion capture and an EyeLink-II tracker. Difficulty was manipulated across six Index of Difficulty levels by varying target size. Outcomes included movement time, acceleration, deceleration, homing, and dwell durations. Median values per level were analyzed with linear mixed-effects models to test age and difficulty.

Results: Increasing task difficulty produced longer movement times, consistent with Fitts's law. Age predicted total movement time ($\beta = -16.72$ ms/year, $p < .001$), with older children showing greater efficiency. Acceleration ($\beta = -7.02$ ms/year, $p < .001$) and deceleration durations ($\beta = -9.98$ ms/year, $p < .001$) decreased with age. Effects were weaker for homing duration ($\beta = -2.20$ ms/year, $p = .049$), and dwell time showed a non-significant trend ($\beta = -8.21$ ms/year, $p = .054$).

Discussion: Developmental gains were pronounced in early movement phases, with smaller age-related changes in late-stage processes (homing and dwell time). These results indicate that visuomotor control continues developing across childhood and support Fitts' task as a probe of sensorimotor maturation.

Acknowledgements

UK Waterloo Foundation, Natural Sciences and Engineering Research Council

Psychomotor learning

Session 6: Motor Learning, Practice & Individual Differences

Saturday, Oct 3 | 8:45 AM | Chaudière

It takes time: Autistic Traits Predict Motor Encoding After Extended Practice

Cheryl M. Glazebrook¹, Elena M. Broeckelmann¹

¹ *University of Manitoba*

Motor sequences are initially encoded in allocentric visual-spatial coordinates by neurotypical learners. That said, with ongoing practice learners can develop an egocentric motor representation based on proprioceptive signals. Autistic learners have been shown to rely less on visual-spatial coding, and more on proprioceptive signals when generalizing motor skills compared to their neurotypical peers (Haswell et al., 2009; Sharer et al., 2016). Take together, the purpose of the present study was to provide insight into short- and long-term practice of a goal-directed motor sequence, including how the presence of sub-diagnostic autistic traits influenced sequence encoding. Eleven neurotypical righthanded adults (18–36years) practiced a 12-item SRTT with their preferred hand over two consecutive days by sequentially reaching to an array of targets displayed on a touchscreen. Both days included 8 practice blocks and several intermanual transfer tests that included spatially congruent and motor congruent versions of the sequence. Autistic traits were recorded using the Comprehensive Autistic Trait Inventory (CATI). Sequence performance was quantified as the time it took learners to complete each sequence block. Using a repeated measures ANCOVA, we found a statistically significant effect of CATI scores, but not of transfer type (parallel, mirrored). A Pearson Product-Moment correlation specific to the mirrored blocks revealed that CATI scores were associated with motor encoding after long-term practice specifically ($r=0.7$, $p=0.01$). Thus, the influence of autistic traits on motor sequence encoding was evident after multiday practice, perhaps due to consolidation and integration of visual- and proprioceptive signals from the limb.

Acknowledgements

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Psychomotor learning

Session 6: Motor Learning, Practice & Individual Differences

Saturday, Oct 3 | 9:00 AM | Chaudière

Knowledge of human and algorithm learning rates is required to shape human performance during coadaptation

Matthew Short¹, John Buggeln¹, Nicholas Muscara¹, Seth Sullivan¹, Truc Ngo¹, Jan Calalo¹, Nour Al Afif², Michael Croteau², Michael Carter², Joshua Cashaback¹

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From interacting with an exoskeleton to reduce metabolic cost or a brain-machine interface to control a cursor on a screen, humans are increasingly co-adapting alongside adaptive algorithms. Current human-algorithm interaction approaches do not consider human adaptation models, preventing predictions of the human's performance. Here, we leveraged knowledge of both human and algorithm learning rates to predict and shape how healthy adults co-adapt alongside algorithms during classic adaptation paradigms. Shaping refers to tuning an adaptive algorithm to influence a human's movement contribution. To shape human performance, we tuned algorithms to work with (assistive) or against (resistive) participants across two reaching experiments. Experiment 1 required human-algorithm pairs to adapt to a viscous curl field. The assistive algorithm applied forces in the same direction as the human to reduce reach trajectory errors. The resistive algorithm applied forces in the opposite direction as the human to augment reach trajectory errors. Experiment 2 required human-algorithm pairs to jointly control a cursor while adapting to a visuomotor rotation. The assistive algorithm moved the jointly controlled cursor in the same direction as the human to reduce reach endpoint errors. The resistive algorithm moved the jointly controlled cursor in the opposite direction as the human to augment reach endpoint errors. As predicted with a state-space model, participants had significantly greater early and late adaptation with the resistive compared to assistive algorithm in both Experiments. Leveraging both human and algorithm learning rates will be critical to shape human behavior when interacting with wearable technologies and rehabilitation robotics.

Psychomotor learning

Session 6: Motor Learning, Practice & Individual Differences

Saturday, Oct 3 | 9:15 AM | Chaudière

No Action Required: Investigating the Extent to Which Motor Learning Occurs Through Different Types of Covert Practice

Kyle Vallido¹, Nicola Hodges¹, Sarah Kraeutner¹

¹ *University of British Columbia*

Little is known about the behavioural separability across modalities of covert practice. In particular, it is unknown how each type of motor imagery [the mental rehearsal of how movements look (visual; VMI) or feel (kinaesthetic; KMI)] influences motor learning, and whether this differs to action observation (AO). Here, we tested the extent to which motor learning occurred via each modality in novices to inform on their separability. Participants (N = 47; right-handed) practiced a joystick-based explicit motor sequence in one of three groups: VMI, KMI, or AO. Motor performance (assessed via movement time (MT) of correct sequences) was captured in a pre, post, retention design. A linear mixed-effects model was fitted for MT with fixed effects of Time Point and Group with pre-planned Helmert contrasts applied (AO vs. [VMI and KMI] and VMI vs. KMI), and participant as a random intercept. An interaction between Group (AO vs. [VMI and KMI]) and Time Point (pre vs. retention) was found ($p = 0.003$), indicating that MTs decreased to a greater extent from pre to retention following motor imagery (collapsed across type) vs. AO. Interactions between Group (VMI vs. KMI) and Time Point (pre vs. post; pre vs. retention) were found ($p = 0.035$, $p = 0.002$) indicating that MTs decreased to a greater extent across all time points following KMI vs. VMI. While motor imagery overall led to greater motor learning than AO, KMI led to greater motor learning than VMI in novices, informing on the separability across modalities of covert practice.

Acknowledgements

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Psychomotor learning

Session 6: Motor Learning, Practice & Individual Differences

Saturday, Oct 3 | 9:30 AM | Chaudière

Implicit vs. Explicit Practice of Structured Piano Sequences: Performance and Retention Outcomes

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¹ *Queen's University*

Music performance integrates auditory, visual, and motor information, serving as a key area for studying multisensory support of skill acquisition. An important challenge in motor learning is identifying practice conditions that optimize both acquisition and long-term retention, yet few studies have compared implicit and explicit learning using a complex, ecologically valid multisensory task. This study examined how practice structure influences the learning and retention of musical sequences in novice participants. Two groups of participants completed a two-day practice protocol using either an implicit (n = 30) or explicit (n = 30) practice paradigm. The implicit practice group performed 150 randomized trials wherein a repeating target sequence was embedded among distractor and free-play trials. The explicit practice group completed 150 trials in 10 sequence-specific blocks of 15 and received note-accuracy feedback every five trials. Accuracy and asynchrony were assessed immediately and 24-hours after practice, followed by a transfer test involving a novel sequence. The primary outcomes were accuracy and timing asynchrony. Secondary movement outcomes included movement smoothness, movement variability, and total motion. Analyses revealed that while the explicit practice group had significantly better accuracy and asynchrony during acquisition, the implicit practice group was significantly more accurate in both immediate and delayed retention tests. The implicit practice group also had significantly better asynchrony in the transfer test. The explicit group also had significantly smoother movement patterns during acquisition, and both retention tests. These results provide evidence that an implicit practice structure, that promotes exploration, may be better for learning musical sequences.

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Psychomotor learning

Session 6: Motor Learning, Practice & Individual Differences

Saturday, Oct 3 | 9:45 AM | Chaudière

Algorithmic strategies for sensorimotor learning approach automaticity with extensive practice

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An important aspect of high-level motor skill is automaticity, which is the ability to rapidly select a movement given a goal. Predominant accounts of automaticity assume a progression from an algorithmic stage, where successive computational steps are executed before generating a movement, to a response caching stage where movements are encoded and retrieved from memory. Alternatively, there is evidence that certain cognitive algorithms can be substantially accelerated with practice (algorithmic speeding); however, it remains unknown whether algorithmic speeding is possible for movement selection. To test this, we conducted two visuomotor rotation experiments where participants were required to adapt their reaches to rotated cursor feedback of their hand. Each experiment involved 12 targets, rendering response caching inaccessible due to working memory demands, and forcing reliance on algorithmic strategies. Despite these conditions, mean RTs declined with two days of training, from 184 ms (SD 96) to 77 ms (SD 138) above baseline reaching RTs. In experiment 2, we further constrained participants by training them to reach with an auditory cue played on average 300 ms before target appearance, matched to individual baseline reaching RT. Adaptation to an 80-degree rotation improved from 37 degrees (SD 30; early Day 1) to 61 degrees (SD 18; late Day 2) on average, and approached a 1500 ms ceiling condition (78 deg, SD 8; late Day 2). In summary, extensive practice substantially improved algorithmic processing, pointing to algorithmic speeding as a distinct route to movement selection automaticity.

Sport psychology

Session 6: NOVEL APPROACHES TO RESEARCH METHODS AND INTERVENTION

Saturday, Oct 3 | 8:30 AM | Ballroom A/B

Exploring Embodiment Among Women Who Have Experienced Eating Disorders in Sport: A Photo-Elicitation Study

Olivia Feng¹, Lindsay R. Duncan¹

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Sport environments foster norms contributing to eating disorders (EDs). Women athletes may be particularly vulnerable due to sport and sociocultural discourses emphasizing appearance and disembodiment practices such as body surveillance. Although challenging these discourses may support ED recovery, little is known about how women foster experiences of embodiment throughout recovery. Therefore, the purpose of this study was to explore how women who experienced EDs as athletes experience embodiment while reconciling relationships with their bodies, food, and movement. Data were collected using a longitudinal photo-elicitation methodology. Three women who experienced EDs as athletes (8-11 years prior) and self-identified as being in active recovery completed three rounds of data collection: each round involved one month photographing their experiences of embodiment and a semi-structured interview to discuss their photographs (9 interviews total). Interviews and photographs were analyzed using interpretive phenomenological analysis. We identified three themes. In the first theme, "*Experiences of embodiment are intentionally created*," participants described their active efforts to prioritize joyful activities, bodily cues, and felt experiences over cognitive control. The second theme, "*ED recovery is extra counter-culture*," reflected participants' rejection of sport culture but negotiation with diet culture, which continues to prioritize self-management over joy and connection in food and movement. The third theme, "*Solidification of recovery values*," captured how photo-elicitation reinforced agency among participants to advocate for their bodily, emotional, and relational needs. Findings highlight the importance of supporting embodied agency and joyful relationships with food and movement, while demonstrating the utility of arts-based approaches in ED recovery.

Sport psychology

Session 6: NOVEL APPROACHES TO RESEARCH METHODS AND INTERVENTION

Saturday, Oct 3 | 8:45 AM | Ballroom A/B

'Smile for the camera!': Developing Emotional Intelligence through photo-elicitation.

James Shaw¹, Sydney Graper, PhD (c)², Dr. Diane Culver²

¹ *Iron Minds*

² *University of Ottawa*

Background. Emotional intelligence (EI) is firmly recognized in sport as influential to athletes' performance, well-being, and personal development (Laborde et al., 2016). Typically, sport environments lack opportunities intentionally designed to help athletes develop EI in relation to their performance. Informed by the RULER framework (Brackett et al., 2019), this case study presents an EI intervention delivered by a Mental Performance Consultant (MPC) using photo elicitation as a tool for athletes to engage in retrospective reflection-on-action regarding their emotional processing.

Purpose. This study aimed to: (a) explore how athletes demonstrated EI competencies throughout the intervention, and (b) provide practical reflections for MPCs integrating photo elicitation for developing EI.

Methods. Grounded in the constructivist paradigm, this descriptive case study examined how EI competencies emerged through reflective accounts of six varsity athletes during a single training session. Prior to training, athletes were interviewed about their emotional state. During training, athletes were professionally photographed. Following training, a second interview was conducted using the photographs to guide a reflective discussion on the RULER competencies. Interview data were analyzed using Abductive Thematic Analysis (Thompson, 2022).

Results. Three themes illustrated how athletes demonstrated EI competencies: (1) embodied awareness, (2) retrospective meaning-making, and (3) social influence.

Discussion. Findings suggest that photo elicitation led athletes to pause, reflect upon, and articulate nuanced emotional experiences embedded within performance environments. Methodological considerations such as ethical concerns around the use of photography, intervention logistics, and dual relationships are discussed for MPCs seeking to integrate EI development and reflective methods into practice.

Sport psychology

Session 6: NOVEL APPROACHES TO RESEARCH METHODS AND INTERVENTION

Saturday, Oct 3 | 9:00 AM | Ballroom A/B

A critical realist exploration of athletic identity across three successive adult age cohorts using elaborative think-aloud interviews

Motz Derrik¹, Scott Rathwell², Bradley W. Young¹

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² *University of Lethbridge*

Athletic identity (AI), the extent to which one identifies with the athlete role, is a self- and socially-ascribed role and a cognitive structure (Brewer et al., 1993). Most AI research is quantitative, centred on youth athletes in structured sport. Consequently, little research has considered adulthood, where adults are agents upholding AIs through life transitions (e.g., age-decline, evolving roles). Thus, we explored lived AI experiences in 25 adults across three age-cohorts (25-34, 35-55, 56-75). We conducted elaborative think-aloud interviews using statements from the Athletic Identity Measurement Scale-Third Generation (AIMS3G; Brewer et al., 2022). A four-stage critical realist thematic analysis (Christodoulou, 2024), supported by retroductive reasoning, inferred causal mechanisms explaining how AI shifts across adulthood. Across all three cohorts, participants actively reconstructed, managed, and socially situated their AIs, yet each cohort emphasized a unique AI pattern that we linked to an inferred causal mechanism. Young adults reconstructed their AI standards to resolve a dialectic between their personal athletic self and the external benchmarks carried over from structured youth sport. Mid-life athletes balanced and negotiated AI against career and family demands, defending a coherent, ontologically secure self as competing roles threatened to crowd out the athlete. Older athletes preserved AI against aging by constructing a continuous athlete life story of meaning and capability, in pursuit of ego integrity. These findings reframe AI in adulthood as a dynamic, agentic project of identity work and suggest that the AIMS3G may underrepresent the effortful, negotiated, and continually defended work through which adults sustain AI across adulthood.

Acknowledgements

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Sport psychology**Session 6: NOVEL APPROACHES TO RESEARCH METHODS AND INTERVENTION**

Saturday, Oct 3 | 9:15 AM | Ballroom A/B

Using Logbooks to Bring Attention to Self-Talk and Improve Performance in GolfersConrad Kozak¹, Lori Dithurbide¹¹ *Dalhousie University*

Self-talk influences attention, confidence, emotional regulation, and performance (Hatzigeorgiadis et al, 2014). While many interventions teach specific self-talk strategies, fewer encourage athletes to reflect on naturally occurring self-talk (Latinjak et al., 2023). The current study examined whether a reflective logbook designed to increase awareness of spontaneous self-talk influenced performance and psychological outcomes in golfers. Sixty golfers were randomly assigned to a self-talk intervention group (n = 31) or a control group (n = 29). During Session 1, participants completed measures of self-awareness and spontaneous self-talk, viewed a brief video, and completed a 6-hole practice round. The intervention group received self-talk psychoeducation and completed a reflective logbook between sessions, whereas the control group viewed a golf rules video and used traditional scorecards. Participants then completed three 9-hole simulated tournament rounds. Performance outcomes included score, fairways in regulation, greens in regulation, and putts. Linear mixed-effects models revealed no significant effects of the intervention on performance, self-awareness, or spontaneous self-talk (all ps > .05). Across groups, anticipatory negative self-talk, $F(1, 58) = 8.92$, $p = .004$, and retrospective negative self-talk, $F(1, 58) = 6.97$, $p = .011$, decreased over time. Increases in self-awareness predicted increases in anticipatory positive self-talk ($B = 1.28$, $p = .020$) and decreases in retrospective negative self-talk ($B = -1.17$, $p = .042$). The intervention did not improve performance, self-awareness, or spontaneous self-talk. However, increases in self-awareness were associated with more adaptive self-talk patterns, suggesting self-awareness may play an important role in spontaneous self-talk regulation.

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Sport psychology

Session 6: NOVEL APPROACHES TO RESEARCH METHODS AND INTERVENTION

Saturday, Oct 3 | 9:30 AM | Ballroom A/B

Drawing connections: Examining girl athletes' understandings and experiences of sport-based mentorship using a novel arts-based approach

Caroline Hummell¹, Corliss Bean¹

¹ *Brock University*

Increasing attention has been directed toward the role of supportive relationships in promoting girls' development and sustained participation in sport. Although mentorship is frequently identified as a promising relational strategy, limited research has examined how girls conceptualize mentorship or what they perceive as meaningful mentoring experiences within sport settings. Drawing on Interpretative Phenomenological Analysis and informed by a critical feminist perspective, this study explored the perspectives of girl-identifying athletes ($N=18$; $M_{age}=13.9$ years) involved in Canadian sport-based mentorship programs. Participants completed an arts-based Draw-a-Mentor activity and subsequently took part in focus group discussions examining their drawings and experiences with mentorship. Analysis of the visual and verbal data generated two interconnected themes: (a) perceptions and meanings of mentorship and (b) experiences, outcomes, and impacts of mentorship. Girls described mentors as trusted individuals who provide encouragement, guidance, and support extending beyond sport performance to personal growth and well-being. Mentorship was also perceived as contributing to confidence, life skill development, and ongoing sport involvement. Findings further highlighted the significance of representation, with participants emphasizing the value of access to women mentors who understand the unique challenges associated with navigating gendered sport environments. In addition to advancing conceptual understandings of mentorship from girls' perspectives, this study illustrates the potential of arts-based methods to elicit insights into relational experiences in sport. Practical implications are discussed for sport organizations and sport leaders seeking to foster supportive environments that encourage girls' long-term engagement in sport through quality mentorship.

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Sport psychology

Session 6: NOVEL APPROACHES TO RESEARCH METHODS AND INTERVENTION

Saturday, Oct 3 | 9:45 AM | Ballroom A/B

An Immersive Inquiry Exploring the More-Than-Human Flows of Tight/Loose Movements Entangling Through the Rideau Canal Skateway

Evan Bishop¹, Martin Camiré²

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² *University of Ottawa*

The Rideau Canal Skateway (RCS) enables people to skate along a 7.8km delimited route of ice. This route includes access points/amenities (e.g., equipment rental, vendors, rest areas) that delimit which movements are allowed, making the RCS what Franck and Stevens (2007) call a “tight” space. Yet, some use the RCS to move in ways different from its intended use, in the process “loosening” the space. These flows of tight/loose movements are conditioned by material-discursive forces (e.g., rules, ice conditions, infrastructure) that continuously materialize the becomings of the RCS. The present project was conducted as an intravention, an immersive agential realist inquiry exploring the more-than-human flows of tight/loose movements entangling through the RCS. During the Winter of 2026, I (first author) intravened, immersing myself in the doings of the RCS by moving (e.g., skating, walking, resting) with it, tracing its flows of ever-evolving tightness/looseness. Through the gathering of various artefacts, three mo(ve)ments are offered. Smoking foregrounds how rules, signage, visibility, health discourses, and youth bodies intra-act to relegate smoking to the shadowy edges of the RCS. Weathering traces how ice, climate, skates, and maintenance co-constitute the shifting conditions making movement (im)possible on the RCS. Infrastructuring follows how ramps, bicycles, paths, and law enforcement open/close possibilities for moving otherwise. Together, these mo(ve)ments illustrate how the RCS is not a fixed site. It comes/goes into (in)existence as a material-discursive flow of tight/loose movements through which more-than-human agencies become-with one another.

Session 7: Oral Presentations

Saturday Oct 3, 12:30 pm – 1:45 pm

Exercise psychology

ADVANCING PHYSICAL ACTIVITY RESEARCH: REVIEWS, MEASUREMENT AND ENGAGEMENT

Sport psychology

SYMPOSIUM: Rethinking Perfectionism in Sport: New Research and Insights from the Model of Excellencism and Perfectionism

Exercise psychology

Session 7: ADVANCING PHYSICAL ACTIVITY RESEARCH: REVIEWS, MEASUREMENT AND ENGAGEMENT

Saturday, Oct 3 | 12:30 PM | Capitale

Youth Engagement in Identifying Physical Activity Priorities for Children and Youth with Disabilities in Canada

Jenna Smith¹, Lauren De Luca², Madison Klaas¹, Alessia Capone¹, Kelly Arbour-Nicitopoulos¹, Youth Advisory Committee³

¹ *University of Toronto*

² *University of Plymouth*

³ *Canadian Disability Participation Project*

Research addressing physical activity (PA) in children and youth with disabilities (CYD) has historically excluded those with lived experience. This study aimed to generate priority research questions on PA for CYD from the perspective of youth with disabilities.

Seven CYD (ages 12-21; 5 females) from an established Youth Advisory Committee (YAC) participated in a priority-setting process adapted from the James Lind Alliance. Across 20 monthly online meetings, candidate questions were generated (Phase 1) and refined (Phase 2). Phase 3 involved targeted Medline searches to assess question novelty. In Phase 4, the YAC rated the novel questions, using a 1 (strongly disagree) to 5 (strongly agree) Likert scale, on six items related to the relevancy, importance, and potential impact of each question.

Through Phases 1 and 2, 52 research questions were generated across 8 areas (advocacy, family/support systems, belonging, programming, PA knowledge, environmental considerations, knowledge mobilization). 12 (23%) of the 52 questions were rated for priority and ratings ranged from 3/5 to 5/5, with an overall rating of 4/5. One question fell below the 50% median, which was retained following group discussion. Strategies used to engage the YAC in the priority-setting process included gamification, interactive discussion prompts (e.g. drawing), and task analysis (e.g. breaking down issues into steps).

Using a dynamic and pragmatic approach, youth with disabilities generated priority research questions on PA for CYD that can be used to inform future research agendas. Future research with the YAC will explore methods for disseminating the list of priority questions.

Exercise psychology

Session 7: ADVANCING PHYSICAL ACTIVITY RESEARCH: REVIEWS, MEASUREMENT AND ENGAGEMENT

Saturday, Oct 3 | 12:45 PM | Capitale

Revisiting the contributions of cohesion in exercise contexts: A state-of-the-art review

Zakry Walsh¹, Mark Eys¹

¹ *Wilfrid Laurier University*

Cohesion refers to a group's unity in achieving its goals and objectives (Carron, 1982), and has been conceptualized as having four dimensions (i.e., task and social attractions to the group, task and social group integration; Carron et al., 1985). In exercise, cohesion is an intervention target to foster key outcomes such as physical activity (PA) adherence. However, Eys and Beauchamp (2025) proposed a reconceptualization of cohesion in sport that narrows the dimensions of cohesion to social and task integration, positing that cohesion is solely a group-level emergent state that influences, and is influenced by, other constructs. Further, it was highlighted that the attractions to the group dimensions represent individual-level perceptions that share considerable conceptual overlap with social identity. Considering the recent advancements, the purpose of this review was to revisit the extant cohesion literature in exercise, describe the relative contributions of the four cohesion dimensions and implications toward the reconceptualization of cohesion, and provide future research directions. Several databases were strategically searched for articles assessing cohesion in exercise settings, with data from 58 articles informing this review. Preliminary findings highlight that attractions to the group-task was commonly a strong predictor of key PA-related outcomes. Furthermore, group integration-task contributed to positive outcomes, albeit to a lesser and more inconsistent degree. Future research should take a meta-analytical approach to examine the relative impact of each cohesion dimension in exercise, and look to isolate and test potential relationships between social identity and both task and social integration in PA groups.

Exercise psychology

Session 7: ADVANCING PHYSICAL ACTIVITY RESEARCH: REVIEWS, MEASUREMENT AND ENGAGEMENT

Saturday, Oct 3 | 1:00 PM | Capitale

Strategies for Implementing an Intersectional Lens in Disability Physical Activity Research and/or Knowledge Mobilization: A Scoping Review

Owen Juan¹, Jenson Price², Luxshmi Nageswaran¹, Heejun Lim¹, Michele Chittenden³, Eun-Young Lee⁴, Mahadeo Sukhai⁵, Danielle Peers⁶, Jennifer R. Tomasone¹

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Individuals who identify with multiple equity-owed social identities (e.g., disability, gender, income, etc.) report lower rates of participation in physical activity. As persons experiencing disability may identify with other equity-owed social identities, an intersectional lens—a framework first developed around interlocking structures of racism and sexism—could be useful in understanding the broader systems of power that contribute to shaping disability physical activity experiences and inequities. As such, a scoping review was conducted to compile a comprehensive list of strategies that can be used to help implement an intersectional lens within disability physical activity research and/or knowledge mobilization, along with any associated methodological challenges. Using JBI systematic scoping review methodology, 14059 articles were identified from seven databases, 11771 titles & abstracts and 906 full-texts were screened for relevance, and 106 articles were included in this review. The majority (n=100) of included publications focused on the intersection of disability and gender, with notably few engaging with race—a primary focus of intersectionality theory—or other social identities. Reported strategies frequently offered broad conceptual recommendations that can serve as an overarching foundation throughout the entire research and knowledge mobilization processes, rather than specific methodological guidance. Critical reflection on the challenges associated with implementing an intersectional lens was seldom reported. Overall, findings indicate a need for greater investigation of intersectional social identities in disability physical activity research and/or knowledge mobilization, along with greater methodological guidance on how an intersectional lens can be implemented in the field.

Exercise psychology

Session 7: ADVANCING PHYSICAL ACTIVITY RESEARCH: REVIEWS, MEASUREMENT AND ENGAGEMENT

Saturday, Oct 3 | 1:15 PM | Capitale

State Embodied Movement: Introducing a Novel Construct and Testing a Momentary Instrument

Eva Pila¹, Samantha Adler¹, Rachel Calogero¹

¹ Western University

Background. Informed by theories and qualitative evidence of embodiment and physical activity, our objectives were to define and assess the concept of “state embodied movement” - a subjective experience of being physically and psychologically engaged with the body during physical activity. We theorized state embodied movement as multidimensional and capable of fluctuating within individuals across contexts, with content reflecting bodily awareness, responsiveness to bodily sensations, agency, and immersion. **Methods.** To develop the State Embodied Movement Scale (SEMS), a 56-item pool was generated, and content validity was established through expert evaluations (N=10) and cognitive interviewing with community-based adults using longitudinal surveys (N = 12). Preliminary field data assessed SEMS three times during a physical activity bout in adults ($n = 194$) attending a recreation facility. **Findings.** Experts indicated adequate content validity, with strong item clarity ratings (86.9%), correct item-subscale matching (77.5%), high item relevance ($S-CVI \geq .79$), and representation ($S-CVI \geq .93$). Based on expert and community feedback, items, instructions, and scale structure were refined. A multilevel one-factor CFA demonstrated adequate fit: $\chi^2(32)=97.60$, $p<.001$, $RMSEA=.060$, $CFI=.942$, $TLI=.898$, $SRMR_{within}=.048$, $SRMR_{between}=.049$ with significant standardized loadings at both levels. The retained model supports SEMS as an overall momentary index, with some residual association among conceptually linked item pairs that may inform future item refinement. **Discussion.** This work advances theory and methods for studying how individuals inhabit their bodies during physical activity, positioning SEMS as a practical tool for examining embodied movement across lab, field, and experience-sampling contexts.

Acknowledgements

SSHRC Insight Grant

Exercise psychology**Session 7: ADVANCING PHYSICAL ACTIVITY RESEARCH: REVIEWS, MEASUREMENT AND ENGAGEMENT**

Saturday, Oct 3 | 1:30 PM | Capitale

Identifying the Conceptual Attributes of Physical Activity Maintenance Among Adults with Physical Disability: 6-Month ResultsTayah M. Liska¹, Lauren Tozer², Jenna C. Gibbs¹, Shane N. Sweet¹¹ *Department of Kinesiology and Physical Education, McGill University*² *Ability New Brunswick*

Evidence on physical activity (PA) maintenance among adults with physical disability remains limited due to the inconsistent conceptualization and operationalization of “maintenance” within the literature. 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 participation, and gratification/satisfaction); and (3) Achievement of Maintenance (consistency and achieving PA recommendations). The purpose of this study was to examine the relationships between identified attributes PA maintenance and four operationalizations of PA maintenance among adults with physical disability over 6 months. Participants ($n=71$; women $=40$) were adults with physical disability who reported at least 30 min of PA twice weekly over the previous month. Self-report questionnaires corresponding to the identified attributes were administered at baseline, 3 months, and 6 months. Outcomes included PA minutes, consistency, consistency of PA minutes, and consistency of PA minutes categories. Multi-level analyses were conducted separately for each attribute category and outcome. Among Individual and Environmental Resources, social support ($b_{PAmin}=29.510$, $p_{PAmin}<0.05$; $b_{consistency}=39.37$, $p_{consistency}<0.01$), self-monitoring ($b_{PAmin}=22.76$, $p\leq 0.01$; $b_{consistency}=25.61$, $p\leq 0.01$), and grit ($b=46.08$, $p<0.05$; $b_{consistency}=44.95$, $p\leq 0.05$). Among Valued Outcomes of Physical Activity, gratification/satisfaction significantly predicted consistency ($b=10.00$, $p<0.01$), and values PA participation significantly predicted consistency of PA minutes categories ($b=0.34$, $p<0.010$). These findings provide longitudinal support for conceptual attributes of PA maintenance among adults with physical disability and contribute to the development of maintenance-specific PA research and intervention approaches.

SYMPOSIUM

Sport psychology

Session 7: Rethinking Perfectionism in Sport: New Research and Insights from the Model of Excellencism and Perfectionism

Saturday, Oct 3 | 12:30 PM | Ballroom A/B

Rethinking Perfectionism in Sport: New Research and Insights from the Model of Excellencism and Perfectionism

Patrick Gaudreau¹, Benjamin J. I. Schellenberg², J  r  mie Vernier-Filion³, Giovanni Andrade¹,
Patrick Gaudreau¹

¹ *University of Ottawa*

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³ *Universit   du Qu  bec en Outaouais*

In sport and performance psychology, striving for exceptionally high standards has long been viewed as a defining feature of optimal performance. However, empirical findings on perfectionistic standards remain inconsistent, suggesting that not all forms of high striving are psychologically equivalent. The Model of Excellencism and Perfectionism (MEP) has been developed to distinguish athletes and performers who flexibly pursue high and realistic standards from those who relentlessly pursue perfectionistic standards. A growing stream of research has found that excellencism – rather than perfectionism – is positively associated with beneficial performance and mental health outcomes. The purpose of this symposium is to leverage empirical evidence to showcase the theoretical and practical implications of the MEP. Across two longitudinal studies examining collegiate and university athletes, Schellenberg and colleagues will offer a new understanding of how excellencism and perfectionistic standards are uniquely associated with engagement and burnout. Turning their attention to high school students engaged in extracurricular activities, Verner-Filion and colleagues will highlight the role of need satisfaction and frustration in explaining the distinct contributions of excellencism and perfectionistic standards to well-being and dropout intentions. Past studies often relied on measures that hybridized high standards and perfectionistic standards. Andrade and colleagues will present a meta-analysis on achievement goals showing that findings vary according to the extent to which studies isolated perfectionistic standards from broader forms of high standards. Finally, Gaudreau and colleagues will present the results of two studies demonstrating why the MEP can be positioned as a truly integrative, multidimensional theory of perfectionism.

Sport psychology

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Perfectionism and Excellencism in Two Samples of Collegiate Athletes: Associations with Athlete Engagement and Burnout

Benjamin J. I. Schellenberg¹, Alexandra B. Patterson¹, Jérémie Vernier-Filion², Patrick Gaudreau³

¹ *University of Manitoba*

² *Université du Québec en Outaouais*

³ *University of Ottawa*

Previous research with athletes has found that perfectionistic strivings is positively associated with dimensions of athlete engagement (i.e., confidence, vigor, dedication, and enthusiasm) and negatively associated with dimensions of athlete burnout (i.e., physical/emotional exhaustion, sport devaluation, reduced sense of accomplishment; e.g., Hill & Curran, 2016; Jowett et al., 2016; Waleriańczyk et al., 2022). We tested if these effects remain while controlling for excellencism, as conceptualized by the Model of Excellencism and Perfectionism (Gaudreau et al., 2022). We conducted secondary analyses of data collected from two samples of college- and university-level athletes during the 2019-2020 (Sample 1, $N = 298$) and 2025-2026 (Sample 2, $N = 384$) competitive seasons. In both samples, athletes completed surveys at the start of the season to assess excellencism and perfectionism, and approximately 2 months later at the midpoint of the season to assess athlete burnout (in both samples) and engagement (in Sample 2 only). The results showed that excellencism was negatively associated with sport devaluation, reduced sense of accomplishment (Samples 1 and 2), and exhaustion (Sample 2 only). Excellencism was also positively associated with each dimension of athlete engagement (Sample 2). In contrast, across both samples, perfectionism was not associated with any dimension of athlete burnout or engagement. These results support the benefits of excellencism in the competitive world of collegiate-level sport. They also fail to support the conclusion that striving for perfection can help athletes become more engaged or protect them from burnout.

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Excellencism, Basic Psychological Needs, and the Functioning of High School Students in Extracurricular Sporting Activities and in School

Jérémie Vernier-Filion¹, Julien Gauthier¹, Anne Holding², Benjamin J. I. Schellenberg³, Patrick Gaudreau⁴

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² *McGill University*

³ *University of Manitoba*

⁴ *University of Ottawa*

During high school, students involved in extracurricular activities are required to juggle the demands of both their extracurricular activities and school. In line with the Model of Excellencism and Perfectionism (Gaudreau et al., 2022) and Self-Determination Theory (Ryan & Deci, 2017), this research investigated how excellencism and perfectionism influence adolescents' psychological need satisfaction and need frustration in extracurricular activities and in school, as well as their functioning in both domains. Results of a study with 334 high school students ($M_{\text{age}} = 15.00$, $SD_{\text{age}} = 0.94$) showed that excellencism was positively related to need satisfaction in extracurricular activities and in school, while being negatively related to need frustration in both domains. In contrast, perfectionism was positively associated with need frustration in extracurricular activities and in school. In turn, need satisfaction in extracurricular activities was positively associated with subjective well-being and negatively associated with dropout intentions in extracurricular activities. In contrast, need frustration in extracurricular activities was negatively related to subjective well-being and positively related to intentions to drop out of extracurricular activities. As for school need satisfaction, it was positively associated with school subjective well-being, whereas school need frustration was negatively associated with it. Finally, school need satisfaction and frustration were negatively and positively associated with school dropout intentions, respectively. Ultimately, the study reveals that excellencism can propel adolescents both within their extracurricular activities and in school, while perfectionism pulls them into cycles that threaten both their well-being and their commitment to both domains.

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Saturday, Oct 3 | 1:00 PM | Ballroom A/B

High Standards or Perfectionistic Standards? A Meta-Analytic Adjustment of the Relationship between Perfectionism and Achievement Goals

Giovanni Andrade¹, Philippe Pétrin-Pomerleau¹, Thomas L. D. Boivin¹, Patrick Gaudreau¹

¹ *University of Ottawa*

Numerous studies have investigated perfectionism from a motivational perspective. Using Achievement Goal Theory (AGT) as the framework provides a means to assess not only whether perfectionism generates higher levels of motivation but also the nature of that motivation. Recent developments suggest that perfectionism measures may conflate perfectionistic standards with more realistic high standards such as those involved in excellencism. The present study goes beyond reporting the associations of perfectionistic standards and perfectionistic concerns with the four achievement goal orientations and provides a means to assess how hybridized measures of perfectionistic standards and high standards can distort conclusions about the motivation involved in perfectionism. A literature search across achievement domains such as sports, school, and work identified 60 samples comprising approximately 20,000 participants. Meta-analytic weighted effect sizes were consistent with previous reviews, indicating positive associations between perfectionistic standards and the four achievement goal orientations, and between perfectionistic concerns and all goal orientations except mastery approach. More importantly, further analyses indicated that the measure used to capture perfectionistic standards moderated these relationships. Questionnaires using lower semantic intensity wording (i.e., high standards, excellence) showed substantially weaker associations with avoidance-oriented goals than those using perfection-focused wording. Additionally, high-standard wording showed a stronger association with the more adaptive mastery approach goal orientation. These findings support the conceptual distinction between high standards, such as those involved in excellencism, and perfectionistic standards, and strengthen claims that prior research may have overestimated the adaptive and underestimated the maladaptive correlates of perfectionistic standards.

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The Model of Excellencism and Perfectionism as a Multidimensional Theory: New Conceptual and Empirical Advances

Patrick Gaudreau¹, Thomas L. D. Boivin¹, Marie Pier Grégoire-Gaul¹

¹ *University of Ottawa*

The fourth talk will present two other fundamental distinctions that help explain why the MEP is a multidimensional theory of perfectionism. Based on the widely agreed definition of perfectionism, Gaudreau (2021) repositioned perfectionistic standards as the *core definitional feature* of perfectionism, while reconceptualizing perfectionistic concerns as the *signature expressions* that capture the unique phenomenological experience of being a perfectionist. In operational terms, perfectionistic concerns are not part of the core definitional nexus of perfectionism; rather, they serve as a mechanism explaining why perfectionistic standards are indirectly and less strongly related to indicators of mental health in the literature. For the first time in sports psychology, the results of a study involving 350 sports participants will be presented to illustrate the MEP *proximal-to-distal principle*. Our results supported the indirect effect of automatic perfectionistic thoughts in the association between perfectionistic standards and psychological distress. Furthermore, sport researchers have frequently conceived parental expectations as a developmental antecedent rather than a definitional characteristic of perfectionism. The MEP goes further, proposing that parents should be differentiated based on whether they expect their child to aim for excellence or perfection. Results from an original study, involving 340 parents of teenage children who participate in sports, demonstrated the possibility and importance of separating parental expectations of excellence and perfection. Parental expectations are better conceived as a bidimensional construct, showing distinct associations with variables within the MEP landscape. Practical implications, such as targeting perfectionistic concerns and parental expectations, will be discussed to conclude this symposium.

Session 8: Oral Presentations

Saturday Oct 3, 3:15 pm – 4:30 pm

Exercise psychology

SYMPOSIUM: All are welcome? Disrupting the dis/ableist norm through dialogue, discomfort, and disciplinary accountability

Psychomotor learning

Performance Across Virtual and Real-World Environments

Sport psychology

ATHLETES' NEEDS: PERFORMANCE, MENTAL HEALTH AND WELLBEING

SYMPOSIUM

Exercise psychology

Session 8: All are welcome? Disrupting the dis/ableist norm through dialogue, discomfort, and disciplinary accountability

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All are welcome? Disrupting the dis/ableist norm through dialogue, discomfort, and disciplinary accountability

Jenson Price¹, Jennifer R. Tomasone², Nathan V. Fawaz³

¹ *Trent University*

² *Queen's University*

³ *University of Alberta*

Disability remains a critically underrepresented and oppressed identity within sport and exercise psychology and related fields. Despite the values of diversity, equity, and inclusion becoming central to many university missions, disabled persons continue to face systemic exclusion and underrepresentation. Often, efforts focus narrowly on inclusion without addressing how dis/ableist assumptions and beliefs—intentional and unintentional discrimination against disabled persons—shape the academic environment. While growing calls for diversity, equity, and inclusion have prompted important discussions, many faculty and trainees still lack clear, actionable strategies to support anti-dis/ableism—intentional practices to dismantle discrimination against disabled persons—across the multiple dimensions of their work.

This symposium brings together three interconnected perspectives to discuss dis/ableism within kinesiology with the hope of advancing meaningful transformation toward disciplinary accountability. Collectively, this symposium cultivates an opportunity for dialogue, discomfort, and disciplinary accountability to challenge faculty and trainees to reimagine who belongs in our spaces. The symposium is centered around emerging recommendations for anti-dis/ableism. Critically, implementation of the recommendations are oriented toward reflecting on the underlying beliefs that produce dis/ableist practice in recognition that performative anti-dis/ableism—actions, statements, or policies that claim to support inclusivity but lack substantive action—risks causing further harm to disabled persons. Participants will be supported through three presentations to introduce the recommendations, the realities of living them, and structured critical reflexivity to examine their own positionality and the assumptions sustaining dis/ableist norms within their institutional contexts.

Exercise psychology

Symposium: All are welcome? Disrupting the dis/ableist norm through dialogue, discomfort, and disciplinary accountability

Saturday, Oct 3 | 3:15 PM | Ballroom A/B

Part 1: Making the invisible visible

Jenson Price¹

¹ *Trent University*

Jenson Price (Assistant Professor, Trent University) will open the session, providing background and articulating the aims and intent of this session. She will introduce the findings of a Foucauldian discourse analysis that interrogated the ideological underpinnings embedded within kinesiology as observed on kinesiology web spaces. Drawing on concepts of normalization and power, this analysis reveals how web spaces construct and reproduce narrow, dis/ableist ideals contributing to the continued marginalization of disabled persons through visual rhetoric, language, and the conspicuous absence of disability. She will provide an overview of the emerging recommendations, mapping them onto crip technoscience as a framework for accountability and collective access-making.

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Part 2: Reflections from attempts at disrupting dis/ableism.

Jennifer R. Tomasone¹

¹ *Queen's University*

Jennifer R. Tomasone (Associate Professor, Queen's University) will continue the session, exploring her lived experience of the emerging recommendations. She will share a candid autoethnographic account from a mid-career faculty perspective, engaging with the intersections of disability studies and kinesiology. She will reflect on the personal, interpersonal, and structural barriers encountered within academic spaces (including in a community-based exercise program for persons with disabilities housed at Queen's), while also identifying moments of resistance, coalition-building, and scholarly resilience that sustain critical work in a field that carries power towards perpetuating or dismantling dis/ableism.

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Part 3: Practicing with tension

Nathan V. Fawaz¹

¹ *University of Alberta*

Nathan V. Fawaz (PhD student, University of Alberta) will build upon the insights shared through a series of embodied practices. Attendees will be invited to consider the tensions and vulnerabilities that can arise when translating emerging recommendations into policy and procedure. This part of the session will open a space for attendees to examine these dynamics individually and collectively, offering structured invitations for reflexive engagement with the recommendations in relation to their own professional contexts and modes of participation, including a large group discussion for questions.

Psychomotor learning

Session 8: Performance Across Virtual and Real-World Environments

Saturday, Oct 3 | 3:15 PM | Chaudière

Active movements enhance sensitivity to visual feedback delays: an EEG study

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² *Department of Pediatrics, Faculty of Medicine and Health Sciences, University of Sherbrooke, Sherbrooke, Quebec J1H 5N4, Canada*

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Accurate motor control and coherent self-movement perception depend on multisensory temporal congruence, particularly between proprioception and vision. Delays in visual reafferent feedback cause intersensory conflict, yet it remains unclear whether the threshold for detecting such delays differs between active versus passive movements. While active movements involve efference copy-based sensory predictions, passive movements lack this mechanism. We hypothesized that active movements would enhance sensitivity to visual feedback delays, and be indexed by P3b response, an EEG component reflecting context-updating.

Thirty-two participants performed goal-directed reaches using a robotic manipulandum with concurrent EEG. Movements were self-initiated (active) or robotically guided (passive), with kinematics matched. Visual feedback of the hand (a cursor) was parametrically delayed (0-315 ms; 35 ms increments). Participants reported if they perceived a delay between their hand and the cursor using an alternative forced-choice task.

Psychometric functions revealed a significantly lower Point of Subjective Equality (PSE) for active ($\bar{x}$ = 171 ms) versus passive movements ($\bar{x}$ = 189 ms; $t(31) = -2.71$, $p = 0.01$). Electrophysiological analyses revealed a significant Movement x Delay interaction in centro-parietal P3b amplitude ($p = 0.04$) computed 200-400 ms after cursor presentation. Parametric modulation by delay magnitude was observed only for active condition, indicating that P3b indexes an active sensorimotor prediction error rather than visuo-proprioceptive mismatch.

These findings suggest that efference copy provides a precise temporal anchor that enhances the detection of visual feedback delays. This active advantage is supported by a context-updating processes, as indexed by the P3b response, which possibly drives subsequent internal model revisions.

Psychomotor learning

Session 8: Performance Across Virtual and Real-World Environments

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Effects of the Vergence-Accommodation Conflict on Online Movement Control in Virtual Reality: Disparity Matching Predicts Mean Endpoint Error but Not Distance Scaling

Xiaoye Michael Wang¹, Digby Elliott², Damian M. Manzone³, Luc Tremblay¹, Gavin P. Lawrence⁴, Catherine M. Sabiston¹, Timothy N. Welsh¹

¹ *University of Toronto*

² *Liverpool John Moores University; McMaster University*

³ *Toronto Rehabilitation Institute*

⁴ *Bangor University*

Virtual reality (VR) head-mounted displays introduce the vergence-accommodation conflict (VAC) because accommodation remains fixed at the display plane while vergence varies with simulated viewing distance. VAC produces distance-dependent errors during targeted movements, but the mechanism underlying these distortions remains unclear. The present study examined the spatiotemporal influence of VAC using a disparity-based model of online movement regulation. Twenty adults performed targeted pointing movements in VR to targets located 20–35 cm from a home position. Visual feedback of the virtual hand was available throughout the movement or removed at peak deceleration (350 ms), peak velocity (200 ms), peak acceleration (100 ms), 50 ms after movement onset, or immediately after movement initiation. Movement trajectories were analyzed using a proportional-rate model based on relative disparity tau. Stable epochs exhibiting dynamics compatible with disparity-tau occupied approximately 70–75% of movement time. As visual feedback became increasingly restricted, these epochs terminated progressively earlier and occupied a smaller proportion of the movement. Kinematic projections revealed that VAC-related distance scaling remained embedded in the movement state at the end of these stable epochs. Importantly, the predicted distance-dependent pattern diverged from the behavioral results in some feedback conditions, suggesting that VAC-related biases present in the evolving movement state were attenuated before movement termination. These results show that binocular information shapes movement dynamics throughout much of the reach and provide insight into how immersive-display distortions interact with online motor control.

Acknowledgements

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Psychomotor learning

Session 8: Performance Across Virtual and Real-World Environments

Saturday, Oct 3 | 3:45 PM | Chaudière

Translating laboratory-based fatigue measures to the field: Subjective, physiological, and performance indicators of fatigue during commercial shrimp fishing

John Cullen¹, Elizabeth Sanli¹

¹ *School of Maritime Studies, Fisheries and Marine Institute of Memorial University*

Laboratory studies provide controlled methods for assessing fatigue, but it remains unclear how well traditional fatigue measures translate to operational field settings. This study examined a multidimensional fatigue assessment battery during commercial shrimp fishing voyages. Eighteen male crew members from five vessels completed repeated assessments during voyages lasting 2–8 days. Measures included subjective ratings of fatigue and workload; simple reaction time, choice reaction time, and sustained-attention tasks; physiological measures, including heart-rate variability, heart rate, electrodermal activity, skin temperature, blood pressure, and near-point convergence; and contextual measures, including sleep quality and marine weather conditions. Mixed-effects models examined associations between fatigue-related outcomes, voyage day, sleep, weather, and vessel, while accounting for repeated observations within participants. Self-reported fatigue increased across voyage days ($\beta = 0.13$ points/day; 95% CI [0.01, 0.24]; $p = .031$) and was higher with each 1 SD increase in ambient temperature ($\beta = 0.31$; 95% CI [0.06, 0.56]; $p = .016$). NASA-TLX composite workload also increased across voyage days ($\beta = 5.1$ points/day; 95% CI [0.29, 10.0]; $p = .038$). Performance findings were mixed: simple and choice reaction times improved across days, whereas sustained-attention accuracy declined by approximately 1.5% per day ($p = .013$). Physiological measures also showed mixed patterns, with HRV increasing across days but decreasing under warmer conditions. These findings suggest that laboratory-derived fatigue measures can be deployed in maritime field settings, but interpretation requires attention to environmental context, measurement feasibility, and indicators that do not always move together.

Psychomotor learning

Session 8: Performance Across Virtual and Real-World Environments

Saturday, Oct 3 | 4:00 PM | Chaudière

Hand function rehabilitation using augmented reality: Assessing perceptions of feasibility and meaningfulness among individuals with cervical spinal cord injury

Damian M. Manzone¹, Olga Taran², Hardeep Singh³, Cesar Marquez-Chin⁴, José Zariffa⁴

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Home-based hand rehabilitation for individuals living with cervical spinal cord injury (cSCI) lacks hand posture guidance and quantitative performance feedback which can limit compliance and neurorecovery. Augmented reality (AR) head mounted displays can leverage markerless hand tracking to provide augmented guidance and feedback. Further, AR enables real object interactions, which increase task and sensorimotor specificity compared to virtual reality applications. Thus, this study assessed perceptions of feasibility and meaningfulness of a custom AR hand rehabilitation application towards future home-based rehabilitation among individuals with cSCI. Fifteen individuals with cSCI (AIS: A-D, Neurological Level of Injury: C3-C7) tried the application in a clinical setting for one 30-minute session while performing hand exercises with real objects. The AR application provided visual guidance of object-specific grasping postures, tracked hand joint positions, and provided augmented feedback via an overall matching score and visual comparisons between actual and target postures. After trying the application, participants completed one 30-minute semi-structured interview, which was analysed using thematic analyses. The two themes were: 1) Perceived Therapeutic Values (subthemes: removing rehabilitation barriers, quality of guidance and feedback, and motivation) and 2) Building a Usable and Tailored Experience (subthemes: feasibility considerations and suggestions and refinement). Overall, individuals with cSCI perceived that the AR application was meaningful, motivating, and had the potential to increase exercise dosage, while also providing suggestions to increase usability within the context of home-based rehabilitation. These results provide evidence that AR applications have the potential to support increased engagement in and dosage of home-based rehabilitation.

Acknowledgements

Funding: Craig H. Neilsen Foundation

Psychomotor learning**Session 8: Performance Across Virtual and Real-World Environments**

Saturday, Oct 3 | 4:15 PM | Chaudière

Effect of Virtual Batting Practice on Visual-Search Strategies in Baseball Batters

Fabian Alberto Romero Clavijo¹, Thomas Romeas², Zachary Besler³, Maxime Trempe⁴¹ *Bishop's University, Institut national du sport du Québec*² *Institut national du sport du Québec, Université de Montréal, York University*³ *Langara College*⁴ *Bishop's University*

Baseball batting requires batters to use vision to extract kinematic cues from the pitcher's movements to anticipate the pitch's endpoint location. Emerging evidence suggests that virtual batting practice (VBP), which immerses batters in a virtual environment simulating a pitcher-batter interaction, is a viable supplement to real-world practice (RWP) to improve batting performance. However, whether VBP allows batters to better capture the pitcher's kinematic cues remains unknown. This preregistered study compared the effects of VBP and RWP on batters' visual-search strategies. Thirty-eight male baseball players aged 11–15 years ($M=13$, $SD=1$), with an average of 5 years of playing experience ($SD=1.4$), were recruited and semi-randomly assigned to either a VBP or RWP group. The VBP group completed twelve 20-min sessions of virtual batting practice over four weeks using commercial software, integrated into their regular 10 hr/week training schedule; the RWP group completed standard practice. Using a mobile eye-tracking system, gaze behaviour indicators (number of fixations, fixation duration, and search rate) were measured during a screen-based pitch-recognition test (PRT) and real-world at-bats (RWAB) at pre- and post-intervention. Repeated-measures ANOVAs indicated no differences in gaze strategies during the PRT. In the RWAB, significant group $\times$ time interactions emerged for number of fixations ($p=.04$) and search rate ($p=.04$), with the VBP group exhibiting greater increase in both measures. These findings suggest that VBP fostered broader exploration of visual information by offering interaction with kinematic cues from the virtual pitcher and the ball trajectory.

Sport psychology

Session 8: ATHLETES' NEEDS: PERFORMANCE, MENTAL HEALTH AND WELLBEING

Saturday, Oct 3 | 3:15 PM | Capitale

“Each day is different”: Women Athletes’ Sport Performance Perceptions Across the Menstrual Cycle

Grace Spilchak¹, Amber D. Mosewich¹, Margo E.K. Adam¹

¹ *University of Alberta*

High-performance sport often expects women athletes to show up the same way every day even when their bodies are moving through a cycle that often makes each day feel different. This convergent longitudinal mixed-methods study explored how high-performance, naturally menstruating women athletes perceived their sport performance across biologically verified menstrual-cycle sub-phases, and how self-compassion, body-related well-being, and self-criticism shaped these interpretations. Seven athletes (M age = 21.1 years, SD = 4.18) completed repeated quantitative measures of sport performance perceptions, self-compassion, body appreciation, intuitive eating, and self-criticism alongside semi-structured interviews. Quantitatively, scores for sport performance perceptions (M range = 5.67-5.97), self-compassion (M range = 2.93-3.09), body appreciation (M range = 3.89-4.19) and intuitive eating (M range = 3.53-3.90) appeared relatively stable across sub-phases, while self-criticism showed the greatest fluctuation (M range = 4.39-6.21). However, qualitative narratives revealed more layered, dynamic experiences. Athletes described shifting relationships with their bodies, varying physical demands, and the ongoing negotiation between internal signals and external expectations of consistency. These accounts reflect a bio-psycho-social process where physiological rhythms intersected with psychological self-relation and the sociocultural norms of high-performance sport, producing interpretations of performance that were biological, mental, relational, and context-bound. While quantitative self-compassion scores remained stable, athletes described it as a key resource for navigating fluctuations and managing self-criticism. Integrated findings demonstrate that performance perceptions are not simply reflections of physical output, but bio-psycho-social interpretations shaped by hormonal rhythms, psychological self-relation, and the cultural expectation of consistency that athletes learn to navigate across their cycles.

Sport psychology**Session 8: ATHLETES' NEEDS: PERFORMANCE, MENTAL HEALTH AND WELLBEING**

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Moments of rest: Exploring how psychological resting experiences relate to recovery, stress, and positive sport engagement among Canadian university athletesStuart G. Wilson¹, Kaitlin N. Fortier¹, Adam Doyle¹, Luc J. Martin¹, Jean Côté¹¹ *Queen's University*

Recovery is a multidimensional process of restoring capabilities between sport activities, which may be enhanced through high-quality resting experiences (Kellmann et al., 2018). Although these experiences are associated with greater well-being and reduced stress (Steed et al., 2021), they have only been examined in cross-sectional or daily designs, which fail to capture their momentary nature. This study examined whether psychological resting experiences throughout the day were associated with momentary states of recovery and stress, as well as daily perceptions of sport enjoyment and motivation. Thirty Canadian university athletes (17 women, 13 men; $M_{age} = 20.4$, $SD = 1.5$), from 11 sports completed experience sampling questionnaires up to seven times per day for seven days. Questionnaires assessed resting experiences during the past 30 minutes and current recovery and stress states, while the final daily questionnaire also assessed sport enjoyment and motivation. We used multilevel linear models to examine within- and between-person associations between states and experiences, as well as sport perceptions. Participants completed 74.2% of prompts. At the momentary level, higher-quality resting experiences were associated with states of higher recovery ($p = .018$) and lower stress ($p = .007$). Better resting experiences were not associated within participants with greater sport enjoyment ($p = .274$) or motivation ($p = .991$). However, athletes who were generally more psychologically rested reported greater enjoyment ($B = 0.92$, $p = .031$) and motivation ($B = 0.83$, $p = .037$). These results emphasize the importance of quality resting experiences for supporting more positive momentary and persistent sport involvement.

Acknowledgements

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Sport psychology

Session 8: ATHLETES' NEEDS: PERFORMANCE, MENTAL HEALTH AND WELLBEING

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The Conditional Status of ADHD in Sport: A Critical Realist Multiple-Case Study of ADHD in Organized Youth Team Sport

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Although organized sport is often promoted as beneficial for young people with attention-deficit/hyperactivity disorder (ADHD), little is known about how ADHD-related differences are experienced within sport environments or the conditions that shape them. This study examined how structural, contextual, and relational conditions shaped ADHD experiences in organized youth team sport. Guided by critical realism, a multiple-case study was conducted with three former youth athletes diagnosed with ADHD and six support agents (parents and teammates). Data collected through semi-structured interviews were analyzed using critical realist thematic analysis involving a participant-level analysis, within-case analysis and cross-case synthesis. Across cases, ADHD-related differences were often experienced as advantageous when they aligned with stimulating, engaging, and fast-paced sport environments. When experiencing challenges, peers, coaches, and parents compensated for structural constraints, limited institutional guidance, and performance pressures of the Canadian youth sport system. However, ADHD-related differences were often normalized, concealed, or overlooked when they supported performance. In contrast, they were recognized as problems or legitimate support needs when they disrupted performance, team functioning, behavioural expectations, or others' experiences. Findings suggest that ADHD was neither inherently advantageous nor problematic in youth sport. Instead, its meaning and consequences were shaped by how ADHD-related differences were interpreted within the social, relational, and structural conditions of sport participation. Future research should consider how the current relational resources supporting ADHD can improve inclusion within existing sport constraints while gradually challenging the conditions that make support contingent on performance or disruption.

Acknowledgements

This research was supported by the Social Sciences and Humanities Research Council of Canada (SSHRC).

Sport psychology

Session 8: ATHLETES' NEEDS: PERFORMANCE, MENTAL HEALTH AND WELLBEING

Saturday, Oct 3 | 4:00 PM | Capitale

“Women shouldn’t be dancing”: An Interpretative Phenomenological Analysis of women’s experiences in the cultural sport of Bhangra

Ariel J. Dimler¹, Jasleen Gill¹, Jessie Dinh¹, Tara-Leigh F. McHugh¹

¹ *University of Calgary*

Women in sport continue to face challenges in being recognized, acknowledged, and empowered; women participating in Bhangra, one of the thriving Punjabi dance forms, experience similar challenges in terms of gender norms and visibility. The purpose of this research was to explore and interpret the lived experiences of women participating in the cultural sport of Bhangra in order to better understand how cultural performance spaces can be made truly inclusive for women. A total of 10 women between the ages of 16 and 20 who had engaged in competitive/performance-based Bhangra within the past five years participated in one-on-one semi-structured interviews. Data were analyzed using an interpretative phenomenological analysis approach, and participants’ experiences in Bhangra are represented by five themes: (a) navigating participation within gendered cultural norms, (b) performing the “right” way as a woman, (c) women-only categories create equitable opportunities, (d) supportive environments encourage participation, and (e) structural inequities in men-dominated spaces. Findings suggest that a lack of effective practices and policies addressing cultural biases, equitable recognition, and access to leadership roles continues to hinder women’s advancement and long-term engagement in the sport. Furthermore, supportive and inclusive environments play a crucial role in fostering women’s confidence and sense of belonging in Bhangra.

Acknowledgements

The authors would like to thank the participants who shared their knowledge and contributed their time and effort to this research.

Sport psychology

Session 8: ATHLETES' NEEDS: PERFORMANCE, MENTAL HEALTH AND WELLBEING

Saturday, Oct 3 | 4:15 PM | Capitale

Explaining Mental Health and Psychological Skill Needs in Adolescent Competitive Dance Through Mixed Methods Integration

Alyssa Hughes¹, Scott Rathwell¹, Afra Foroud¹, Paige Pope¹

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In the first phase of this explanatory sequential mixed methods needs assessment, quantitative findings identified support-seeking, burnout, disordered eating, body image concerns, the mental side of injury, cognitive restructuring, and emotional and arousal regulation as the highest-priority mental health and psychological skill needs within adolescent competitive dance. Guided by pragmatism, semi-structured interviews were subsequently conducted with the purpose of understanding how the experiences of dancers and educators explain how these needs emerge and are shaped. Current dancers ($n_{\text{survey}} = 16$; $n_{\text{interview}} = 4$), former dancers ($n_{\text{survey}} = 79$; $n_{\text{interview}} = 9$), and dance educators ($n_{\text{survey}} = 35$; $n_{\text{interview}} = 6$) participated in survey and interview phases. Qualitative data were analyzed using reflexive thematic analysis, and integrated with quantitative findings to generate three meta-inferences, explaining how identified needs develop within competitive dance. Dance as the default; reflected reliance on dance as a primary source of coping and identity. Conform and persist; described how conformity is rewarded, persistence is expected, and suffering is normalized. Norms over needs; illustrated how cultural and structural barriers within dance limit help-seeking and access to support. Together, integrated findings demonstrate how identity processes, performance demands, and entrenched cultural norms interact to shape dancers' mental health and psychological skill needs, ultimately suggesting that although individuals recognize mental health as important, they often lack the knowledge, resources, and capacity to provide effective support. Implications emphasize moving beyond individual-level explanations toward system-level approaches that address barriers to support-seeking, strengthen implementation capacity, and promote prevention within early dance training contexts.

Acknowledgements

This research was supported in part by the Social Sciences and Humanities Research Council of Canada (SSHRC).

Session 9: Poster Session 3 (Odd Number Posters)

Saturday Oct 3, 4:30 pm – 5:15 pm

POSTER SESSION 3

Psychomotor learning

Session 9: Poster Session 3

Saturday, Oct 3 | 4:30 PM | Ballroom C

Poster 1

A new theory of proprioceptive working memory

John Buggeln¹, Nicholas Muscara¹, Matthew Short¹, Truc Ngo¹, Michael Carter², Joshua Cashaback¹

¹ *University of Delaware*

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A young violinist must recall the placement of their fingers since there are no visual frets. Proprioceptive working memory is a short-term store that allows one to maintain, manipulate, and recall recent movement. Yet despite accumulating evidence of the importance of this system for sensorimotor behaviour (Bernardi et. al (2015), Sidarta et. al (2018), Ohashi et. al (2019)), less is known about its underlying dynamics and computational principles. To address this problem, we consider proprioceptive working memory as a linear dynamical system.

We modelled the temporal dynamics of working memory using a fixed and flexible attentional resource. Specifically, attention operates as a gain on memory strength. Several canonical findings in the working memory literature emerge from our model, including the power-law relationship for memory strength and set-size, temporal decay, memory interference, the recency effect, and the primacy effect. We will propose multiple experiments to test our new theory of proprioceptive working memory.

Psychomotor learning

Session 9: Poster Session 3

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Poster 3

Computational and behavioural insights into localization of the unseen hand

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Accurately estimating unseen limb position is essential for everyday goal-directed movement. Studies of limb localization have traditionally focused on the contributions of peripheral input from sensory receptors and central signals from motor commands. With respect to central signals, a motor prediction of movement outcomes is generated via a copy of the motor command with each movement. Using active (voluntary) and passive (robot-guided) movement, studies have shown that this prediction can improve proprioceptive precision. However, other studies have failed to show this effect, leaving overall evidence inconclusive. We propose these equivocal results may be due to potential contributions of prior knowledge of reaching performance, something not formally considered. Our study investigates these issues through the following two aims: (1) to understand how prior expectation and motor prediction influences localization during goal-directed reaching, and (2) to understand the computational principles underlying localization of the unseen hand in 2D space. To this end, we compared trajectory-matched active and KINARM-guided passive reaching, with participants (n=6) reporting perceived endpoint via joystick-controlled cursor. Results show localization precision did not differ between active and passive reaching. Localization errors were consistently biased towards the movement goal, as predicted by our optimal Bayesian model which formalizes limb localization as the integration of prior expectations with sensory information. Consistent with this, AIC revealed that this model outperformed both prior-only and sensory-only models for all participants. Combined, these findings demonstrate the important role of prior expectations in limb localization during goal-directed reaching, an underexplored factor in previous work.

Psychomotor learning

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Saturday, Oct 3 | 4:30 PM | Ballroom C

Poster 5

The influence of speed-dependent changes in motor variability within movement decision-making

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Movement decisions require planning to select an effective motor strategy that maximizes average reward, given the inherent uncertainty within the sensorimotor system. Frequently, these decisions are made under time constraints, necessitating a trade-off between movement speed and accuracy that further increases movement uncertainty. Humans typically learn this trade-off, prioritizing task-related accuracy unless speed is demanded. Limited work has explored movement planning under varying conditions of motor variability; therefore, we investigated how individuals adjust their aimpoint strategies as a function of movement speeds and penalties associated with overshooting a target line. Participants made reaching movements towards a target line under slow (350–500 ms) and fast (100–250 ms) movement time conditions designed to change the level of motor variability. Reaches that stopped on the near, safe side earned points (0–100) that scaled linearly with reach distance, while reaches that crossed the target incurred a cost (0 or –500). Participants' aimpoints were compared with predicted aimpoints using an optimal movement planning model. We hypothesized that shorter MTs would lead to increased motor variability, and participants would subsequently reduce reach excursion, particularly under threat of greater penalty. We also expected that participants would still aim farther than optimally predicted, consistent with an underestimation of their motor variability. Results suggest participants internalize the speed-dependent changes to motor variability, reducing reach excursion when MTs are shorter or greater penalty is present; however, most participants exhibit risk-sensitive behaviour and reach closer than optimally predicted to the target line.

Psychomotor learning

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Poster 7

Learning through the experts' eyes: eye-movement modelling examples for air traffic control decision-making training

Jacob Sargent¹, John D. Cullen¹, David J. Hancock¹, Hiwa Rahmani¹, Kimberley L. Cullen¹

¹ Memorial University of Newfoundland

Air traffic control (ATC) requires rapid decision-making and efficient visual search within complex tasks (Durso & Manning, 2008). Eye-Movement Modelling Examples (EMMEs), which overlay an expert's gaze behaviour onto a task display, have emerged as a promising tool for perceptual-cognitive skill acquisition, yet their application in ATC training remains limited (Emhardt et al., 2023). This study explored whether EMME training could facilitate perceptual-cognitive skill development and whether adding verbal instruction to visual demonstrations provided incremental benefits. Nineteen participants were randomly assigned to either an audio-visual ($n = 10$) or visual-only ($n = 9$) EMME training group. Participants completed a pre-test, three EMME training sessions, and a post-test ATC decision-making task. Eye movements were recorded using Tobii Pro Glasses 3. Outcome measures included response accuracy, response time, fixation duration, fixation count, and saccade count. Linear mixed-effects and negative binomial mixed-effects models were used to evaluate training effects. Significant main effects from pre- to post-test demonstrated faster response times ($\beta = 0.31, p < .001$), accompanied by reductions in fixation count (IRR = 1.23, $p < .001$) and saccade count (IRR = 1.23, $p < .001$). No significant Group $\times$ Time interactions were observed for any outcome ($p > .05$), indicating that additional verbal instruction did not enhance learning outcomes. Accuracy remained unchanged across testing sessions. These findings suggest that EMME training may promote more efficient visual search and faster decision-making, indicative of emerging expert-like gaze behaviour. EMMEs may represent a promising tool for perceptual-cognitive skill acquisition in visually demanding performance environments.

Psychomotor learning

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Poster 9

Does hand-to-target information contribute to implicit adaptation of target-directed reaching?

Nick Butler¹, Annika Szarka¹, Elsa Sun¹, Romeo Chua¹

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Implicit sensorimotor adaptation underlies our ability to adjust our movements without conscious awareness. During reaching movements, it is commonly understood that the brain creates a multimodal representation of where the limb is in space, known as a perceived hand position. Computational models have suggested that the difference between this perceived hand position and the target is a critical error signal in driving adaptation. Despite the importance of actual hand position towards perceived hand position, many studies use shooting movements, whereby the actual hand position is no longer near the target at the end of movement. Currently, no study has compared the difference in implicit adaptation between shooting and pointing movements where the hand finishes in different locations in relation to the target. To address this gap, we recruited 30 participants who performed reaching movements towards targets displayed on a screen. While vision of their actual hand was hidden, they observed a cursor on the screen representing hand position. During perturbation trials, cursor feedback was rotated relative to the target position (clamped), irrespective of hand position. Participants performed two sessions one-week apart: one with shooting and one with pointing movements (counterbalanced). Results demonstrated there was no difference in adaptation between the pointing and shooting conditions. Surprisingly, we did observe an effect of session, where adaptation decreased in the second session regardless of what condition was being performed. These results may encourage reframing how we conceptualize the perceived hand position, as well as suggest examination of the long-term effects of implicit adaptation.

Psychomotor learning

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Poster 11

Motor and Perceptual Awareness During Learning to Reach with a Small Mirror Reversed Visuomotor Distortion

Sarvenaz Heirani Moghaddam¹, Gerome A. Manson², Erin K. Cressman³

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Learning to reach with a small mirror reversed (MR) visuomotor distortion, in which cursor feedback is reflected across the body midline (i.e., the y-axis), has been shown to engage explicit (i.e., conscious strategies) learning. However, explicit learning is often treated as a single construct despite evidence that it may consist of multiple components. The present study examined whether learning to reach with a small 20° MR distortion engages distinct forms of awareness, including motor awareness (awareness of changes in reaches) and perceptual awareness (awareness of the visuomotor distortion). Ninety participants learned to reach with a 20° MR distortion. Motor awareness was assessed using the Process Dissociation Procedure by comparing reaches when participants were instructed to use versus not use what they learned. Perceptual awareness was assessed using a line-orienting task in which participants indicated where they believed they should aim to move the cursor to the target. Both motor and perceptual measures were collected following the learning block. Results revealed that both motor and perceptual awareness were engaged during learning to reach with the small MR distortion. These findings demonstrate that learning to reach with a small MR distortion engages multiple forms of explicit awareness and highlight the importance of distinguishing between motor and perceptual components of awareness.

Psychomotor learning

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Poster 15

“You can’t imagine”: Motor imagery does not lead to adaptation in a visuomotor rotation task

Timothy Welsh¹, Jasmina Icgic¹, Helena Orphanides¹, AaroHi Pathak¹

¹ *University of Toronto*

Recent research has not provided any evidence that motor imagery can update internal sensorimotor models. According to the two-state space model of motor adaptation, both explicit and implicit processes are required to produce lasting changes in motor performance. Successful adaptation and changes to the internal model are typically intuited by changes in relative hand angle during performance of the visuomotor rotation task (adaptation) and persistence of the changes in relative hand angle when returning to a non-rotation condition (after-effects). Because motor imagery primarily engages explicit processes, it is unclear if motor imagery can lead to changes in the internal model. The present study was designed to determine whether motor imagery can effectively lead to changes in the internal model by examining adaptation and after-effects in a visuomotor rotation task. Participants completed a reaching task involving an initial no-rotation baseline followed by 200 cursor-rotated adaptation trials. Three conditions were tested: (1) motor imagery only (200 trials), (2) early motor imagery replacing the explicit phase (48 imagery, 162 physical trials), and (3) late motor imagery replacing the implicit phase (48 physical practice, 162 imagery trials). Results were that: 1) there was no adaptation or after-effects in the motor imagery only group; and 2) adaptation and after-effects were present in the other 2 groups, but larger in the early motor imagery group than in the late motor imagery group. Collectively, these findings suggest that motor imagery does not generate changes in the internal model in a visuomotor rotation task.

Acknowledgements

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Psychomotor learning

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Poster 17

Modulation of sensorimotor gating following multi-session rTMS in endometriosis-related chronic pain

Kathleen J. Peters¹, Leo Dolenko¹, Braeden Fancy¹, Nick Gohar¹, Lana Khaddaj¹, Meaghan Lapierre¹, Kyleigh McNichol¹, Grace E. Otto¹, Cassandra M. Santangelo¹, Linda McLean², Anthony N. Carlsen¹

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Sensory gating refers to the attenuation of irrelevant or redundant sensory input, enabling efficient processing of behaviorally relevant information. Impaired sensory gating has been reported in chronic pain; simultaneously, some evidence suggests that rTMS may reduce chronic pain intensity. Accordingly, this study tested whether repetitive transcranial magnetic stimulation (rTMS) counteracts impaired sensory gating in endometriosis-related chronic pain. Sensory gating was indexed using movement-related tactile suppression, or the reduction in somatosensory input around movement onset thought to support efficient sensorimotor integration. Thirty participants received either sham or active rTMS over M1 across a short (5-day) or long (10-day) protocol. Detection thresholds and tactile suppression (detection probability) of electrical-tactile stimuli applied to the back of the right hand were measured during a simple RT task on days 1, 5, and 10. rTMS did not affect tactile detection thresholds but had protocol-dependent influences on tactile suppression. In the long protocol, *active* rTMS generated greater increases in suppression relative to sham, from both day 5 to 10 ($p=.022$) and day 1 to 10 ($p<.001$). However, in the short protocol, changes were inconsistent: tactile suppression increased more following *sham* than active rTMS from day 1 to 5 ($p<.001$), followed by the opposite pattern from day 5 to 10 ($p<.001$), and no difference from day 1 to 10. These results suggest that a 10-day rTMS protocol may enhance movement-related tactile suppression in endometriosis-related chronic pain, with potential broader implications for assessing and targeting sensory gating deficits in chronic pain.

Psychomotor learning

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Poster 19

“Did you Hear Something?” Response-Effect Coupling on a Serial Movement Task

Markus Lenizky¹, Martina Kacan¹, Tim Welsh¹

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Movement planning is thought to involve the binding of motor responses to their anticipated effects, forming an action-based event. Previous work has exclusively focussed on the binding of single actions (e.g., keypress) to singular events (e.g., tone). The current study was designed to investigate if sequence-based actions of increasing length can be linked with auditory stimuli. Participants responded with either a right- or left-hand sequence in phases from 1-3 keypresses where each keypress generated a specific tone. To test if an action-effect link was developed, these effect tones were randomly presented before keypresses in pre- and post-tests. It was hypothesized that performance (accuracy, reaction time and movement time) would be improved for compatible trials (tones presented before the sequence matching those in the executed sequence) compared to incompatible trials in the post-test. Results (n=13) show no significant differences between compatible and incompatible trials within sequences. Significant performance-based improvements were identified in the pre-test between sequences 1 – 2 and 1 – 3 for compatible trials with significant impairment for incompatible trials. Therefore, a residual compatibility effect may be present after learned keypress-tone associations in the later sequences. Preliminary results (n=10) from a follow-up experiment, in which the 3-sequence task was learned in isolation, display a trend toward improved performance for compatible trials and impaired performance for incompatible trials using the same measures. These results support a coupling effect between motor responses and multiple auditory events, aiding to further our understanding of action-perception binding.

Psychomotor learning

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Poster 21

Learning to look ahead: Eye- hand coordination is optimized for optimal limb visual feedback during motor sequence learning

Elena M. Broeckelmann¹, Cheryl M. Glazebrook¹

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Currently little is known about how humans learn to perform motor sequences in near-automatic fashion, with minimal visual limb-target control (Bosch et al., 2018; Tal et al., 2021). In pursuit of a more ecological approach to measuring skill acquisition, the present study tested principles of eye-hand coordination during single target aiming embedded in an explicit goal-directed Serial Reaction Time Task, including if eye-hand coordination changes with multiday practice. Ten neurotypical adults (26.7 ± 6.4 years) practiced a 12-item SRTT by reaching to sequential targets displayed in a radial array on a touchscreen. Throughout the SRTT, the transition between sequence elements was constrained by a successful target touch which allowed for the measurement of eye-hand coordination to individual targets. An EyeLink 1000Plus and Optotrak 3D Investigator were synchronized to record gaze and limb movements, which were analysed using a series of mixed-effects models. In early and late practice, the eye “waited” for the hand about half the time. However, participants increasingly adopted a “looking-ahead” strategy, with saccades being initiated earlier in late practice and more often shifting gaze toward upcoming targets before the hand completed its trajectory. Notably, the hand achieved Peak Acceleration (PA) before target fixation in early practice ($p=0.03$), while target fixation and PA occurred simultaneously in late practice ($p=0.5$). Thus, practice involved updating eye-hand coordination for optimal limb visual feedback. In addition to replicating the relationship between target fixation and limb PA, the present findings provide new insight into practice-related optimization of eye and hand movements.

Acknowledgements

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Psychomotor learning

Session 9: Poster Session 3

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Poster 23

Effects of Visual Biofeedback Scaling on Centre of Pressure Dynamics during Quiet Standing: An Analysis of Ankle Muscle Coherence and COP-EMG Cross-Correlation

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Real-time visual biofeedback (vBF) while standing is a strategy to control posture and consists of providing a real-time representation of one's COP within a target boundary, which has been shown to reduce postural sway. Intermuscular coherence derived from surface electromyography (EMG) signals can estimate common neural input from the central nervous system to muscles whereas cross-correlation analyses between COP and muscle activation can characterize the temporal relationship between postural sway and ankle muscle activity. This study investigated the muscle coherence between the tibialis anterior (TA) and medial gastrocnemius (MG) during a quiet standing task with scaled vBF. 20 healthy young adults completed ten 1-minute trials for each condition: (1) no vBF (static target), (2) vBF magnified by 1 (X1), (3) vBF magnified by 5 (X5), and (4) vBF magnified by 10 (X10). No significant differences in muscle coherence were observed across frequency bands which suggests limited effects of biofeedback on the source of common neural drive. Cross-correlation analyses between medial-lateral COP displacement and MG activation demonstrated a significant increase from the no vBF to the X10 condition, and from the X1 to the X10 condition while similar increases were not observed in the anterior-posterior direction. This suggests that vBF may have an important effect on control in the medial-lateral direction, while the anterior-posterior direction may improve through other mechanisms that do not rely on temporal attributes between muscle activation and COP.

Psychomotor learning

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Poster 25

Effects of Acute Nicotine Abstinence and E-Cigarette Use on Executive Function and Craving in Young Adults

Lila Gavigan¹, Nathan Frewen¹, Lauren Giuffre¹, Harry Prapavessis¹, Matthew Heath¹¹ Western University

E-cigarette use has increased substantially among young adults, yet its effects on executive function (EF) remain poorly understood. Here, we examined whether acute nicotine abstinence and subsequent e-cigarette usage influences EF in experienced users. Thirty-two young adults (16 regular nicotine e-cigarette users, 16 non-vaping controls) completed a single laboratory session. Vaping participants abstained from nicotine for two hours before testing and then completed a standardized vaping protocol followed by a 60-minute *ad libitum* vaping period. Executive function was assessed at baseline (T₀), following the standardized protocol (T₁), and following *ad libitum* vaping (T₂) via the antisaccade task. Subjective craving and withdrawal symptoms were measured using the Questionnaire of Vaping Craving (QVC) and the Wisconsin Smoking Withdrawal Scale (WSWS2-L). Results demonstrated that following abstinence, e-cigarette users had increased nicotine craving ($p < 0.001$) and impaired EF as determined via longer antisaccade reaction times (RT) compared to non-vaping controls ($p = 0.038$). Notably, nicotine craving and EF improved following the *ad-libitum* vaping protocol. Further, a repeated measures correlation examining the within-subject association between QVC scores and antisaccade RT in the vaping group revealed a significant positive association ($r_{rm}(31) = 0.45$, 95% CI [0.12, 0.69], $p = 0.008$) indicating that higher craving was associated with longer antisaccade RTs. Thus, acute e-cigarette abstinence in regular e-cigarette users impairs EF and this impairment is ameliorated following a standardized vaping protocol and results suggest that impaired EF may be related to increased e-cigarette craving.

Psychomotor learning

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Poster 27

The Effect of Compassion Focused Imagery on Pain, Quality of Life, Self-Compassion and Self-Efficacy: A Case Study of Chronic Low Back Pain

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Chronic low back pain is one of the major causes of disability worldwide and is associated with reduced quality of life and psychological distress. Self-compassion has been identified as an important factor in pain coping and psychological well-being. Compassion-focused imagery is a mental practice with the goal of cultivating feelings of warmth, acceptance, and self-kindness; however, its effectiveness for individuals with chronic low back pain has not been well explored. The purpose of this study was to investigate the feasibility and effectiveness of a compassion-focused imagery intervention on pain intensity, quality of life, self-compassion, and pain self-efficacy in individuals with chronic low back pain. Two participants (F/43) presented with chronic low back. Over four weeks, both participants received pain management education, followed a physiotherapist prescribed home exercise program, and practiced daily compassion-focused imagery. Outcomes were assessed at baseline and after the intervention period. Using a single-subject design, descriptive analysis showed mixed changes in self-compassion, with one participant demonstrating an increase and the other a decrease in scores. Self-efficacy remained stable for both participants, while mental imagery scores decreased slightly. Disability levels remained low throughout the study. Participant logs indicated greater adherence to the physical exercise component compared to the mental imagery exercises, which may have influenced the observed outcomes. Given the small sample size these findings should be interpreted as preliminary and primarily provide insight into participant engagement and feasibility of the intervention.

This study contributes to the growing body of literature examining psychological approaches to chronic pain management.

Exercise psychology

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Poster 29

Implicit Effort Approach Tendencies Moderate the Relationship Between Motivation and Physical Activity

Emily Kotoris¹, Emily Brown¹, Caleb Zigby¹, Cole Akande², Steven R Bray¹

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Dual-process models (e.g., TEMPA; Cheval & Boisgontier, 2021) propose physical activity is determined by explicit, reflective, motivational processes as well as implicit, automatic, tendencies to approach or avoid physical effort. Explicit motivation reflects a conscious, deliberative mode of self-regulation and is a well-established predictor of physical activity. However, tendencies, such as automatic approach responses toward effort, may play a key role in translating explicit motivation into action for some individuals while hindering it for others. The purpose of this study was to examine explicit motivation and implicit effort approach tendencies as predictors of moderate-to-vigorous physical activity (MVPA) and implicit effort tendencies as a moderator of the relationship between explicit motivation and MVPA. Undergraduates ($N = 848$; 651 female) completed online measures of explicit motivation (BREQ-3; Relative Autonomy Index), implicit approach tendencies toward effort (PES; Relative Approach Effort) and MVPA (IPAQ-SF). Explicit motivation and implicit effort tendencies positively predicted MVPA ($R^2 = .13$, $p < .001$). The explicit motivation X implicit effort tendency interaction was significant ($p = .039$). Simple slopes estimates showed explicit motivation significantly predicted MVPA at all implicit effort levels, with weaker effects at lower effort tendencies ($b = 7.49$; $SE = 2.27$) and average levels ($b = 10.50$; $SE = 1.88$) of relative approach tendencies compared to higher levels ($b = 13.51$; $SE = 2.48$). Findings support predictions of TEMPA showing explicit motivation and implicit effort approach tendencies uniquely predict MVPA, and both motivations combining to explain MVPA among participants who are the most active.

Exercise psychology

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Poster 31

Implementation Evaluation of an 8-Week Behaviour Change Technique Coaching Intervention to Support Physical Activity Among University Students with Disabilities

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¹ McGill University

Introduction: Behaviour change interventions with behaviour change techniques (BCTs; e.g., goal-setting) are commonly used to promote physical activity among persons experiencing disabilities. However, little is known about implementation outcomes such as intervention fidelity and participant engagement in BCT coaching interventions. This study evaluated whether an 8-week BCT coaching intervention was delivered as intended and whether participants engaged with the intervention activities as planned. **Methods:** Eleven university students with disabilities participated in an 8-week BCT coaching intervention. Participants completed measures of intervention credibility and expectancy (CEQ; 1–9), counselling experiences (CECI; 1–4), and perceived coaching behaviours (CBSS; 1–7). Coaches rated participant engagement and adherence (0–10), while three independent coders ($n = 3$, 20 video coaching sessions) assessed delivery fidelity (0–2), with values between 61–80% indicating substantial agreement. **Analysis:** Interrater agreement was evaluated during coder training and pilot testing. Descriptive statistics summarized participant engagement, intervention perceptions, coach-rated adherence, and independent coder-rated delivery fidelity. **Results:** Interrater reliability and coder competency were high following training and pilot testing (e.g., ICCs = .96; Fleiss' $\kappa = .96$ –1.00). Participant engagement was high ($M=8.11/10$, $SD=0.81$), and independent evaluator ratings indicated 79%, reflecting substantial agreement for protocol adherence across sessions. Participants scored high overall with CEQ ($M=7.56$, $SD=1.16$, range=4–8), CECI ($M=3.71$ $SD=0.43$, range=2.82–4), and Coaching Behaviour Scale for Sport ($M=5.67/7$, $SD=1.52$, range=2.43–7.00). **Conclusion:** This study provides an evaluation of implementation fidelity and participant engagement within a BCT coaching intervention. Findings may inform the design and implementation of future behaviour change interventions.

Exercise psychology

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Poster 33

Connecting Participant Experience and Instructor Behaviour Using a Quality Participation Feedback Tool in a Community Recreation Program

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³ *Variety Village*

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Quality participation (QP) refers to participation in life events, including physical activity (PA), that is satisfying, enjoyable, and personally meaningful for individuals with disabilities. Key to fostering QP is an instructor's ability to facilitate the six experiential elements: autonomy, belongingness, challenge, engagement, mastery, and meaning. However, practical implementation guidelines on the experiential elements are currently lacking. The Quality Participation Enrichment Project (Q-PEP) is an initiative intended to address this implementation gap. As part of Q-PEP, the purpose of this study was to implement and evaluate the Q-PEP Feedback Tool, designed to guide instructor facilitation of the experiential elements within a community partner's swim program.

Adapted from the Measure of Experiential Aspects of Participation (MeEAP) and Player Passport, the tool was piloted in a recreational swim program at a community centre. Administered by a QP Ambassador across six sessions, participants used the tool to evaluate the presence of the experiential elements facilitated by the instructors. The QP Ambassador and the instructors then debriefed this feedback post-session.

Participants successfully provided feedback on the experiential elements using the Q-PEP Feedback Tool, allowing the QP Ambassador and instructors to translate participant experiences into actionable strategies for the following sessions.

The Q-PEP Feedback Tool offers a feasible and impactful mechanism for enhancing QP in recreational PA environments. Specifically, the tool allows instructors to reflect on participant experiences of the experiential elements and adjust their facilitation accordingly. Further development and testing of this tool is warranted in order to integrate QP into larger recreational PA contexts.

Exercise psychology

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Poster 35

“The cost of doing business”: exercise, neuropathic pain, and mood in people with spinal cord injury

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Background: Exercise may help manage both chronic and acute neuropathic pain (NP) and improve psychosocial outcomes in people living with spinal cord injury (SCI). However, results are variable, highlighting the need to learn about individual lived experiences. *Methods:* We conducted semi-structured interviews with ten adults with SCI (age = 50 ± 15 years, 6M/4W) to explore associations between exercise, NP, and mood among people with SCI who experience NP. Interviews were inductively analyzed using reflexive thematic analysis adopting an experiential orientation that centred on the meanings and experiences articulated by participants. *Results:* Four principal themes were developed that illustrate the diverse lived experiences of people with SCI: (1) *The heterogenous influence of exercise on NP* which describes the inter-individual variation whereby exercise relieves NP for some but exacerbates NP for others; (2) *In the zone*, which describes how exercise can act as a distraction from NP; (3) *“The cost of doing business”* which explains how some individuals will persist with exercise despite it exacerbating their NP; and (4) *“Man, I am on a high”*, which explores how exercise can be mood enhancing for people living with SCI, despite worsening their NP. *Discussion:* Our findings illustrate the individual nature of associations between exercise, NP, and mood in people with SCI. These findings highlight the need for future research to look beyond group-level data to understand how exercise is related to these outcomes and may provide direction for interventionists who prescribe exercise to people with SCI who experience NP.

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Assessing the Construct Validity of a Quality Participation Observation Tool Across Inclusive Physical Activity Contexts

Ariel Saulnier¹, Mia KurtzFavero¹, Isabel Coupland¹, Marley Mullan¹, Maya Hardowar¹, Nishi Patel¹, Tessa Griffin¹, Amy Latimer-Cheung¹

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Quality participation (QP) is an increasingly recognized outcome of inclusive physical activity programs. This study examined the construct validity of a Quality Participation Observational Tool designed to assess athlete experiences across disability sport and exercise contexts. Grounded in the six Canadian Disability Participation Project QP building blocks, the tool captures observable indicators of belonging, mastery, challenge, engagement, meaning, and autonomy.

The tool was implemented across three sport and exercise programs, where trained observers assigned session potency scores ranging from 0-3, with higher scores reflecting more frequent and impactful QP interactions. Construct validity was examined by comparing observed potency between programs and assessing convergent validity through correlations between observed and coach-reported potency scores.

Observed potency was highest in Program 3 ($M = 2.67$, $SD = 0.29$), followed by Program 2 ($M = 2.63$, $SD = 0.48$), and Program 1 ($M = 2.08$, $SD = 0.79$). A one-way analysis of variance indicated no significant differences across programs, $F(2,16) = 1.43$, $p = .269$, $R^2 = .151$. The effect size, although not statistically significant, suggests that program context may account for a proportion of variance in observed potency. The correlation between observed potency and coach-reported potency was weak and non-significant, $r = .098$, $p = .689$ ($n = 19$). Participant-reported potency scores demonstrated a ceiling effect, limiting variability and comparison with observational data.

These findings provide preliminary support for the tool as a practical method for evaluating inclusive physical activity programs, but further research is needed to strengthen validity.

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Poster 39

Disparities in parental perspectives of psychosocial development outcomes in neurodivergent youth after a one-week overnight camp

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Overnight summer camps provide unique opportunities for youth development, particularly in psychosocial development domains (Thurber et al., 2007). These positive outcomes are reflected in the perspectives of camper's parents (Henderson et al., 2007). Yet, majority of youth who attend overnight camps are neurotypical, and camp counsellors do not necessarily receive training with neurodiverse youth. Thus, higher-functioning neurodiverse youth may extract fewer psychosocial benefits from camps than neurotypical youth. As the camp clients are parents, the current pilot study's purpose was to begin assessing how parents perceive psychosocial benefits of a one-week overnight camp for their neurotypical or neurodivergent child. An online survey (from Henderson et al., 2007) was administered to parents with each question related to psychosocial development domains, relative to their child before and after attendance of a one-week overnight summer camp. Although results indicated that both groups of parents perceived significant improvements in their child trying new activities and adventures (NT: $t=-2.63$, $p=.03$; ND: $t=-2.50$, $p=.047$), neurotypical youth improved in more domains than neurodiverse youth. Parents of neurotypical youth also perceived improvement in taking initiative to lead groups ($t=-3.67$, $p=.005$) and introducing themselves to new people ($t=-2.89$, $p=.02$). These findings reinforce the assertion that neurodiverse youth do not extract the same benefits from overnight summer camps that neurotypical children do. In turn, further research and practical application is necessary to implement the proper resources and training for camp counsellors in overnight summer camps organizations to increase accessibility for neurodiverse youth.

Acknowledgements

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Poster 41

“It’s all relative”: The Magnitude of Contrast Effects when Rating Body Types is not Impacted by Context nor Self-Perception of Body Size

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The current studies were designed to examine if context modifies the magnitude of a contrast effect that emerges for perceptions of body size when bodies are presented in a group. Participants (women; 18-35 years) rated the body size of centrally-presented models on a continuous scale from “very thin” to “very heavy”. Target models were presented either on their own or in groups of three. When in groups, the two flanking models had the same, smaller, or larger body size than the target model. In Experiment 1, models were presented on a white background. In Experiment 2, models were presented in either a gym or office setting. In Experiment 3, models were presented upside-down to break the configural processing of the bodies. We found a contrast effect in each experiment in which the target model was rated as thinner when presented between groupmates of a heavier body size ($p < .05$), and as heavier when presented between groupmates of a thinner body size ($p < .05$). The contrast effect did not differ for groups of participants who viewed their own bodies as too thin vs too heavy (Exp1) nor for different office or gym contexts (Exp2). The contrast effect was, however, larger for individuals who saw the models upside-down than for those who saw them right-side-up (Exp3). These findings provide evidence that the representation and perceptions of body size are biased by configural processing of the bodies, but not by factors such as context or the viewer’s perception of their own body size.

Acknowledgements

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Poster 43

When support falls short: Using daily diaries to explore the role of social support during athletic injury recovery

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Athletes derive meaningful social connections and a sense of identity through sport. However, injuries can disrupt such experiences and negatively affect psychological and physical outcomes. Whereas research has recognized the general value of social support during injured athletes' recovery, the day-to-day experiences of these processes remain underexplored. Therefore, this study used a daily diary design to examine how athletes' perceptions of social support relate to psychological and physical experiences during musculoskeletal injury rehabilitation. Twenty-four athletes ($n_{men} = 15$, $n_{women} = 9$; $M_{age} = 21.46$ years) completed 615 daily surveys across an average of 25.63 days. Daily measures assessed received and desired social support, social identity, well-being, motivation, optimism, and pain. Multilevel models were used to examine within-person associations, accounting for the nesting of daily observations within individuals. Results indicated that social support was associated with athletes' daily recovery experiences, although specific patterns varied across support types and outcomes. Support types were positively associated with well-being and motivation when examined independently; however, associations were less consistent when support types were considered simultaneously. Discrepancies between desired and received support appeared particularly important, with athletes reporting lower well-being and motivation and greater pain on days when they received less support than desired. Social identity was positively associated with well-being but did not moderate the relationship between support and well-being. Together, these findings suggest that support during injury recovery may depend not only on the amount of support but also on the extent to which it aligns with athletes' evolving needs and desires.

Acknowledgements

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Poster 45

The ‘Super Crew’ Success Story: Understanding the volunteer experience at the inaugural OneAbility Games

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Volunteers at disability sporting events are key in determining success at the event. Understanding and improving experiences can aid in sustained volunteer participation and potentially impact experiences of athletes at events. The purpose of this study was to describe a) the volunteer experience at the OneAbility Games—a disability sporting event with a deliberate focus on creating positive volunteer experiences, and b) the contextual features contributing to experiences from volunteer perspectives, organizing committee, and researchers.

In this mixed-methods study, 62 event volunteers completed the Measure of Experiential Aspects of Participation (MeEAP) and open-ended questions to describe their experience. The lead researcher also gathered contextual details through meeting with the organization committee and designing and attending volunteer training, and attending the event. MeEAP scores were analyzed using descriptive statistics and repeated measures (RM) ANOVA. We analyzed the qualitative data using thematic analysis.

The average MeEAP score was $6.18 \pm .86$ out of 7. Belongingness was rated the highest ($M = 6.57 \pm .86$) followed by meaning ($M = 6.39 \pm .90$). The lowest reported aspect was engagement ($M = 5.90 \pm 1.21$), $F(4.04, 359.57) = 14.44$; $p < .001$; partial $\eta^2 = .14$). The volunteer break rooms, creating a ‘Super Crew’ group identity, and shared purpose may have contributed to the volunteer experience. Lack of role clarity and opportunity for engagement may have detracted from the volunteer experience.

Volunteer experiences were generally positive, with high ratings in belongingness and meaning. Future disability sporting events may consider evaluating strategies to enhance role clarity and to optimize volunteer scheduling, ensuring engagement.

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Poster 49

Perceptions of Team Video-Debriefing in High-Performance and Professional Ice Hockey

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Team-based video feedback is central to learning and development in elite sport. However, despite its widespread use and substantial investment in team film review, little is known about how athletes and coaches perceive the effectiveness of these sessions, or how the film room influences various team dynamics. As such, we sought to understand how ice hockey athletes, video coaches, and coaches perceive the use of team video debriefing and to explore their experiences of the film room as a pedagogical, communicative, and social learning environment. Using a qualitative comparative case study design, semi-structured interviews ($N = 20$) were conducted with current and former coaches ($n = 6$), athletes ($n = 6$), and video coaches ($n = 8$) from elite (i.e., Canadian Hockey League, National Team) and professional leagues (e.g., National, American, Professional Women's, and European Elite Hockey Leagues). Interviews were analyzed using a reflexive thematic approach, first within cases and subsequently between cases. Findings suggest that all participants perceive team film review as capable of creating a shared understanding among teammates, carrying social consequences for athletes and coaches, and express concern about the increasing amount of video used. Participants differed in how they described their preferred film room structure, the presence of power and authority, and the overall objective of the film room (e.g., accountability, learning, culture-building). These findings provide insight into how team film debriefing is experienced and implemented in elite and professional hockey environments and offer practical considerations for designing film sessions that support athletes' learning and performance.

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Poster 51

Embedding Knowledge Mobilisation in a Participatory Action Research Project: Developing a Legacy

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Sixteen trainees completed a three-year certification programme to become social learning leaders (facilitators of communities of practice; CoPs) for the sport system, ultimately creating a new role for sport leader development to build system-wide capacity for adaptive, collaborative problem-solving, and sustained knowledge use. Emerging standards recommend that knowledge mobilisation (KMb) be an integral part of a research plan, requiring a deliberate effort from the beginning. Situated within the participatory paradigm, this project gave priority to practical knowing (Lincoln et al., 2011). Our action-oriented programme is innately about KMb given that CoPs and social learning are at their core about KMb and the co-creation of knowledge. From the start, our trainees (i.e., knowledge users, being sport leaders from different levels of the system) have been involved in our evolving plans, collaboratively shaping programme activities according to their collective needs. Social learning theory compels us to attend to learning and the broader practice landscape. Our trainees evolved from delivering coaching modules to becoming social learning leaders who attend to relationships and learning loops, creating environments where participants engage uncertainty rather than focus on transactional goals. These leaders are now disseminating social learning by engaging members in CoPs focused on gender equity, safe sport, physical literacy, and lifelong learning. This has resulted in increased cross-organizational alignment, faster uptake of evidence-informed practices, and strengthened leadership capacity across the system. Another aspect of our KMb plan is ongoing messaging through partner newsletters, calls, and congresses, contributing to the rapid uptake of CoPs in sport organizations.

Acknowledgements

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Poster 53

Development and Preliminary Validation of the Japanese Version of the Transformational Coaching Scale (TCS-J) Among High School Team-Sport Athletes

Masashi Fukami¹

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Transformational leadership in sport coaching—characterized by idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration—has been associated with athletes' psychological development and performance. However, no validated instrument is currently available to assess these specific coaching behaviors in Japanese sport settings.

This study developed a Japanese version of the Transformational Coaching Scale (TCS-J) and examined its preliminary reliability and construct validity.

Participants were 69 male high school team-sport athletes ($M_{age} = 16.33$, $SD = 0.89$). The original 16-item TCS was translated into Japanese. Participants completed the TCS-J, a sport-club motivation scale, and the athlete version of the Coach–Athlete Relationship Maintenance Questionnaire (CARM-Q). Internal consistency was examined using Cronbach's alpha coefficients, and construct validity was assessed using Pearson correlation analyses.

The four TCS-J subscales demonstrated good internal consistency ($\alpha = .82-.84$). The total TCS-J score was positively correlated with intrinsic motivation ($r = .35$, $p < .01$) and identified regulation ($r = .37$, $p < .01$), and negatively correlated with external regulation ($r = -.25$, $p < .05$) and amotivation ($r = -.45$, $p < .01$). Higher TCS-J scores were also positively associated with openness, support, and prevention of relationship deterioration.

These findings provide preliminary evidence for the reliability and construct validity of the TCS-J, suggesting that transformational coaching is associated with self-determined motivation and constructive coach–athlete relationship maintenance. Although limited by the small sample size, data collection is ongoing. Detailed factor-structure analyses from an expanded sample will be presented at the conference.

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Poster 55

Applying Self-Determination Theory to Understand Sport Officiating Retention

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Self-Determination Theory (SDT; Ryan & Deci, 2000) contends that when three innate needs (autonomy, competence, and relatedness) are met, individuals are motivated to persist. SDT has been used to explore sport officials' (referees, umpires, judges; Webb et al., 2025) motivations (Sunde et al., 2024). This is vital research, since there is an ongoing officiating shortage with competing explanations for why sport officials quit (Tingle et al., 2026; Webb et al., 2020). Our purpose was to investigate how SDT predicts retention among US soccer officials. 846 certified soccer officials (777 male; M age = 49.5 years; M experience = 13.3 years) completed a survey with demographic questions, Referee Retention Scale (Ridinger et al., 2017), and Basic Needs Satisfaction in Sport Scale (Ng et al., 2011). Participants highly rated intrinsic motivation ($M = 4.23/5.00$), relatedness ($M = 5.47/7.00$), choice ($M = 5.58/7.00$), locus of causality ($M = 5.74/7.00$), competence ($M = 6.04/7.00$), and volition ($M = 6.41/7.00$). Strong correlations existed for relatedness with competence, choice, and locus of causality (all Pearson $r > .40$). A significant regression model ($F_{[5, 840]} = 88.38, p < .001, R^2 = .35$) indicated the strongest predictors of retention were relatedness ($B = 11.29$), locus of causality ($B = 3.85$), and choice ($B = 3.38$). Results corroborate existing literature that positions SDT as an important framework for sport officials' motivations. Organizations should focus on improving sport officials' perceptions of autonomy (choice, volition, causality), competence, and relatedness to improve retention.

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Poster 55

Mental Skills Profiles of Open-Water Swimmers: Foundation Skills Predict Competitive Level and Relate to Training Volume

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Open-water swimming demands sustained self-regulation under unpredictable conditions. The OMSAT-3 provides a 12-dimension framework for assessing mental skills in sport, but its application to open-water swimming remains limited, with few studies linking mental skills to training and competition in this population. The purpose of this study was to characterize the OMSAT-3 profile of open-water swimmers, identify latent athlete profiles, model predictors of competitive level, and present an analytics platform for practice. Three hundred swimmers (155 M/145 F; M age = 45.6 years) completed the OMSAT-3 online. Analyses included reliability testing, group comparisons with non-parametric checks, principal component analysis (PCA), K-means clustering, and hierarchical regression using ordinary least squares (OLS), with results confirmed by ordinal logistic regression (n = 288). Swimmers displayed high self-confidence and emotional regulation but low cognitive preparation. Three profiles emerged: Consolidated (43%), Self-Regulation without Preparation (27%), and Reactive (30%). Foundation skills (goal setting, self-confidence, commitment) were the strongest predictor of competitive level ($\beta = .27$, $p < .001$), above experience and sex. Higher training volume was associated with stronger mental skills across tertiles (Global OMSAT-3: 4.48 to 5.05, $p < .001$). Athletes listing "winning" as a goal scored higher on foundation skills ($d = 0.54$, $p = .003$). Foundation skills were the central psychological variables linking training to competitive level. Consistent with person-centered approaches in sport psychology, the three profiles may guide differentiated interventions. A companion platform (app.omsat.club) automates scoring, profiling, and personalized feedback.

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Poster 57

Between Bedtimes and Boardrooms: Motherhood as Leadership Development for Women in Senior Leadership Positions in U Sports

Jonathan Hood¹, Nicole Ferguson²

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Despite increasing recognition of the importance of diversity and inclusion within sport organizations women remain underrepresented in sport leadership. Existing research has documented structural and cultural barriers facing women leaders; however, limited research has explored how motherhood shapes leadership practice and leadership legitimacy within Canadian intercollegiate sport. Guided by Implicit Leadership Theory (ILT), this study examined how women leaders understood the relationship between maternal experience, leadership effectiveness, and leadership recognition in high-performance sport environments.

Using a narrative inquiry approach, semi-structured interviews were conducted with eight women Athletic Directors at Canadian Universities who were also mothers. Data were analyzed using reflexive thematic analysis.

Findings suggest that motherhood functioned as a developmental experience that strengthened leadership capacities associated with contemporary leadership effectiveness, including emotional regulation, relational intelligence, adaptive communication, strategic prioritization, and structured accountability. Participants frequently described becoming more intentional, efficient, and relationship-oriented leaders following motherhood. At the same time, they continued to navigate sport cultures shaped by historically masculine leadership prototypes emphasizing visibility, endurance, emotional toughness, and uninterrupted commitment. Consequently, participants described tension not between motherhood and leadership effectiveness, but between how they enacted leadership and how leadership legitimacy was recognized within sport environments.

The findings challenge deficit-oriented narratives that position motherhood primarily as a barrier to leadership and instead suggest that maternal experience may cultivate capabilities increasingly valued in contemporary organizational leadership. The study contributes to sport scholarship by highlighting a potential capability-recognition misalignment, whereby maternalized leadership capacities may be effective yet insufficiently recognized within traditional sport leadership cultures.

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Poster 59

Exploring Attitudes Toward Sports Betting

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Sports betting has become normalized within sport culture through the rapid expansion of online gambling platforms and widespread advertising. This trend is particularly concerning among university athletes, who consistently report higher rates of gambling-related harms than their non-athlete peers (Derevensky et al., 2019; Nowak, 2018). Studies in the United States suggest that 6–9% of college athletes experience problem gambling or gambling disorder, however, research has largely focused on prevalence rather than the attitudes and motivations behind athletes' engagement in sports betting. This presentation summarizes the results of brainstorming session on student-athlete gambling in Canada. Thirty individuals, including student-athletes, coaches, researchers, and sports administrators, participated in the session. Workshop notes were analyzed using content analysis (Morgan, 1995), with frequency counts used to identify recurring ideas and patterns across groups. Seven overarching themes were identified. The most frequently discussed theme was Normalization and Accessibility of Betting (24), followed by Social and Cultural Drivers (20), Identity as an Athlete (14), Harm Reduction Solutions (14), Policy (14), Financial Incentives (12), and Risk Awareness (11). Findings suggest that sports betting has become deeply embedded within sport culture, where accessibility, social influence, and competitive identity interact to encourage engagement among athletes. Efforts to reduce gambling-related harm among athletes should target the broader social and environmental factors that normalize betting, including advertising exposure, team culture, and sport media. Furthermore, athlete-specific education initiatives (e.g., increase gambling literacy and awareness), as well as policy-level strategies (e.g., advertisement restrictions, age/spending controls) may represent promising avenues for prevention.

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Poster 61

A Coproduction Partnership with Special Olympics International to Advance Global Coach Development

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Research coproduction involves knowledge users and sport administrators collaborating and sharing decision-making to enhance the relevance, usability, and uptake of research findings in practice. The purpose of this presentation is to describe the implementation and evaluation of a coproduction approach in a global project exploring Special Olympics coach development. Participants comprised of partnership members: five Canadian researchers and two Special Olympics administrators. Iterative cycles were undertaken across the initiation, implementation, and mobilization phases of the project, including: (1) using the Partnership Assessment Toolkit and promising coproduction practices to develop guiding questions for understanding partners' values, expectations, and experiences, and collecting responses from partners through surveys, (2) analysing data using reflexive content analyses, (3) reflecting on findings and developing strategies to foster positive partnership experiences and achieve partnership goals. The results spanned four themes: (a) partnering for impact –improving Special Olympics coach development through creating relevant and usable research-informed recommendations/tools (e.g., infographics, webinars); (b) working with partners' realities – scheduling meetings with a focus on structure (monthly with set agendas) and flexibility (adapting to shifting conditions and time zones); (c) valuing diverse expertise - involving all partners in decision-making through open-meeting discussions, and consulting end users (directors, coaches) for feedback in shaping the research, (e) collaborating with purpose – paying attention to ethics, meaningful engagement, and cultural sensitivity through dedicated meeting agendas focused on learning and strategizing these topics. This work demonstrated that partnerships – when carried out intentionally – can help pay attention to partnership ethics and better meet both research and practice goals.

Acknowledgements

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Poster 63

A psychometric evaluation of the Self-Compassion Scale factor structure in a sample of athletes

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Self-compassion is increasingly recognized as a supportive way for athletes to relate to themselves during setbacks and challenges (Mosewich et al., 2013), and has been linked to adaptive sport-related processes (e.g., perceived performance, adaptive appraisals) and lower maladaptive responding (e.g., self-criticism, perfectionistic concerns; Cormier et al., 2023). Such associations in sport are most often assessed using the Self-Compassion Scale (Neff, 2003), with self-compassion commonly operationalized as a single overarching construct or a six-factor multidimensional construct. Although the Self-Compassion Scale is commonly used in sport research, its structure has not yet been robustly evaluated among athletes. Thus, the present study examined the factor structure of the Self-Compassion Scale among 730 athletes (388 men, 375 women; $M_{age} = 25.34$ years, $SD = 10.79$) using confirmatory factor analysis (CFA) and exploratory structural equation modeling (ESEM). Both the six-factor ESEM (RMSEA = .047, SRMR = .018, CFI = .982, TLI = .968) and bifactor ESEM models (RMSEA = .040, SRMR = .015, CFI = .988, TLI = .977) demonstrated strong fit. The observed pattern of strong model fit alongside cross-loadings, where items showed meaningful associations with more than one subscale, is consistent with evaluations of the Self-Compassion Scale in other populations (Neff et al., 2019). The present results align with Neff's (2003) conceptualization of self-compassion as a system of interrelated components, wherein the six dimensions are expected to overlap and interact as part of a broader self-compassion system. Overall, these findings inform recommendations surrounding how Self-Compassion Scale scores may be used in athlete samples.

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Poster 65

Gender Differences in Self-Efficacy Following Negative Performance Feedback

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Beliefs about athletic ability influence how individuals interpret and respond to performance-related feedback. Yet, how this process differs by gender remains underexplored, particularly among competitive athletes. This study examined whether gender differences in self-efficacy emerged on a neutral motor task among competitive athletes, and whether gender moderated changes in self-efficacy following performance feedback. $N = 128$ competitive university athletes ($n_{female} = 73$; $n_{male} = 55$) completed a motor-accuracy task across two sessions, while receiving standardized positive feedback in one session and negative feedback in the other. Self-efficacy was assessed pre- and post-feedback, and individual perfectionistic tendencies were statistically controlled. A one-way ANCOVA revealed that male athletes exhibited significantly higher baseline self-efficacy than female athletes, $F(1, 125) = 5.23, p = .024$, independent of perfectionistic tendencies. Furthermore, a linear mixed model analysis demonstrated that gender significantly moderated athletes' responses to feedback, $F(1, 119) = 4.89, p = .029$. While female athletes maintained similar self-efficacy scores after positive feedback, they exhibited a decline following negative feedback. Conversely, male athletes demonstrated greater stability; although their confidence dropped following negative feedback, the magnitude of this drop was less than half that of their female counterparts. These findings suggest that, on average, competitive female athletes approach 'neutral' athletic tasks with lower self-efficacy than male athletes, and that their self-efficacy is considerably less stable in response to negative performance feedback. More broadly, this work informs ongoing discussions of gender differences in sport and may help coaches consider how feedback is received by different athletes.

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Knowledge Mobilization for Coach Support in Figure Skating: A Document Analysis of Resources Addressing Body Image and Disordered Eating

Erin Rayman¹, Shannon SD Bredin¹

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For athletes training in aesthetic sports like figure skating, experiences with disordered eating, diet culture, and/or negative body image are common. Coaches are uniquely positioned to influence athlete well-being but often report feeling underprepared to address these concerns. The purpose of this research was to examine the available documents provided by sport governing bodies in figure skating to map the existing knowledge mobilization approaches related to body image and disordered eating for coaching practice. A document analysis was conducted using publicly available resources from Skate Canada, the International Skating Union, the International Olympic Committee, and the Coaching Association of Canada. Of 55 identified documents, 34 met the inclusion criteria. Documents included policies (n = 4), conduct codes (n = 8), guides (n = 4), consensus statements (n = 8), and handbooks/toolkits (n = 10). Documents were analyzed for content related to creating strengths-based environments for body image, nutrition and well-being, coach-athlete communication, and safeguarding practices. Results showed that most resources focused on mobilizing nutrition facts, general well-being, or mental health (67%). Documents directly addressing disordered eating primarily emphasized misconduct, focusing on cases of coaching neglect and/or psychological abuse (26%); while fewer documents provided guidance on prevention, identification, or intervention (7%). Although transparent policies regarding the protection of athletes from maltreatment is essential, future knowledge mobilization efforts should also provide tools that support early recognition of disordered eating habits, effective coach-athlete communication strategies around diet, and the development of body-positive training environments for athlete health and well-being.

Sport psychology

Session 9: Poster Session 3

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Poster 71

Athlete Representation in Concussion Education Materials across Ontario Sport Organizations

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Concussion education is widely promoted as a key strategy for injury prevention in youth sport and is mandated under Rowan's Law in Ontario. While this legislation has standardized the availability of concussion resources across sport systems, access to information alone does not necessarily lead to behaviour change. Athletes often understand concussion symptoms yet continue to underreport them due to social and cultural pressures within sport environments. Accordingly, it is important to examine not only the content of concussion education, but also how athletes are represented, including whether these materials reflect the complexity of reporting processes.

The purpose of this study was to explore the representation of athletes in concussion education materials through Rowan's Law in Ontario sport organizations. A qualitative content analysis was conducted using publicly available concussion education materials from six provincial/multisport organizations: hockey, rugby, soccer, alpine skiing, judo, and parasport. Analysis focused on athlete representation alongside broader patterns in messaging, including responsibility framing and resource delivery.

Findings indicate that organizations largely rely on government-developed materials, resulting in highly standardized content across sports. Athlete representation was limited, with minimal diversity in identity, ability, and sporting context. Educational messaging emphasized individual responsibility for symptom recognition and reporting, with less attention to organizational or systemic roles. Overall, although Rowan's Law has institutionalized concussion education, its implementation is largely compliance-driven. These findings highlight the need for more athlete-centered, inclusive, and sport-specific concussion education approaches that emphasize shared responsibility and may better support meaningful knowledge uptake and behaviour change in youth sport.

Sport psychology

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Poster 73

How coaches foster a Sense of Community in Colombian Masters sport

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In Canada, Masters (adult) sport coaches adopt relational approaches to enhance a Sense of Community (SOC): athletes' sense of belonging, mattering, and shared emotional connection (Belalcazar et al., 2025). Cultural context shapes SOC (McMillan & Chavis, 1986), yet culturally-sensitive inquiry on the topic is rare. In Colombia, where Masters sport is growing, coaching guidance is limited (Belalcazar & Callary, 2021), particularly for how coaches can foster SOC. This study explored coaches' influences in the development of SOC in two Colombian Masters swim clubs. Using a narrative inquiry approach, data were collected over 14 weeks, including 30 field observations of coaches and athletes (aged 40+), three focus groups with ten swimmers, seven semi-structured interviews with additional swimmers, and researcher field notes. Narrative data were analyzed thematically and generated three themes that reflect coaches' influence on SOC. First, coaches used *diverse approaches*; they offered swimmers various ways to learn, responded to individual age-related needs, and were invested in athletes' swimming goals. Second, coaches used *facilitative leadership*; they attended to swimmers' needs within group settings, affirmed athletes' dedication and growth, and accepted swimmers for who they were. Finally, coaches contributed indirectly to SOC by *celebrating beyond the pool*; they frequently joined athletes' gatherings post-practice to socialize and get to know them better. Together, these coaching practices strengthened swimmers' SOC, further expressed through sport commitment, emotional renewal, and confidence. This study highlights how coaches are key agents in fostering SOC in Colombia and provides insight into culturally nuanced coach education resources for Masters sport.

Acknowledgements

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Sport psychology

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Poster 75

A Simulation-Based Framework for Generating Athlete-Specific Neuropsychological Norms: Evidence from the Creyos Cognitive Battery

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As cognitive performance is an emerging facet in athlete development and selection, recent studies demonstrated that high-performance athletes exhibit superior cognitive abilities relative to the general population. However, existing normative frameworks rely on data from the general population that fail to capture the range of performance observed within athletes. The present study examined the reliability and classification accuracy of Creyos cognitive battery normative data for adolescent high-performance athletes using a Monte Carlo simulation framework

A Monte Carlo simulation was parameterized from the empirical multivariate correlation structure of 126 adolescent high-performance athletes (M age = 18.3 years) who completed a 12-test neuropsychological battery. Simulated data were generated across sample size ($N = 126-5,000$), age-stratification (16–19 years), and performance decrement arising from sequential cognitive load ($\lambda = 0, -0.05, -0.10$ SD). Task-level descriptives were derived for both true and observed scores.

Multivariate base rate analyses revealed that the proportion of athletes achieving high scores declined sharply with increasing task count across all three percentile thresholds (75th, 84th, 91st). As many athletes achieved at least one high score, proportions of high scores declined with increasing task count. Sensitivity was high for isolated high scores (92.2–97.2%) but decreased progressively as the threshold increased. As well, normative parameter recovery was robust, with observed and true mean scores diverging by less than 0.10.

These findings support simulation-based normative modelling as a valid and practical approach to support normative data for identifying cognitive strengths, monitoring development, and informing selection decisions in high-performance athletes.

Sport psychology

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Poster 77

Athlete-Centered Coaching and athletic burnout: The protective effect of the coach-athlete relationship on manifestations of burnout

Felix Gaudreault¹, Isabelle Green-Demers¹

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Sports federations are increasingly recommending training methods that take into account the athlete's needs across all areas of their life, as supported by the Athlete-Centered Coaching (ACC) perspective. Coaches adopting this philosophy emphasize on involving athletes in planning their training process according to their needs, in order to foster autonomy and personal responsibility, while maintaining high-quality coach-athlete relationships. Coaches can adopt ACC with behaviors from six dimensions: (1) asking athletes questions about their training process; (2) involving athletes in decision-making; (3) being available for athletes; (4) supporting athletes' collaboration; (5) respecting athletes' training-personal life balance; and (6) fostering satisfaction during sport participation. Since the coach-athlete relationship contributes to the athletes' well-being in the practice of their sport, and given that a low level of well-being can lead to burnout, this study aimed to examine the associations between behaviors of ACC dimensions adopted by coaches, and athletes' burnout manifestations. The sample included 129 athletes who completed the Inventory of Coaches' Athlete-Centered Behaviors, the Athlete Burnout Scale, among other general questions related to their athletic experience. Results showed that all six ACC dimensions were negatively associated with a manifestation of burnout, either a physical exhaustion, a reduced sense of accomplishment, or negative feelings toward their sport. This implies that sports organizations could encourage coaches to adopt an ACC approach, in order to protect athletes from experiencing burnout related to their sport.

Sport psychology

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Poster 79

Sport-Related Concussions: Psychopathology and Access to Academic Support

Paige Laplante¹, Hayley Russell¹, Erin Austen¹

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Sport-related concussion (SRC) is highly prevalent among athletes and is associated with a range of physical, cognitive, and emotional symptoms. This study investigated the differences in psychopathological symptoms between athletes with and without SRC history and whether athletes with SRC received academic accommodations. A cross-sectional survey assessed SRC frequency, psychopathology, and academic support in student-athletes. We hypothesized that athletes with a history of SRC would describe higher levels of depression and anxiety compared to those without a history of SRC, as well as greater awareness and receipt of academic support. Participants included 48 varsity and club athletes from St. Francis Xavier University who completed a Qualtrics survey. Frequency analyses suggested that underreporting was highly prevalent within our sample. One-way ANOVAs indicated no significant differences in depression or anxiety across athletes (0, 1, or 2 or more diagnosed SRCs). However, depression mean scores tended to be higher for athletes with two or more SRC diagnoses. Conversely, anxiety mean scores tended to be lower with two or more SRC diagnoses. Student-athletes described receiving few academic accommodations after SRC. Academic challenges were mostly described as cognitive symptoms. General challenges after SRC were described most often as a continuation of symptoms. This study describes the various impacts of SRC on student-athletes and the varied challenges that accompany this injury. Future research is recommended to explore reporting behaviors and investigate current institutions' concussion protocols and academic accommodation provision.

Sport psychology

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Poster 81

Mental Health Outcomes in Non-Heterosexual and Heterosexual Student-Athletes: A Comparison

Parker Triano¹, Phillip Sullivan¹

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Elite athletes who are LGBTQ+ are more likely to experience mental health symptoms and disorders (Gorczynski et al., 2022; Kroshus & Davoren, 2016). Kroshus and Davoren (2016) found significant difference between sexual minority and heterosexual NCAA athletes on a variety of mental health outcomes including hopelessness, loneliness, sadness, depression, anxiety, and suicidal and self-harm. Previous research has identified how membership of multiple marginalized groups (e.g., female athletes of colour who are lesbian or bisexual) may affect sport experience and cause athletes to de-emphasize elements of their own identity to mitigate experiences of stigma (Melton & Cunningham, 2012). Therefore, this project aims to address the question: "Do Canadian sexual minority student-athletes report higher adverse mental health outcomes than heterosexual student athletes?" To answer this research question, data from the 2024 Canadian Campus Wellbeing Survey was analyzed. 1112 respondents in this survey were student athletes, of which 152 self-identified as non-heterosexual. Independent samples t tests showed that sexual minority athletes reported significantly higher psychological distress and thoughts of suicide, and significantly lower resilience, general mental health, and well-being than their heterosexual counterparts. These results suggest that the mental health gap between heterosexual and non-heterosexual student-athletes may be more robust than previously thought and warrant the implementation of population-specific strategies.

Sport psychology

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Poster 83

Do I need my teammates to reach my personal goals? Early developments of self-oriented goal outcome interdependence scales

Seth Papineau¹, Zakry Walsh¹, Anthony Griffo¹, M. Blair Evans², Mark Eys¹

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² *Western University*

Sport presents a complex and underexplored context in which athletes pursue valued personal goals (e.g., skill development; securing a starting position) while simultaneously contributing to team objectives (e.g., winning). Concurrently, each athlete's personal goal pursuits can have positive (i.e., cooperative) and negative (i.e., competitive) ties to others' personal goal pursuits. To illuminate perceptions of these goal relationships and their consequences, we gathered evidence for the development of two surveys that assess the perceived interdependence of teammates' personal goals. Specifically, we developed a two-item sociometric survey conducive to social network approaches (i.e., rating interdependence with each teammate) and an accompanying multi-item psychometric survey regarding perceptions of interdependence with the team as a referent. Using a novel conceptual model of interdependence in sport teams (Papineau & Eys, 2025) and established guidelines for measurement development (e.g., Clark & Watson, 2019), we developed an item pool before engaging with participants across three phases. In Phase 1, content expert reviewers from various psychological disciplines ($n = 10$) aided in the refinement of initial scale items and survey formats. In Phase 2, further refinement occurred through cognitive interviews with athletes from several sport team types ($n = 10$). Lastly, in Phase 3, the technical operation of both surveys was evaluated from a convenience sample of athletes ($n = 142$) to prepare for further rigorous testing of sociometric and psychometric properties. These initial phases of measurement development create the foundation for examining how dyadic-level interactions between teammates' personal goals impact individual and team functioning.

Acknowledgements

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Session 10: Poster Session 4 (Even Number Posters)

Saturday Oct 3, 5:15 pm – 6:00 pm

POSTER SESSION 4

Psychomotor learning

Session 10: Poster Session 4

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Poster 2

Effects of Muscle Vibration During the Planning and Execution of Rapid Target-Directed Movements on Movement Endpoint Bias

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The central nervous system (CNS) relies on the sensory encoding and transformation of proprioceptive feedback for accurate movements. Research using muscle tendon vibration to influence proprioceptive feedback has demonstrated systematic directional errors during manual targeting tasks. Vibration induces an illusion of increased muscle length, such that vibration applied to a lengthening muscle (e.g., biceps during elbow extension) elicits undershooting effects. Such errors have been examined under slow movements where incoming feedback can modulate the outgoing movement and a muscle specific bias in feedback can materialize. While sensory feedback regarding the initial limb position would also be expected to be important, the effects of static limb muscle vibration preceding an upcoming movement remain less clear. In the present study, we investigated the influence of perturbing proprioceptive signals during movement planning, execution, or both, on early kinematic parameters and endpoint accuracy of rapid targeted movements. In two experiments, participants made unseen rapid elbow flexion or extension movements to visual targets while vibration was applied to biceps or triceps before movement only, at movement onset for the duration of movement, or both. Results for vibration applied throughout (i.e., pre and during) the movement revealed an undershooting bias relative to control conditions for biceps vibration in extension reaches and triceps vibration in flexion reaches. Pre-movement vibration revealed a similar lengthening muscle specific shift in endpoint errors biased toward undershooting, although to a lesser degree. These findings suggest pre-movement vibration can bias initial limb estimates, where feedback originating from the lengthening muscle is likely used.

Psychomotor learning

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Poster 4

Dissociating Ocular and Manual Motor Adaptation in a Double-Step Reaching Task

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The use of target perturbation paradigms in studies of saccadic and reach adaptation has revealed that both the ocular and manual motor systems adjust the gain of their movements when repeatedly exposed to jumping targets. The origin of the learning mechanisms driving adaptation in the limb is unclear, though it has been suggested that the transfer of saccadic adaptation to the limb may be responsible for the concomitant reach adaptation observed in these paradigms. Though evidence for this transfer has been weakly supported by previous research, the possibility has strongly influenced experimental design in reach adaptation studies, as precautions have been taken to prevent such transfer and the conflation between saccadic and reach adaptation in eliciting changes to limb movement gain. To address this issue, we used the double-step paradigm in which participants performed look-and-reach movements to peripheral targets by sliding a motorized handle along a linear rail. During baseline and post-testing, all movements were active and targets were stationary. During exposure, the target jumped during the saccade, while half the participants actively moved the handle, and half had their hand passively moved. The latter task resulted in hand-eye decoupling, as saccadic adaptation was possible while automatic limb corrections were prevented. To evaluate gain adaptation, we compared the constant error distributions of hand position at reach endpoint between baseline and post-testing. Differences in manual gain adaptation were observed between active and passive movement groups, suggesting that exposure of the limb to the online movement correction process modulates manual adaptation behavior.

Psychomotor learning

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Poster 6

Active Writing Confers a Mnemonic Advantage Over Passive and Observational Encoding of Unfamiliar Text

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Handwriting is a powerful encoding strategy for both familiar and unfamiliar text. However, whether the mnemonic advantage associated with writing depends on self-generated motor commands, visual feedback, proprioceptive feedback, or some combination of these processes remains unclear. To dissociate these contributions, neurologically healthy adults ($n = 32$) encoded novel and unfamiliar Arabic words under four conditions that varied motor engagement and sensory feedback: static viewing (no motor engagement and no dynamic visual feedback), dynamic viewing (visual animation of the word being written without proprioceptive feedback), passive writing (visual and proprioceptive feedback via robotic guidance without voluntary motor commands), and active writing (self-generated writing with full visual and proprioceptive feedback). Following encoding, participants completed a recognition test in which previously presented words were identified among distractors. Recognition accuracy, reaction time, and confidence ratings (1–4 Likert scale) were recorded. As expected, active writing produced the highest recognition accuracy, followed by dynamic viewing and passive writing, which did not differ from each other, but both exceeded static viewing. Confidence and reaction time did not differ significantly across encoding conditions, although confidence ratings were higher for correct than incorrect responses. These findings provide that dynamic visual feedback and passive proprioceptive input each confer mnemonic benefits beyond static observation, and that coupling voluntary motor commands with sensory feedback produces the greatest enhancement in encoding unfamiliar text.

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Psychomotor learning

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Poster 8

Movement Smoothness During Sequential Reaching in Older Adults: Effects of Task Complexity and Augmented Sensory Feedback

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Aging is associated with increased variability of multi-segment movements, yet how task complexity and augmented feedback influence movement smoothness (jerk) remains unclear. The present study extends our previous analysis of movement planning and limb-target control by examining jerk (normalized, peak, and RMS) during single (1T) and unimanual two-target extension (2T1He) goal-directed reaches under auditory (A), vibrotactile (VT) and no feedback (NF) conditions. Twenty-four older adults (67.46 ± 5.41 years) performed 1T and 2T1He reaches using an instrumented stylus tracked at 300Hz via Optotrak motion capture. Subject-level means were analyzed using linear mixed-effects with Feedback and Task as fixed factors and Subject as a random intercept. Task complexity had a large effect on movement smoothness where normalized jerk was 10-12 times greater in the 2T1He versus 1T task. Peak jerk showed a comparable task effect ($p < .001$). Importantly, the first movement segment of 2T1He was kinematically indistinguishable from the 1T task, whereas the second segment showed a significantly longer time-to-peak acceleration ($p = .039$; $d = 0.45$) coupled with shorter deceleration ($p = .043$; $d = 0.44$). At the subject-mean level, no significant effects involving feedback were observed for jerk ($p > .10$). At the trial level, peak and RMS jerk were higher in NF than A ($d = 0.43$ - 0.44), although these differences were absent at the subject-mean level. Together the results demonstrate how movement planning, control and quality intersect. Task complexity was the primary determinant of movement smoothness in older adults during sequential reaching. In contrast, brief auditory and vibrotactile cues influenced movement preparation and terminal velocity control, without modifying movement smoothness.

Acknowledgements

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Psychomotor learning

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Poster 10

Preserved Beta Desynchronization During Motor Preparation in Multiple Sclerosis Despite Behavioral Deficits

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Multiple sclerosis (MS) is a neurodegenerative disease in which demyelination and neuronal loss alter the functional integrity of neural networks. In MS, motor processing speed and movement preparation are frequently impaired, as reflected by prolonged reaction times. Beta-band event-related desynchronization (beta-ERD; 13–30 Hz) over sensorimotor regions is a key neural signature of motor preparation, involved in the release of inhibition and allowing the initiation of a motor plan. Because beta oscillations are sensitive to changes in sensorimotor network integrity, assessing beta-ERD provides a physiologically grounded marker to probe motor preparation processes that may be vulnerable in MS. However, beta-ERD has not yet been investigated in the context of goal-directed reaching.

The objective of this study was to evaluate whether MS alters beta-ERD amplitude. To investigate this, we recorded electroencephalography from 23 patients and 23 age- and sex-matched healthy controls to examine beta-ERD over sensorimotor regions (FC1, FC3, C1, C3, CP1, CP3) while participants performed a reaching task. We considered a time window starting from 0 to 800ms relative to movement onset.

Results revealed that, although patients exhibited significantly longer reaction times ($p=.001$), the amplitude of beta-ERD did not differ between groups ($p=.839$). These findings align with previous studies indicating that the amplitude of beta-ERD is not consistently altered in MS, suggesting that cortical mechanisms of motor preparation may remain functionally preserved despite behavioral impairments. This implies that motor deficits may arise from other processes involved in the generation of the motor response.

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Poster 12

The effect of environment luminance on the visual regulation of manual aiming

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The brain transforms retinal target coordinates into motor commands through visuomotor processing in the dorsal visual stream, which receives input from the magnocellular pathway. Thus, changes in luminance conditions should lead to a shift in the contribution of rod and cone signals to visuomotor processes. Therefore, this study examined how different luminance levels affect online control during a rapid reaching movement. Right-handed adults completed a rapid pointing movement to a 30cm target. To elicit online control, the target jumped to 27cm before the limb reached peak velocity on 25% of trials. Participants completed four blocks of 20 trials under two photopic (i.e., high/low), one mesopic, and one scotopic lighting condition. Outcome measures included movement time (MT), time after peak velocity (TaPV), constant error (CE), and variable error (VE). For the timing measures, significant effects of target location were interpreted as reflecting the target jump manipulation. For the error measures, significant main effects indicated that CE and VE differed as a function of lighting condition and target location. Notably, VE increased in most lighting conditions during the target jump trials with the exception of the mesopic condition, suggesting participants could accommodate the target jump without becoming more variable. This effect was not accompanied by a corresponding lighting and target interaction for CE or TaPV. Therefore, mesopic lighting may have supported more reliable use of peripheral visual information during online control, resulting in a more consistent endpoint distribution without increasing the time needed to make corrections or altering endpoint bias.

Psychomotor learning

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Poster 14

Practice Structure and Performance Outcomes in the Training of Classical Musicians: A Scoping Review

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The acquisition and refinement of movement-related skills in post-secondary student musicians is characterized by structured practice. Currently, research about skill acquisition and practice in musicians is distributed across a wide range of topics and musical cohorts (expertise, instrument, practice history) and less is known about student musicians as a distinct population. A scoping review was conducted to map the existing evidence on practice structure in the training of classical post-secondary musicians. A comprehensive search was conducted across five databases (ERIC, Music Index, PsycINFO, Sage Journals, and Web of Science). Of 2120 studies identified, 71 articles met the inclusion criteria for analysis. Across studies, participants represented a range of instrument groups, including string (43%), keyboard (39%), winds, brass, and percussion (35%), and voice (17%). Studies investigated practice perceptions and behaviours (49%), practice protocols (27%), feedback technology (8%), practice schedules (7%), motor learning task performance (7%), practice conditions (6%), and skill measures (1%). Studies also employed a range of general and cohort-specific tasks to evaluate practice including surveys and questionnaires (32%), performance preparation tasks (17%), technical tasks (11%), sight reading (10%), and motor learning tasks (6%). Overall, the research has concentrated on descriptions of practice and behaviour, often relying on self-reported survey data. This highlights an opportunity for future research to give greater attention to motor learning frameworks in research design, including objective assessments of retention, transfer, and performance to better understand the mechanisms through which practice structure contributes to musical expertise in post-secondary training.

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Poster 16

Testing for embodied simulation in the processing of sentences and the moderating role of imagery ability

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Theories of embodied simulation suggest that the ability to understand sentences comes from reconstructing the concepts in your mind. This theory is tested using a sentence picture verification task in which participants are presented with sentences, followed by photos, and then asked to state whether the object in the photo was mentioned in the sentence. The photos can either have a matching object and context (match; e.g., the umbrella was in the backpack and a folded umbrella is shown), a matching object in the wrong context (mismatch; an open umbrella is shown), or a completely different object (filler). Match response times are typically faster than mismatch response times, thought to be a result of a “perceptual” simulation. If this match effect is due to simulation, then participants who cannot visually imagine (aphantasia) or who have low visual imagery ability should not exhibit the effect. Imagery can also be action-based (motor imagery), which may still be preserved in people with aphantasia. Data collection from n=5 participants verified the match-mismatch effect in responses time, but this was only based on non-action stimuli among typical imagers. Even though these were typical imagers, there was a positive relationship between the match-mismatch difference and imagery ability. EEG data was also collected for these participants to evaluate “surprise” (N400) in mismatched stimuli. These data showed differences among experimental stimuli and filler items, but not a neurological match-mismatch effect. These data will form the basis of a larger study involving people with aphantasia and action-based stimuli.

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Poster 18

Investigating effector transfer and motor imagery ‘equivalence’ after observation or motor imagery practice in an adapted dart-throwing task

AnnaMae Pond¹, Carrie M Peters¹, Sarah Kraeutner¹, Nicola Jane Hodges¹

¹ *UBC*

Intermanual transfer informs about the nature of learning and what has been encoded following practice. Strong transfer indicates that the learning was more abstract in nature and not encoded in motor coordinates. Covert forms of practice, such as motor imagery and observational practice, are thought to be more abstract than physical practice, but their generality relative to each other has not been tested. Here we compared three groups (n=23/gp), which either physically practised (PP), watched (OBS), or imagined practising (MI) a right-hand underhand dart throw. All groups were tested on the practised (dominant right) and non-practised hands in pre, post and delayed retention tests. All groups showed significant improvements, with greater improvement after PP. However, the covert groups had better retention of these improvements, particularly the OBS group. Although we did not see the expected Group X Hand interactions, the correlations between improvement in the hands were strongest for the two covert groups. Percent relative transfer was high for all groups (~85%>). Similarities in actual and imagined movement times in post-tests gave an index of ‘equivalence’ in representations. The practised hand showed the best equivalence, with no group differences. In summary, learning and transfer was evidenced in all groups, with transfer high even for the PP group. These data suggest a general efficacy of covert practice methods in supporting transfer and continued offline learning over the retention interval. Data point towards similarities in sensorimotor representations acquired after short-term overt and covert practice methods.

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Psychomotor learning

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Poster 20

Motor Learning on the Golf Course: Golfer's and golf coach rationalization of movement acquisition and practice strategies implementation

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Motor learning research has studied various movement acquisition and practice strategies (MAPS), including variability of practice (VP), contextual interference (CI), and inter-trial intervals (ITIs). However, little research has studied if and why coaches and athletes opt to apply these MAPS. Moreover, whereas most coaches practiced their sport as an athlete, much fewer secured a higher education degree relevant to coaching. Thus, the current pilot study investigated whether and why golf coaches and golfers intentionally employ MAPS.

Ten golf coaches (≥ 3 years of experience) and ten golfers (≥ 5 years of experience) completed separate questionnaire-based interviews. Participants provided background information (e.g., golfing experience, coaching education), rated the perceived optimality of their practice structures on Likert-type scales, and answered open-ended questions explaining their reasoning. Familiarity with VP, CI, and massed-versus-distributed practice was also assessed. Descriptive statistics summarized Likert-scale responses, and a thematic analysis was employed with the open-ended responses.

Both coaches and golfers were more likely to favour blocked practice across shot types, citing repetition, practice organization, efficiency, and ease of error detection as primary justifications. Target/distance organization questions yielded a modest use of VP. ITIs were typically moderate to long, mainly explained by pre-shot routines and session pacing rather than learning mechanisms. Overall, familiarity with MAPS was limited and the lack of implicit use of MAPS was mainly attributed to pragmatic reasons.

Overall, these findings reveal limited knowledge of MAPS, while their implementation among both golf coaches and golfers appear to be primarily guided by tradition, habit, and pragmatic constraints.

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Poster 22

Testing for skill, position, and perspective-specific effects in a volleyball setting action online prediction task

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¹ *UBC*

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Action anticipation provides a critical advantage in fast-paced sports such as volleyball. While motor experience (setting a ball) is thought to facilitate anticipation via internal motor simulation, individuals can achieve prediction accuracy through experience seeing and responding to kinematic cues (blocking a ball). The specificity of such position experiences to viewpoint was investigated here through an online temporal occlusion task. The task contained videos of volleyball setting actions filmed from a first-person (setter) or third-person (blocker) perspective and fast and accurate judgements of ball direction (up, left, right) were required. Expert (varsity or higher) and intermediate volleyball players participated ($N = 49$); comprising setters (high motor experience), blockers (high visual experience), and outside hitters (low setting-specific experience). Experts had higher accuracy (and sensitivity/d prime) than intermediates. The position main effect and 2-way interaction of Skill X Position showed trends ($ps = .075$) for both the setters and blockers to be more accurate than outside-hitters, especially in the expert group. Skill-based differences emerged as early as 60ms before ball contact. However, perspective did not interact with positional expertise. These data show task-specific, but not visual-motor (position & perspective) specific effects on action prediction, although additional power is needed to test the position-specific effects and interactions.

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Psychomotor learning

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Poster 24

The Effect of Visual Biofeedback on Auditory and Visual Cognitive Load

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Visual biofeedback (Vbf) provides real-times cues regarding posture and can enhance postural control. Prior research shows that biofeedback interacts with cognitive load, but it remains unclear whether cognitive task modality influences this interaction or whether scaling Vbf (increasing its sensitivity) alters it. This study examined how scaling Vbf interacts with visual and auditory cognitive modalities in young adults.

Twenty healthy young adults completed 3 conditions for each modality (visual and auditory): No Vbf, X1 (1 mm displacement on the force platform = 1 mm displacement on the screen), and X5 (1 mm = 5 mm). Cognitive error was quantified by participants recalling the number of occurrences of two target digits presented visually or auditorily within a 30-item three-digit sequence.

Vbf availability and scaling did not significantly affect cognitive error ($p > 0.05$), but cognitive errors were significantly lower during visual dual-task conditions ($p < 0.05$). This pattern aligns with the attentional switching theory, which proposes that incompatible modalities (e.g., an auditory cognitive task while maintaining focus on a visual target) impose greater cognitive load than compatible modalities (e.g., a visual cognitive task while maintaining focus on a visual target).

Overall, these findings clarify how modality-specific cognitive load interacts with Vbf scaling. Future work should evaluate whether attentional switching principles generalize to other biofeedback modalities to determine whether this interaction is modality-dependent or reflects a broader cognitive-sensory mechanism.

Psychomotor learning

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Poster 26

External Focus Mindfulness Enhances Immediate Retention and Transfer of a Rhythmic Keypressing Sequence

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Attentional focus influences motor learning, with external focus typically enhancing automatic control and transfer relative to internal focus. However, less is known about whether mindfulness delivered after practice can bias attentional focus and support subsequent performance. This study examined whether external focus mindfulness enhances retention and transfer of a rhythmic keypressing sequence. Fifty-one participants practiced a temporally constrained sequence using the index, middle, ring, and pinky fingers. Participants completed a pre-test, four acquisition blocks, and a post-test, then were assigned to external focus mindfulness, internal focus mindfulness, or a control audiobook condition while lying on a yoga mat. The external focus audio directed attention toward movement effects, including key sounds, pressure, and synchronization with the metronome. Internal focus audio directed attention toward finger movements and bodily sensations. Participants then completed retention, transfer at a faster tempo, and transfer in a new sequence order. Data analysis revealed that groups did not differ at pre-test. Across groups, average error and variability decreased from pre-test to post-test, indicating acquisition of the keypressing task. After participants listened to their respective audio, average retention performance differed by group, with lower error in the external focus vs. the control group. Transfer to the faster tempo also differed by group, with the external group outperforming the internal and control groups. Groups did not differ when transferring to a new sequence order. Overall, findings suggest that post-practice mindfulness may benefit motor learning when it directs attention externally, supporting retention and temporal adaptation.

Exercise psychology

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Poster 28

University Students' Preferences for Exercise Snacks vs. Continuous Exercise

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¹McMaster University

University students experience numerous barriers to being physically active, including lack of time and accessibility. Intermittent forms of physical activity such as exercise “snacks” offer alternative modes of exercise that may alleviate barriers experienced with traditional forms of continuous moderate-vigorous physical activity (MVPA). University students who were not meeting physical activity guidelines ($N = 90$; $M_{\text{age}} = 18.5$; 54 female) attended an interactive session providing experiential opportunities to engage in exercise snacks and continuous MVPA. After sampling the exercise paradigms, they rated which type of activity they would prefer to engage in during the upcoming week and wrote a free-form rationale for their choice. Students expressed a preference for exercise snacks (49) over continuous MVPA (41); although this difference was not significant ($\chi^2(1) = 0.71, p = .40$). Thematic analysis of their free-form statements revealed common and divergent themes. *Scheduling/convenience* was common for both options with snacks offering flexibility to schedule around classes, etc., and continuous being easier to plan for, with many commenting the alternative would not work well for them. *Enjoyment* was another common theme with numerous examples of what was (un)appealing about one choice vs. the other. Themes diverged in two respects: feelings of *reward/accomplishment* were predominant in the continuous choice group; whereas appreciation of *lower energy demands* and *variety* were evident in the snack choice group. Intersectional themes guiding both choices showed greater enjoyment converged with lesser mental and physical effort, which is consistent with self-determination and hedonic theories of motivation.

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Poster 30

Behaviour Change Technique Enactment and Quality Participation Among University Students with Disabilities: Secondary Preliminary Analysis

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Self-enactable behaviour change techniques (BCTs; e.g., goal setting) are commonly used to support physical activity participation in everyday life. However, research has primarily focused on the frequency of BCT enactment, with limited attention given to how enacting BCTs contributes to quality participation experiences. This secondary analysis examined the relationship between BCT enactment and six dimensions of quality participation (autonomy, belongingness, challenge, engagement, mastery, and meaning) among university students with disabilities participating in a physical activity BCT enactment coaching intervention.

An N-of-1 methodology was used to examine the individualized associations between BCT and quality participation for each participant. Eleven university students with disabilities completed a 12-week BCT coaching intervention. Participants responded to an adapted BCT enactment questionnaire and the Measures of Experiential Aspects of Participation weekly. Correlation analyses examining associations between BCT enactment and quality participation were conducted at both the pooled and individual levels.

Findings differed substantially between pooled and individual-level analyses. Although pooled analyses identified only one significant association between BCT enactment and quality participation (Obtaining information on health consequences, $r=.73$), individual-level analyses showed significant associations for seven BCTs across participants ($r=-.73-.86$). Goal setting was not associated with quality participation at the pooled level ($r = .06$) but found positive associations in three participants ($r = .59-.86$), demonstrating that group-level findings may obscure meaningful individual differences.

An N-of-1 methodology shows nuanced information regarding associations between BCTs and quality participation in individuals. Future studies can further explore BCTs as predictors for quality participation.

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“I’m not the person I once was”: Exploring perimenopause experiences among physically inactive Canadian females

Madeline Fabiano¹, Jérôme Sayeur¹, Lindsay R. Duncan¹

¹ *McGill University*

An estimated 10 million Canadians are experiencing perimenopause, a natural transition that can significantly impact females’ wellbeing. This 2-8 year phase is characterized by fluctuating hormone levels causing symptoms like depression, hot flashes, and weight gain. Despite evidence suggesting physical activity (PA) can alleviate symptoms, this cohort falls short of PA guidelines. To date, perimenopause research remains limited, as many studies combine menopause stages, which reduces symptom accuracy and obscures how PA experiences, preferences, and barriers may uniquely manifest during perimenopause. Therefore, this descriptive study explored inactive females’ perimenopausal experiences and PA preferences.

Seventeen perimenopausal females (M age= 44.53 years, SD= 3.50) from seven provinces participated in a 90-minute virtual focus group. Data from the International PA and Menopause-Specific Quality of Life Questionnaires characterized the sample as insufficiently active and experiencing high perimenopause symptom burden. Transcripts were inductively analyzed with a pragmatic lens.

Participants described feeling unprepared for perimenopause and inadequately supported by healthcare professionals. Symptoms negatively affected energy, physical functioning, work performance, mood, and sense of self. Many turned to social media and personal networks to access information, validation, and symptom-management strategies. Participants recognized the potential benefits of PA, while often finding symptom-related fatigue, reduced motivation, and competing demands difficult to overcome. They generally preferred virtual and flexible forms of PA that could be adapted to fluctuating symptoms and daily demands.

These findings highlight the need for improved perimenopause education, greater healthcare support, and targeted strategies to promote PA among inactive women during this transitional life stage.

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Fitness inspiration or misinformation? Piloting the FLICC misinformation framework with TikTok fitness inspiration posts

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Background: Social media platforms have become prominent spaces for exercise-related content, including fitness inspiration posts. While these platforms increase access to health and fitness information, they also facilitate the spread of misinformation. **Purpose:** This study applied the FLICC Misinformation Framework to TikTok fitness inspiration content to assess misinformation content. **Methods:** 110 “fitspiration” TikTok posts and accompanying profile biographies were collected with 92 posts meeting inclusion criteria. Two independent researchers coded 33% of the dataset with excellent agreement ($ICC \geq .90$, 95% CI [.77, .95], $p < .001$). The remaining posts were coded by the primary researcher. **Results:** Of the framework’s five constructs, four were identified in the sample; 53.3% of the posts ($n = 49$) were from Fake Experts, while 44.6% ($n = 41$) of posts contained Logical Fallacies, 65.2% ($n = 60$) contained Impossible Expectations, and 66.3% ($n = 61$) contained Cherry Picking. Poisson regression models revealed that posts from Fake Experts were 4.21 (95% CI [2.13, 8.33]) times more likely to contain a Logical Fallacy, Wald $\chi^2(1) = 17.11$, $p < .001$, and 2.32 (95% CI [1.33, 4.06]) times more likely to contain Cherry Picking, Wald $\chi^2(1) = 8.77$, $p = .003$. Specifically, Fake Experts often shared oversimplification ($n = 35$, $M = .38$, $SD = .49$) and anecdotes ($n = 61$, $M = .66$, $SD = .48$). **Discussion:** The association of Fake Experts with Logical Fallacies and Cherry Picking suggests unqualified TikTok influencers are more likely than exercise professionals to perpetuate exercise-related misinformation.

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Experiences Engaging with a Conversational Agent for Daily Diary Research on Physical Activity Behaviour Change Among University Students with Disabilities.

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² Vancouver Island University

³ Queen's University

Background: Generative artificial intelligence (GAI)-supported diaries, which use conversational AI agent, may offer a novel approach to collecting intensive longitudinal data while addressing challenges related to participant engagement and retention. However, little is known about university students with disabilities' experiences using GAI for physical activity behaviour change research. This study explored the experiences with a GAI-supported daily diary among university students with disabilities. **Methods:** Following the four-month study, 12 ($M_{\text{age}} = 25$ years; $SD_{\text{age}} = 4.48$) university students with disabilities completed a 60-minute semi-structured interview about their experiences with the GAI-supported daily diary. Data were analyzed using directed content analysis guided by the five domains of the Technology Acceptance Model. Specifically, responses were coded as present (1) or absent (0) across: perceived usefulness, perceived ease of use, attitude toward use, behavioural intention to use, and barriers. **Results:** Most participants described the GAI diary as useful (10/12), citing accountability and deeper reflection. Nearly all found it easy to use (11/12). All participants (12/12) reported both positive (enjoyment) and negative (frustration, guilt) attitudes toward the AI experience. More than half (7/12) indicated they would use similar AI-supported tools in the future. All (12/12) identified barriers, including repetitive responses, limited personalization, inaccurate summaries, and technical limitations. **Conclusion:** GAI-supported diaries may offer a novel approach for collecting intensive longitudinal data among university students with disabilities. Future research should further explore and optimize the role of GAI in physical activity behaviour change research.

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Knowledge Mobilization Capacity among Partners Supporting Physical Activity Promotion for Persons Living with a Disability

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Applying evidence-based physical activity (PA) promotion strategies in community-based settings may enhance PA participation among persons living with a disability (PWD). However, research evidence is not consistently translated into real-world PA promotion efforts. Partners working across research and practice contexts in the disability and PA sectors play an important role in knowledge mobilization (KMb), yet many lack the capacity to engage in KMb effectively. While training has been identified as a key strategy to strengthen KMb capacity, limited research has examined self-efficacy or identified priority training needs to support KMb among partners. Guided by the Health Promotion Research Center dissemination framework, this study explored partners' KMb capacity. Participants completed a cross-sectional online questionnaire assessing self-efficacy (i.e., confidence to engage in disability research and KMb activities) and training needs (i.e., areas within disability research and KMb for which participants require the most support). Descriptive statistics were calculated for quantitative data, and thematic analysis was conducted for qualitative responses. The sample included N=59 participants, composed of academic partners (n=19), community partners (n=13), community members (n=6), and trainees (n=21). Participants reported moderately high self-efficacy for engaging in disability research (M=6.70, SD=1.59) and KMb activities (M=6.99, SD=1.25). Commonly reported training needs included inclusive approaches to disability research and KMb, partnership development, and impact evaluation. These findings provide insight into the self-efficacy and training needs of partners working in the disability and PA sectors, informing future KMb capacity-building efforts to support PA promotion for PWD.

Acknowledgements

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Effects of a Combined Physical and Cognitive Warm-Up on Psychological Readiness, Self-Efficacy, and Cycling Performance in Competitive Athletes

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Pre-performance warm-up routines are standard in sport preparation, but traditionally focus on preparing the body for physical exertion. However, competitive sport also requires athletes to perform cognitively, making rapid decisions, sustaining attention, and executing motor skills under pressure. These cognitive demands are typically not addressed in warm-up protocols. Emerging evidence shows integrating cognitive strategies into physical warm-ups enhances psychological readiness and performance. Nevertheless, effects of combined cognitive-physical warm-ups remain underexplored in young competitive athletes. We examined the effects of a combined physical and cognitive warm-up, versus a physical-only warm-up on performance readiness (Acute Readiness Monitoring Scale: ARMS), self-efficacy, and performance on a 10-min cycling time trial. We hypothesized greater positive pre- to post-warm-up change in readiness and self-efficacy as well as better performance in the combined warm-up condition compared to physical-only condition. Using a within-subject crossover design, competitive athletes ($N = 22$; $M_{\text{age}} = 20.0 \pm 1.21$; 11 female) completed counterbalanced testing sessions separated by at least 72 hours. In both conditions, participants completed a 10-minute progressive cycling warm-up beginning at 45% of peak power output (PPO) and increasing to 60% PPO prior to performing the 10-min time trial at 60% PPO. The combined condition also incorporated three 2-minute cognitive tasks, (Go/No-Go, Stroop, and auditory stop-signal). Although there were small effect sizes showing hypothesized trends, contrary to expectations, there were no significant differences in readiness, self-efficacy or performance between conditions (all $p > .05$). Continued research is needed to further test effects of combined warm-ups.

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Co-Designing a Self-Compassion Resource for a Group of Adult Walkers with Acquired Brain Injury

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Self-compassion (SC) plays a positive role in physical activity, mental health, and quality of life; and individualization of SC interventions might be particularly relevant for those living with disability. Therefore, the study purpose was to co-design a self-compassion resource for a group of adult walkers with acquired brain injury (ABI). A 4-phase co-design method was used in which I worked with a specific, longstanding group of individuals with lived ABI experience. In the first phase, short questionnaires were administered to help identify themes representing ways individuals have and would like to experience SC and SC tool preferences. The following three phases were focus groups aimed at the creation and refinement of the SC resource. The data was analyzed using qualitative content analysis (Elo & Kyngäs, 2008). Two main themes were generated: compassion from others and equanimity. Compassion from others was identified through the clear need to see SC in others, while equanimity represented common components of various mental and physical mindfulness exercises that participants described using to be self-compassionate. The final resource was a board game that integrated the group's most preferred SC tools, which were a SC card game and a reset tool for moments of self-criticism. The pragmatic nature of the resource, my close relationship with the participants, and the four phases of collaboration reflect a cogent co-design. Allowing historically marginalized groups to advocate for their need's aids in the development of pragmatic SC resources that can be used by the groups for which they were designed.

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Shattered strings: Unveiling emotionally abusive coaching experiences among elite female tennis players

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Emotional abuse within sport, particularly within the coach-athlete relationship, is a complex and often hidden form of harm that can profoundly impact an athlete's well-being and development (Kerr et al., 2020). Despite growing awareness of athlete maltreatment, emotional abuse remains modestly explored and frequently minimized or misinterpreted as part of "tough" coaching (Stirling & Kerr, 2008). The purpose of this study is to examine how emotionally abusive coaching experiences are understood and navigated by retired, elite female tennis players, offering insight into the complex dynamics between coaches and athletes in an individual, high-performance sport. Specifically, (1) How do these athletes describe the emotionally abusive tactics and behaviours of their coaches, and how did these experiences shape their feelings and wellbeing during their careers? As well as (2) How do these athletes interpret and give meaning to their experiences with emotionally abusive coaching? Semi-structured interviews were conducted with five retired, elite female tennis players who had experienced emotionally abusive coaching throughout their careers. Themes were organized into a timeline to highlight different points of experiencing emotional abuse throughout their athletic careers. Athletes discussed specific abusive coaching tactics (e.g., yelling, manipulation), their lived emotional experience (e.g., feeling trapped and silenced, feeling confused), the impacts and consequences (e.g., lasting loss of confidence, a loss of love for tennis), and the sense-making and healing athletes did after the abuse (e.g., normalizing the abuse, healing journeys). These findings suggest emotionally abusive tennis coaching is normalized by culture, causing lasting psychological consequences beyond athletes' careers.

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Developmental Challenges for Athlete Leaders: Scale Construction and Initial Validation

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Experiences drive leaders' development. In particular, challenges are essential for developing leaders. Based on the leader development model by McCauley et al. (1994, 2014), the purposes of the present study were (a) to conceptualize developmental challenges that facilitate leader development among athletes and (b) to develop a scale that measures these experiences. First, informed by McCauley et al.'s framework and a review of the literature in sport, we identified 10 categories of developmental challenges and generated 79 items for a questionnaire. Content validity was assessed through think-aloud interviews with collegiate athletes and an expert rating panel, which resulted in a 61-item version of the scale. Next, we explored the factor structures of this version of the scale with a sample of collegiate athletes from multiple teams using exploratory structural equation modeling (ESEM) and confirmatory factor analysis (CFA) accounting for the non-independence of observations due to the data being nested in teams (i.e., adjusting standard errors for clustering). The results favored the 10-factor ESEM than CFA model and showed support for its bi-factor structure. Finally, we examined the relationships between challenges and theoretically relevant factors. The results showed that developmental challenges were positively related to athletes' self-efficacy toward their leadership skills. Learning orientation was also positively related to developmental challenges. The effects of gender, as well as feedback and support from others were also examined. The results provided preliminary validity evidence for the developmental challenge scale for sport and its utility in athlete leader development research and practice.

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Exploring Athlete Development Pathways to the NHL

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Evidence suggests development is non-linear and that there are multiple pathways to elite sport (Gulbin et al., 2013). The purpose of this study was to explore developmental pathways to the NHL. Pathway data beginning the season prior to eligibility for the NHL draft and ending 8 seasons after draft eligibility was collected for 1,957 North American players from the 2005 to 2017 NHL drafts via eliteprospects.com. NHL games, non-NHL games, pathway complexity (i.e., number of unique pathway steps), seasons to NHL, transitions between the NHL, AHL and ECHL were analyzed for 528 players that reached the NHL and 394 that became permanent NHL players. A Markov transition matrix model found 37 league transitions to the NHL, with 52 leagues in a draft season leading to NHL permanence. Findings from one-way ANOVA's indicated significant differences between 1st round selections and all other rounds. Pathway complexity ($F(6, 521) = 25.65, p < .001, \eta^2 = 0.23$) and seasons to NHL ($F(6, 521) = 58.59, p < .001, \eta^2 = 0.40$) were influenced by draft round, with some differences based on position (pathway complexity $\eta^2 = 0.03$, seasons to NHL $\eta^2 = 0.04$), while transitions between professional leagues differed based on draft round and position (draft round transitions $\eta^2 = 0.03$, draft round ahl transitions $\eta^2 = 0.08$, position transitions $\eta^2 < .01$, position ahl transitions $\eta^2 = 0.18$). Understanding how developmental pathways influence development trajectories and career success may help provide insights into expertise development processes, and selectors' decision-making processes.

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Children's social and motor skill profiles: Differences in participation in social, leisure, and recreational activities

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Although definitions vary in the literature, researchers generally agree that participation is a multidimensional concept that entails key underlying components, with social interaction, engagement, and independence in preferred and meaningful activities commonly cited. Conceptualizing participation in this manner enables researchers to investigate the dynamic interaction among components and circumstances in which they participate. In the current research, a person-centered approach was adopted to gain insight into how configurations of social and motor skills map onto differences in children's participation across social, leisure, and recreational activities. Parents/guardians ($N = 515$) reported on their 5- to 15-year-old's social-motor skills, and characteristics of participation (i.e., frequency, assistance required, child pleasure, and parental satisfaction). Using latent-profile analysis, a 6-profile solution was identified as optimal for representing the distinct configurations of social skills and motor skills within children. Weak (Profile 1) and strong (Profile 6) combinations of social and motor competencies were identified, alongside four subpopulations with varying combinations of social and motor competencies (i.e., Profile 2: below average social and weak motor; Profile 3: below average social but above average motor; Profile 4: above average social and average motor; Profile 5: above average social and strong motor). Subsequent analyses focused on identifying how profiles differ on participation measures. Differences in subpopulations offer insights into the confluence of social and motor competencies in relation to participation. The results reinforce the notion that social skills are a key driver of children's experiences, while recognizing that motor skills must be considered.

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A prospective follow up of competitive female athletes' childhood sport activities with early adult soccer "success" and motivation

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The developmental activities that contribute to long-term sport success and participation are debated. High-level athletes often accumulate more sport-specific practice in childhood than their lower-skill counterparts. However, high volumes of early sport-specific practice are linked to an increased risk of burnout and dropout and potentially limited adult success. Diverse childhood sport engagement is thought to reduce risks associated with early specialization, potentially via increased motivation, but the evidence is limited. In a longitudinal design, youth female soccer athletes (N=211) completed an initial survey to capture childhood sport activities and motivation. Annual follow-ups are being conducted to capture how early experiences contribute to future soccer participation and success. To date, follow up data is available for ~20% of the sample up to the time of transition from youth to adult sport (~18yr). Athletes who transitioned to the varsity level (n=14) descriptively did more annual childhood soccer practice ($M = 202.4$ hr) than those who quit soccer (n=6; $M = 84.8$ hr) or continued playing at lower levels (n=20; $M = 128.2$ hr; $p < .08$). There were no group differences in childhood 'other sport' practice ($p = .47$). Hours in childhood soccer showed small positive correlations with later motivation, grit, and commitment ($r_s = .11$ to $.43$). Challenging the idea that early diversification predicts future sport success via motivation, childhood other sport participation was negatively correlated with later motivation ($r_s = -.10$ to $-.32$). Follow up is planned until age 25 yr to determine how developmental patterns contribute to adult success and continued participation.

Acknowledgements

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More Than Facilitators: Exploring Sport Officials' Positive Experiences at the 2025 Canada Games

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Sport officiating research has largely focused on sport officials' performances and demands, external and internal factors that influence sport officials, or the development and landscape of sport officiating. This research has highlighted many of the challenges associated with the role, including exposure to abuse, psychological distress, and persistent difficulties recruiting and retaining officials. Although this work is critical for understanding and addressing harmful officiating environments, its predominately problem-focused orientation may overshadow the potentially rewarding and meaningful aspects of officiating. Thus, the purpose of this study was to explore sport officials' positive experiences at the 2025 Canada Summer Games and understand what made these experiences meaningful. Fifteen sport officials (10 cisgender females, 4 cisgender males, and 1 transgender male) participated in online semi-structured interviews which were analyzed using reflexive thematic analysis (Braun & Clarke, 2019). Officials described meaningful relationships and a sense of belonging that developed with officiating crews, volunteers, and members of the broader sport community. Selection to the Canada Games, provincial representation, prominent assignments, and participation in ceremonies contributed to feelings of recognition, pride, and inclusion within the event. The Games also provided opportunities for personal and professional growth through challenging assignments, mentorship, feedback, and exposure to national-level officiating environments. Finally, officials derived fulfilment from enabling athletes' achievements, supporting positive competitive environments, and contributing to the continued development of their sports. Collectively, these experiences positioned officials as participants in sport rather than merely facilitators of competition, highlighting how organizations should consider cultivating similarly meaningful officiating environments.

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Using the Sport Education Model to Foster Motivation

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Sport Education is a teaching style that adopts a student-centered structure that emphasizes the affective learning domain. Using progressive competition formats, this model supports the adjustment of activities to serve the needs of all learners, allowing students to enhance their motor skills and tactical efficiency, while moving beyond direct instruction. The main objective of this study was to develop the autonomy of students with intellectual disability, through the assumption of responsibilities that involves the development of roles couched within the sport education model. A collaborative action-research design from a socio-critical perspective was used, where three seasons of sport education were implemented. The physical education teacher at the school co-designed the intervention program, and the preferences of the students were also considered. Presented here are the results from one of the schools. Qualitative evaluation instruments were used: primary teacher's diary, semi-structured interviews with teachers, and a focus group with students. The analysis followed a narrative perspective of thematic analysis. Though there was significant up-front organization on behalf of the teachers the students demonstrated a lot of enthusiasm for the sport education seasons, the students created team anthems that they sang and danced to at every opportunity, and many students who typically did not engage in physical education classes were motivated to participate. The competitiveness of the games did not emerge as an important factor for the students' enjoyment but rather the sense of team and commitment to one's role were valued as critical to the success of the sport education seasons.

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What Athletes Wear Matters: Examining Sport Uniform Experiences Among Elite and High-Performance Athletes in Canada

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Sport uniforms are a visible and often required component of participation, yet little research has examined how uniforms influence athlete experiences. Existing research has primarily focused on body image and gendered sport contexts, with limited attention to how uniforms shape confidence, belonging, comfort, and performance.

This study explores elite and high-performance athletes' experiences with sport uniforms, including perceptions of fit, choice, comfort, belonging, and performance.

Athletes aged 18 years and older competing in university, provincial/territorial, national, professional, and international sport completed an online survey. Measures include demographic and sport participation characteristics, uniform experiences, perceptions of fit and choice, social identity, confidence, comfort, belonging, and performance-related outcomes.

Preliminary results from 70 athletes ((Mage = 23.8 years (SD = 4.7), Range = 18–37); Men =57.1% / Women=42.9%; Racialized =22.9%; Athletes with a self-reported disability=15.7%) suggest most athletes report positive perceptions of their sport uniform (79%) indicating they liked or loved their uniform and 67% report being provided with a uniform that did not fit as expected, and approximately one-quarter indicated that poor fit negatively affected their willingness or ability to compete. Athletes identified fit, comfort, performance support, and opportunities for choice as important uniform characteristics.

Athletes generally reported positive perceptions of their uniforms, concerns related to fit were common and may influence confidence, comfort, belonging, and participation. Findings suggest that uniform design should extend beyond aesthetics to consider athlete well-being and performance. This study offers novel insights into how sport uniforms shape athlete experiences, belonging, and performance.

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Movement Mentors for Mental Health: Informing Program Development Through the Perspectives of Mental Health Care Professionals

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Guided by the COM-B model, this exploratory study will inform the development of Movement Mentors for Mental Health (MMMh), a peer-based physical activity (PA) mentorship program for university students. Strategies to support PA among students are necessary given that mental health challenges are high and PA participation rates are low; PA is an evidence-based tool to support mental health. Peer mentorship may be one strategy to support PA among university students. The perspectives of mental health care professionals are important because they can identify practical referral, safety, role, and implementation considerations that may shape program feasibility and integration within existing campus services. Mental health care professionals (N=5) participated in interviews to discuss the perceived value, design needs, and implementation considerations for MMMh. The study examined: 1) the perspectives of mental health care professionals regarding the development of the MMMh program and 2) what considerations related to Capability, Opportunity, and Motivation may inform the development of the MMMh program? Inductive analyses identified six themes related to program development: movement value, peer support, flexibility and safety, referral pathways, student engagement, and institutional fit. Subsequent deductive analyses applying the COM-B framework explored Capability-, Opportunity-, and Motivation-related considerations with Opportunity emerging as the most prominent domain. These findings may inform future development of MMMh or other peer-based PA programs through identifying COM-B related considerations to support an accessible, trusted, and feasible program to support students' mental health.

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Poster 62

“Tell Me Again How Linemen Aren’t Athletes”: Social Media Construction of Athletic Identity in American Football Linemen.

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While the relationships that athletes have with their bodies has been thoroughly explored within sport, and within sports that prioritize thin and lean bodies in particular, there is little research that has investigated this relationship as it relates to sports that select for large-bodied athletes. Emerging research into Canadian Football linemen, as one group within this unique subset of athletes, has found that the body holds a central position within their identities as linemen. The current research aimed to expand on these findings by providing an introductory exploration into how the lineman identity within American and Canadian football is constructed and propagated in social media, and by exploring the place of the body within these depictions. I used hybrid thematic analysis to analyze 20 social media posts that came from one week of content for the *Instagram* page @linemanissues, a page dedicated to sharing media depicting and catering to American football linemen. Three overarching themes were generated that described the content under study; conditional normalization of heavy bodies, emphasis on athletic performance and skill, and reconciling conceptions of athleticism. The findings of this study add nuance to our understanding of the athletic identity held by football linemen and the placement of the body within that identity, particularly with regard to the how football linemen experience the tension that exists between the body demands of the sport and greater societal body norms.

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Athletes' Experiences of Felt Trust in the Coach-Athlete Relationship

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The emotional bond between coaches and athletes, characterized by the presence of *trust*, is considered foundational to the coach-athlete relationship (CAR). The trust-performance relationship across high-performing team contexts (e.g., military, healthcare) is well documented, but research in sport remains limited. Specifically, *felt trust* (i.e., one's perception that others trust them) has been underexplored despite insights from organizational research suggesting it may be meaningfully related to factors relevant to sport (e.g., performance, well-being). Framed by Social Exchange Theory, this study explored athletes' experiences of felt trust—its manifestation in the CAR and how it shapes experiences in sport. Highly trained/national-level athletes (N = 14) from individual and interdependent team sports participated in semi-structured interviews at two time points. Data were analyzed using reflexive thematic analysis to interpret patterns in athletes' descriptions of trust, factors affecting its development, experiences of feeling trusted by coaches, and the meanings of these experiences (e.g., performance and personal impacts, intentions to remain in sport). The findings highlight coach factors perceived to facilitate trust (i.e., consistency, communication, effort) and ways athletes feel trusted by their coach (i.e., being played in high-pressure situations, sensing the coach's belief, being relied on). Moreover, the results illuminate the impact of feeling trusted (i.e., improved performance, increased confidence, feeling psychologically safe) and of *not* feeling trusted (i.e., questioning one's abilities, reduced motivation, sport disengagement). This research offers insights into an underexplored perspective of trust that may support coach training and development, facilitate desirable athlete outcomes, and nurture meaningful connections in sport.

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Poster 66

Implementing the quality participation building blocks in a community-based physical activity program for adults with intellectual and developmental disabilities.

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Background: Supporting quality experiences and promoting participation in community-based physical activity programs are strategies to address low physical activity among adults with intellectual and developmental disabilities (IDD). Implementation of the quality participation (QP) building blocks can improve individuals' subjective experiences that may promote enjoyment, motivation, and sustained participation in physical activity. However, the process for implementing the QP building blocks and employing its strategies is under investigated and documented. This quality improvement project aimed to develop and describe a process for implementing the QP building blocks within a recreational swim program for adults with IDD.

Methods: Project participants included program attendees who were adults with IDD (n= 3), academic and community partners who developed the implementation process (n= 5), and partners who contributed to program delivery (n= 9). An iterative approach, guided by the Assess, Plan, Do, Evaluate, Report cyclic process, was used to develop and refine the process of QP building block implementation. Data, collected via program observations, focus groups, and debriefs, were analyzed through inductive thematic analysis.

Results: Three main findings emerged. First, building knowledge of community members and the program environment was foundational to QP resource creation and delivery. Second, reflection and collaboration were essential components of implementing the QP framework. Third, successfully fostering QP depends on relationship-centered and flexible program delivery.

Discussion: The process developed in this study addresses a gap in the literature and provides an approach to implementing the QP building blocks in planning and delivering community-based physical activity programs, benefiting adults with IDD.

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Emotions in sport practice: How athletes describe their emotional preferences across different practice contexts

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The Individual Zone of Optimal Functioning framework (IZOF; Hanin, 2000) contends that athletes have individualized emotional preferences that facilitate performance and that vary across performance contexts. Research on the IZOF framework demonstrates that emotional preferences differ between practice and competition, and across practice types (Hanin & Syrjä, 1997). However, research has yet to describe why athletes' emotional preferences vary according to practice demands. This study explored why athletes have specific preferences for emotions in practice and how they make functional meaning of certain emotions according to practice demands. Ten Canadian collegiate track and field athletes ($M_{age} = 19.1$ years-old; 6 men, 4 women) participated in individual semi-structured interviews. The interviews were stimulated by visual PNA-77 profiles (Hanin, 2000) that these athletes had formerly completed as part of a larger project. Using reflexive thematic analysis, four themes were created to describe how athletes reflected on their emotional preference profiles. First, athletes interpreted the functionality of their emotions according to emotional experiences that were contextual, layered, and seemingly contradictory. Second, emotions were perceived as functional when they supported athletes' intentions and deliberate engagement with challenging practice demands. Third, emotions were viewed as dysfunctional when they undermined focus, intentionality, or persistence. Finally, athletes distinguished between emotions that supported engagement in demanding training, from those that facilitated competitive performance, and from those that promoted enjoyment and social connection in less demanding practices. Altogether, athletes often described their emotions in a dialectic way, highlighting the complex and context-dependent nature of emotions in sport practice.

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The final whistle: Exploring the factors influencing university athletes' retirement from sport

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One of the most impactful transitions in an athlete's career is their exit out of sport. Athlete retirement is a popular research topic but has been largely studied in elite and US college sport, while less is known about the experiences of Canadian varsity-athletes. The purpose of this study was to better understand the how the experiences of Canadian varsity-athletes impact their transition out of sport and use this knowledge to develop strategies to support positive retirement experiences.

Participants were 12 former U-Sports athletes who were all 19+ years of age, competed as a varsity athlete for at least one year, and were retired from competitive sport at the time of data collection. Data were collected using a demographic survey and semi-structured interviews using Microsoft Teams. Interview questions included topics about body-related perceptions and behaviors, social supports, and athletic identity. Interview data were transcribed verbatim and analyzed using reflexive thematic analysis.

Results indicated that an athlete's perspective was a key factor influencing the ease of the retirement transition; specifically, how participants framed their time as a varsity-athlete, as well as their ability to move forward post-retirement. The coach-athlete relationship was an instrumental factor influencing how participants framed their retirement. Coaches play an important role in educating athletes on the retirement transition, while also developing an athlete's mindset and identity. Coaches and universities should support varsity-athletes in developing life skills and multidimensional identities while also leveraging the experiences of former varsity athletes as role models and sources of social support.

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Exploring Body Image Among Former Competitive Female Athletes in Aesthetic Sports

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Female athletes in aesthetic sports face vulnerability to body image concerns due to rigid sociocultural emphasis on appearance, body shape, and athletic performance. While body image during active competition has been studied, a knowledge gap remains regarding how these persist or evolve after retirement. Through Interpretative Phenomenological Analysis, we explored the lived experiences of 13 retired female athletes aged 19–30 years. The participants, who competed in gymnastics, swimming, dance, figure skating, and cheerleading, were between 3–10 years post-retirement. Two semi-structured interviews spaced ~2 weeks apart explored participants' body image during and after sport, the factors influencing their positive and negative perceptions, and how their body image affected wellbeing, identity, and post-sport adjustment. Analysis identified 3 main themes and 9 subthemes. Participants experienced *Living in the Shadow of the Athletic Body* by internalizing aesthetic ideals, enduring the lingering presence of sport influences, and negotiating external judgments. Their journey involved *Renegotiating the Relationship with the Body* by mourning their athletic form, adopting new body perspectives, and straddling acceptance and dissatisfaction. Ultimately, participants succeed in *Reclaiming Self-Worth Beyond Appearance and Performance* by separating their self-concept from their physique, processing the emotional weight of body image, and fostering self-compassion and growth. Findings suggest that body image following retirement from aesthetic sports is complex and connected to identity, self-worth, and shifting perceptions of body function versus appearance. These findings may inform coaches, clinicians, and sport practitioners in supporting athletic transitions and promoting psychological wellbeing beyond sport.

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Implementation and Growth of Special Olympics Ontario Unified Champion Schools: A Descriptive Analysis

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Structured, inclusive sport programs have been shown to promote sport participation and social inclusion among youth with intellectual and developmental disabilities (IDD). Unified Champion Schools (UCS), delivered in Ontario secondary schools by Special Olympics Ontario (SOO), brings together students with and without IDD through three pillars: Unified Sports, Inclusive Youth Leadership, and Whole School Engagement. Research has linked UCS to improved physical and mental health, social inclusion, and school climate. Provincial data from SOO were used to evaluate the implementation and growth of UCS across Ontario from 2017 to 2026. Data spanned eight seasons (excluding COVID-affected years, 2020-2022) and examined total participants, total athletes (with IDD) and partners (without IDD), participation across four Unified sports (soccer, basketball, floorball, bocce), Unified vs. Traditional team formations, and school-level UCS recognition spanning five levels (entry-level, Bronze, Silver, Gold, and All-Province), reflecting the number of initiatives completed across the three pillars. Total participation across the four sports grew from 4,459 in 2017-18 to 12,259 in 2025-26, with schools growing from 127 to 650 and schoolboards from 24 to 58. Partner participation grew from 545 to 1,493, exceeding proportional athlete growth. Unified teams grew from 247 to 674, with floorball showing the greatest proportional growth (22 to 142 teams). In 2025-26, most schools maintained their UCS recognition level, with 3 upgrading, 10 newly registered, and 7 holding All-Province status. These findings provide the first descriptive examination of UCS implementation in Ontario that can inform future efforts to strengthen and expand UCS across Ontario.

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Poster 76

Insufficient Effort Responding: The importance of Data Quality in Sport and Exercise Psychology Research

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Sport and exercise psychology researchers are among the many that rely on self-report surveys to gain insight into human's thoughts and feelings. An assumption underlying the integrity of this research is that participants gave sufficient effort when responding, and that the collected data reflects individuals' true opinions. Growing research on insufficient effort responding (IER; Bowling et al., 2016) has challenged this assumption. IER is a type of problematic response style that is characterized by a lack of motivation to follow survey instructions, interpret item content, or otherwise provide an accurate response to survey items (Clark et al., 2003). When engaging in IER, participants may only partially read item stems and haphazardly fill out a response, respond carelessly, or they may respond randomly to items. Although not commonly addressed through standard data cleaning procedures, IER rates as low as 10% can threaten the quality and validity of results and lead to false conclusions by increasing both Type I and II errors (Huang et al., 2015). Recent studies with student-athletes (N = 259) and exercisers (N = 626) estimate that IER rates could be as high as 30-35%, impacting the validity and conclusions drawn from the results. Given the importance of survey data in advancing research in sport and exercise psychology, researchers should include prevention and detection strategies in their study design. Best practices for study design and strategies for detection and treatment, including novel methods using an unsupervised machine learning approach (Gauthier et al., 2026) will be discussed.

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How are female and Para athlete health-related needs addressed in pre-participation evaluations of elite athletes? A scoping review

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Pre-participation evaluations (PPEs) are critical tools in elite sport. PPEs are conducted prior to a competitive season or event to screen for a variety of concerns such as cardiovascular health and injury history. However, the specific health-related needs of female athletes (e.g., breast health, menstrual health) and Para athletes (e.g., mobility needs, bladder function) are less known and may therefore be less represented in existing PPEs. Given the importance of promoting health among elite female and Para athletes in the context of less empirical research dedicated to their needs, a scoping review was conducted to explore which of these needs have been assessed and how they are assessed in existing PPEs. The objectives of the scoping review were to evaluate the frequency and characteristics of measurement of elite female and Para athlete health as well as commonly measured domains of athlete health relevant to all elite athletes. A search strategy was implemented across databases to compile research pertaining to PPEs used among elite athletes. Findings indicated a lack of female- and Para athlete-specific health concerns in PPEs, and that much of the literature pertaining to PPEs has been specific to cardiovascular health and the debate pertaining to inclusion of electrocardiograms in PPEs. Despite research advocating for stronger assessment of female and Para athlete health, there is a lack of translation into PPE assessment. Future research should develop a PPE inclusive of these athletes' needs to better support injury and illness and prevention in these elite sport populations.

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From locker room to life: Exploring the lasting effects of coaches' support on former athletes' mental health

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As many as 57% of former student-athletes report having negative experiences leaving their sport. Transitioning out of sport has been highlighted as a period of risk negatively impacting mental health, with former athletes reporting anxiety and depression at rates twice as high as the general population. Self-Determination Theory proposes three basic psychological needs of autonomy, competence, and relatedness that must be fulfilled for optimal well-being and functioning. A coach's actions (i.e. interpersonal behaviours) can support or thwart student-athletes' basic psychological needs. To date, no research has investigated the effects on former student-athlete mental health. The purpose of this study was to examine the relationship between coach interpersonal behaviours in student-athletes' final season of varsity play and mental health after leaving their sport. An online survey was administered to former student-athletes having ceased competition in an Ontario University Athletics sanctioned sport within the last 3 years. In this ongoing study, forty-six former student-athletes ($M_{age} = 24$) completed a questionnaire that included demographics, sporting history, coach-athlete relationship (i.e., Interpersonal Behaviours Questionnaire), and mental health (i.e., Self-Rated Mental Health Item). Bivariate correlations were calculated between the Interpersonal Behaviours Questionnaire subscales and mental health rating. No statistically significant relationships were found between a coach's interpersonal behaviours and a former athlete's current mental health. These relationships did not differ by sex assigned at birth or race. Preliminary findings in this area outline that coach-athlete relationships may not have a lasting impact on student-athletes' mental health beyond their time in sport; however, future research is needed.

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'It's what we strive for, that feeling': Interpreting the Meaningful Physical Education framework within the context of rural Alberta

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Meaningful Physical Education (Meaningful PE) is a pedagogical framework that has emerged in response to calls for more student-centered approaches in PE, which aim to foster engagement and lifelong connections to physical activity. Meaningful PE is rooted in teachers' beliefs, values, and the contexts in which they work. Given the subjectivity of experiences, it is important to explore the enactment of Meaningful PE in diverse contexts. As such, the purpose of this study was to explore how Meaningful PE is interpreted and implemented by teachers in rural Alberta. Data were generated through three semi-structured group interviews with four purposefully selected teachers, all of whom teach PE and collaborate across subject areas. Data were analyzed through a process of thematic analysis (Braun & Clarke, 2017). Three separate, yet interconnected, themes represent how the teachers' interpreted and implemented Meaningful PE: a) 'We have never really thought about PE in that way': Isn't it just sports, movement, and games?; b) 'It's not a priority': Not by the province, division, or school; and c) 'It's what we strive for, that feeling': Fostering experiences students 'remember for good reasons'. These themes demonstrate the potential value of Meaningful PE for both students and teachers and highlight the need for further school-based planning and professional development opportunities. Even though the teachers identify that their goal is always for students to have meaningful experiences in PE, they have not yet been afforded the time to shift their understandings from discrepant, one-off events, to a reimagined, overarching, Meaningful PE experience.