



UNIVERSITY
OF ALBERTA



Faculty of Kinesiology, Sport, and Recreation

Research Impact Report

2024-25

DECEMBER 2025

This Research Impact Report is an annual publication by the Faculty of Kinesiology, Sport, and Recreation at the University of Alberta. It is distributed globally to alumni, universities, government bodies, organizations and friends of the faculty.

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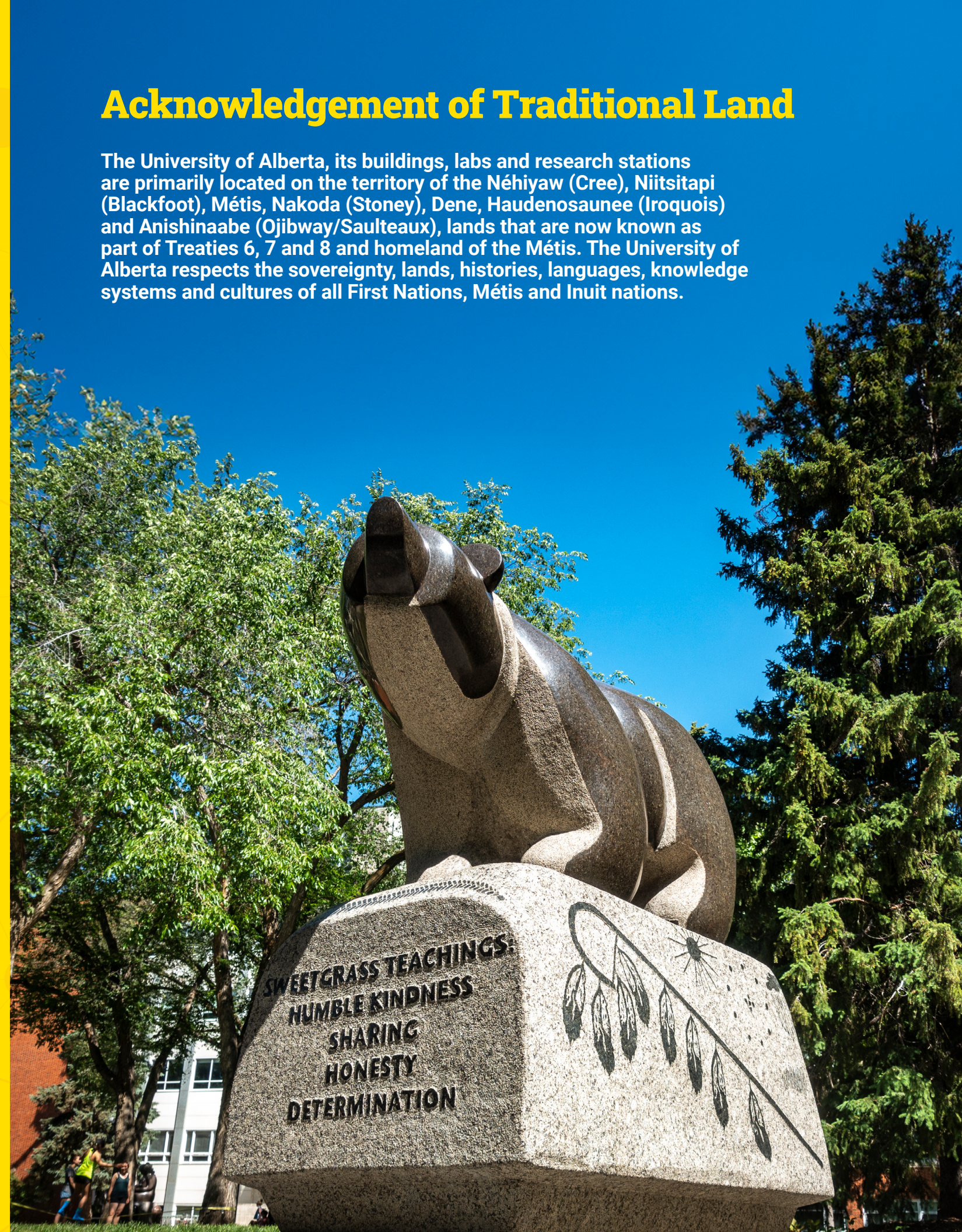
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Acknowledgement of Traditional Land

The University of Alberta, its buildings, labs and research stations are primarily located on the territory of the Néhiyaw (Cree), Niitsitapi (Blackfoot), Métis, Nakoda (Stoney), Dene, Haudenosaunee (Iroquois) and Anishinaabe (Ojibway/Saulteaux), lands that are now known as part of Treaties 6, 7 and 8 and homeland of the Métis. The University of Alberta respects the sovereignty, lands, histories, languages, knowledge systems and cultures of all First Nations, Métis and Inuit nations.



Celebrating Innovation and Impact in KSR Research



For more than 60 years, the Faculty of Kinesiology, Sport, and Recreation has advanced health, movement and quality of life through leading research and innovative teaching. Today, our faculty is ranked among the world's top 10 in sports-related subjects in the QS Rankings, and third in Canada, reflecting the global impact of our research, teaching and leadership in advancing knowledge in this field.

This report highlights the breadth of research across KSR from 2024-25. From advancing well-being and exercise science to promoting inclusion, exploring culture in sport, recreation, and leisure and deepening our understanding of psychology and human movement. Together, these studies reflect the innovative spirit of our scholars and their commitment to creating knowledge with real-world impact.

Our research is guided by the Inspiring Movement: KSR Strategic Plan, which reflects our belief in the power of movement — in body, in community and in ideas. Grounded in our mission to advance the understanding and practice of physical activity and leisure, and shaped by our values of equity, inclusion, curiosity, collaboration and integrity, this plan ensures that our research not only generates knowledge but also drives meaningful impact in Alberta, across Canada and around the world.

Our community partners and donors are vital to this work. Your trust and support strengthen our ability to explore new ideas, create meaningful opportunities and ensure that our research continues to make a difference.

Thank you for being part of this journey.

Kyra Pyke, PhD
Dean, Faculty of Kinesiology, Sport, and Recreation

A handwritten signature in black ink, appearing to read 'K. Pyke'.



Electrical engineering technologist Alex Ley uses the Brainsight neuronavigation system, which relies on MRI images to precisely target brain stimulation during experiments.

The Faculty of KSR



As part of the College of Health Sciences, the Faculty of Kinesiology, Sport, and Recreation advances well-being by deepening understanding and engagement in physical activity and leisure. Through diverse undergraduate and graduate programs, KSR bridges the art and science of human movement, performance and play. Its researchers lead multidisciplinary studies in physiology, psychology, neuroscience, biomechanics, behavioural medicine, sport management and sociocultural inquiry — examining how movement and recreation foster inclusion, participation and lifelong well-being.

Mission

To engage in transformative, multidisciplinary research and teaching that advances how we understand and participate in physical activity and leisure.

Vision

The power of physical activity and leisure to improve well-being is fully realized in Alberta, Canada and globally.

Values

- Equity, diversity, inclusivity and action toward Indigenous reconciliation across our programs and activities
- Curiosity and creativity to facilitate learning, discovery and innovation
- Mutual support, collegiality, collaboration and a holistic approach to create an environment to thrive
- Honesty, integrity and respect in all aspects of our work

KSR students engage in diverse learning environments across the faculty, including applied labs, interactive lectures and community recreation settings.

Strategic Pillars: Shaping KSR's Future

Environment

Fulfilling our purpose: Creating an environment to thrive

Education

Education with purpose: Facilitating transformational teaching and learning

Research

Research with purpose: Supporting research excellence

Leadership

Engagement with purpose: Leading beyond KSR

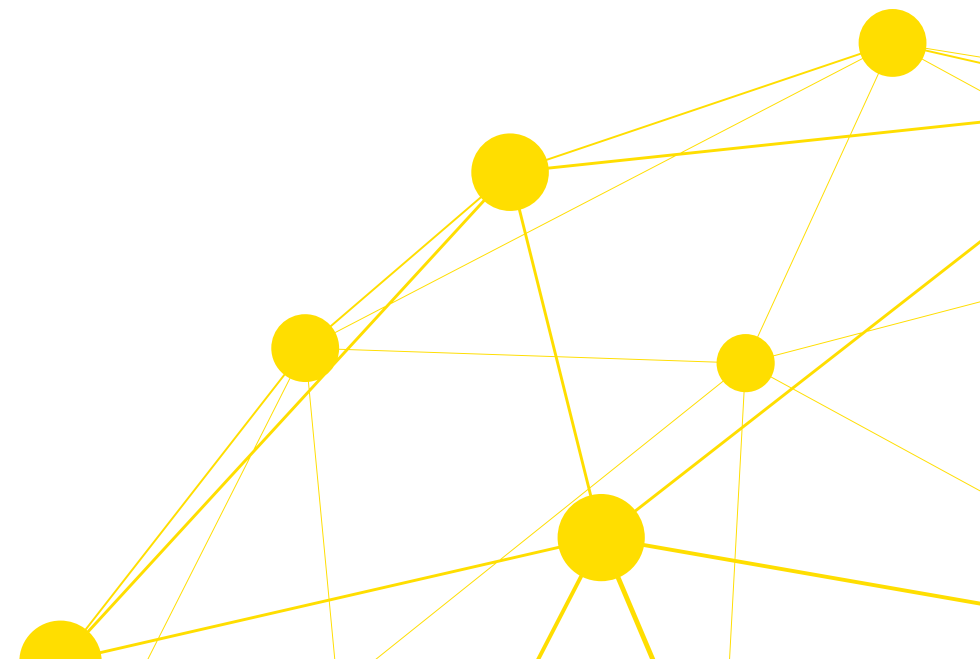
Excellence

Fulfilling our purpose: Striving for operational excellence

Key Faculty Stats

40+ faculty members and career instructors

2 Canada Research Chairs



During a treadmill walking assessment, research assistant Laura Osachoff and graduate student Paris Jones gather data to help advance understanding of physical activity during pregnancy and postpartum recovery.

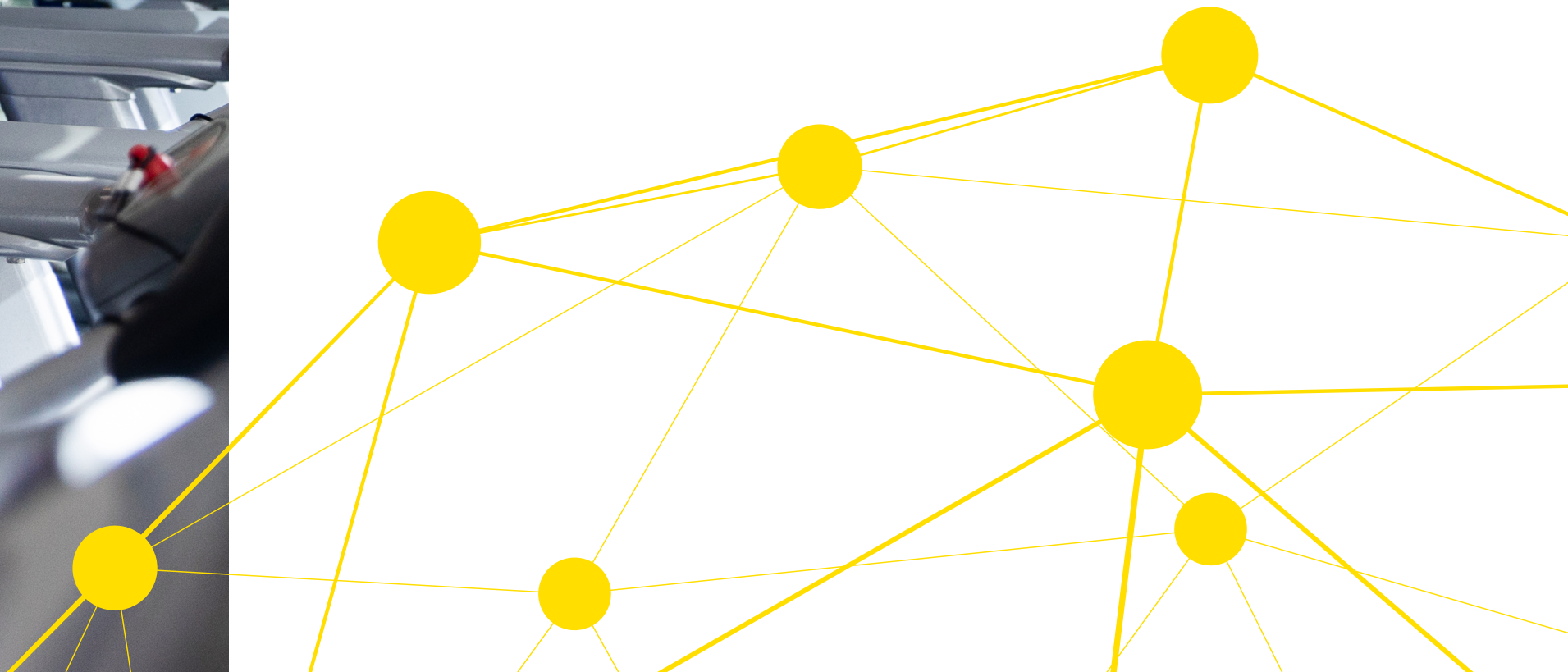
Celebrating Our Impact in 2024-25

TOP 10 globally + TOP 3 in Canada
for sports-related subjects in QS World University Rankings

\$3.88M in research revenue

1,729 research papers published
(July 2019 to Sept 2024)

Research Highlights



Anna-Marie Despins, a participant at The Steadward Centre, rides the functional electrical stimulation bike with support from Amanda Myrturnec, an adapted physical activity consultant. The equipment increases access to regular exercise for people experiencing disability, including those with paralyzed muscles.

Transforming Lives Through Research

Adapted Physical Activity

Adapted Physical Activity research focuses on creating inclusive, evidence-based approaches that make movement accessible and meaningful for people of all abilities. This work examines how tailored exercise programs, adaptive sport and inclusive physical education can enhance fitness, motor development and overall quality of life — supporting both physical and mental well-being.

Educational materials could be perpetuating outdated perspectives of autism, researchers say

Study uncovers disparity between language used in adapted physical education textbooks and that used by self-advocates

BY ADRIANNA MACPHERSON

A study comparing the way autism is discussed by autistic self-advocates and undergraduate textbooks on adapted physical education shows there's a major disconnect between the two.

The findings illustrate the need to re-evaluate these materials to cultivate more inclusive, supportive environments for all students, says An Nguyen, lead author of the study published in the journal *Quest*, noting that textbooks often play a large part in shaping the perspectives and knowledge of future educators and practitioners.

Nguyen led the study as part of her master's thesis under the supervision of Danielle Peers, KSR associate professor. As someone who grew up with an autistic loved one, Nguyen was distraught by some of the perspectives presented in the textbooks.

The contents of these textbooks mean that “people who are working in schools, in communities, are coming in with these really harmful, outdated ideas, even though they're often well-meaning,” says Peers, who is a Tier 2 Canada Research Chair in Disability and Movement Cultures and a member of the Women and Children's Health Research Institute.

Nguyen and Peers identified three main areas where the two sources diverged most significantly: the language they used, the lens through which they viewed autism, and the practices and behaviours they recommended.

Did you know?

How we talk about autism shapes how we teach it. U of A researchers found big differences between textbooks and lived experience.



“People who are working in schools, in communities, are coming in with these really harmful, outdated ideas, even though they’re often well-meaning.”
–Danielle Peers

The textbooks viewed autism through a “pathology paradigm,” as a condition requiring intervention and correction. “The pathology paradigm involves seeing disability as a deficit, as something that’s broken and needs to be fixed,” says Nguyen. In comparison, self-advocates used a “neurodiversity paradigm,” which embraces and values variety, seeing differences as “a part of normal diversity in humans.”

Nguyen and Peers suggest the path forward involves revising the teaching materials in a way that invites conversation and amplifies the voices of self-advocates.

“It is so valuable, useful and helpful to learn from people who have those lived experiences,” says Nguyen.

Nguyen and Peers note the faculty is already emerging as a leader in this paradigm shift, with KSR researchers like Nancy Spencer, Joanna Auger and Donna Goodwin making significant strides in reconceptualizing how adapted physical activity is taught.

Experts in their own lives

Amplifying children’s voices in research about them generates better solutions, say researchers

BY ADRIANNA MACPHERSON

There are some types of information that are easy for researchers to measure with the right equipment, such as heart rate and lung capacity. But how do you measure something more subjective, like whether a child feels included in an activity at summer camp?

For quite some time, the answer has been to ask parents, guardians or educators to speak on behalf of the child. But that might not be the best path forward, says Nancy Spencer, KSR professor and vice dean.

Did you know?

U of A researchers use drawings, photos and play to help children share what inclusion feels like.

Spencer’s research focuses on engaging with children and youth experiencing disability. Her doctoral studies centred on inclusion in recreational activities, such as play at recess or participation in sports. From her perspective, there’s a need to rethink how we value and amplify children’s voices when doing research with and about them, particularly on topics like inclusion.

“It’s common to think about inclusion as a process and a philosophy rather than a feeling,” says Spencer. “So I started to look at how children described what it meant to feel included.”

Spencer’s work suggests that if researchers gather information in a way that purposely includes, for example, what children report rather than what their parents and teachers observe, the children feel empowered and the research findings are more likely to be relevant to their lives.

“If the voices of the people we think we’re doing this research for aren’t an integral part of it, I don’t think the proposed solutions have much hope of actually generating change,” says Spencer.

One challenge with doing research involving children is that study methods like standard questionnaires and interviews can be exclusionary — especially for those experiencing disability.

More inclusive approaches were something Rebecca Rubuliak, a former master’s student of Spencer’s, was mindful of when designing a small qualitative study involving children experiencing disability to explore their perspectives on inclusion and belonging at recess.

Rubuliak allowed the children to guide her through a playground one-on-one, create drawings and take photographs that illustrated their experiences and feelings. Once she had developed a rapport with the children, she also conducted semi-structured interviews.

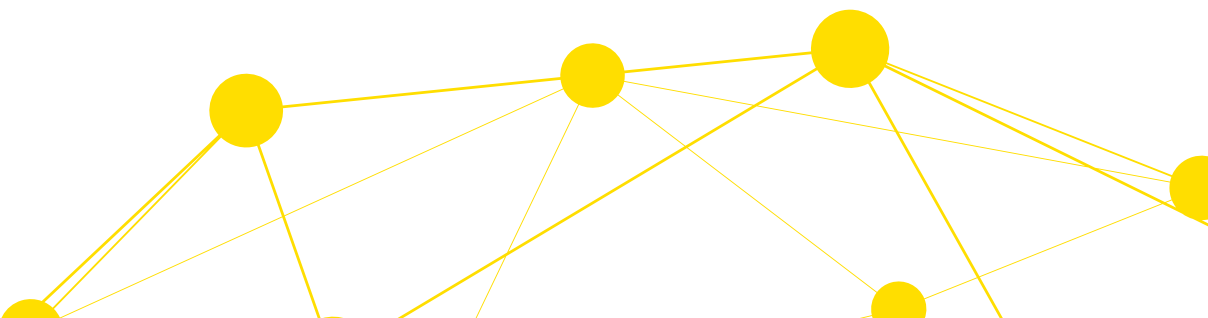
The young participants were also given the opportunity in advance to indicate which approaches they would and wouldn’t enjoy. The intention was to build relationships and create an environment in which the children felt empowered to have a say in the research process.

The researchers’ aim was to put the children’s perspectives front and centre by using narratives, vignettes and poems to present the study findings. They also evaluated the design of the study using “CREATE principles” — an acronym for connections, reflexivity, empathy, adherence, transparency and empowerment — which was a methodology developed to ensure research is done with, by and for youth, not just about them.

“It’s a big shift from seeing children as unreliable sources of information, not capable of being able to share, to actually valuing their perspectives and recognizing that they have a right to speak for themselves and be viewed as experts in their own lives,” says Spencer.



“If the voices of the people we think we’re doing this research for aren’t an integral part of it, I don’t think the proposed solutions have much hope of actually generating change.”
–Nancy Spencer



Behavioural Medicine

Behavioural Medicine research examines the links between physical activity, sedentary behaviour and health. Researchers in this area study how behaviours, emotions and thoughts impact physical health, and how interventions can promote healthy lifestyles and manage chronic diseases. This includes understanding the mental processes behind health behaviours, stress management and the psychological aspects of rehabilitation.

Landmark study delivers definitive proof that exercise improves colon cancer outcomes

Exercise specialists should be integrated part of health-care teams, says researcher

BY ADRIANNA MACPHERSON

A first-of-its-kind international trial provides definitive evidence that people who follow a structured exercise program after surgery and chemotherapy for colon cancer have a lower risk of their cancer coming back and better odds of survival.

“Our study shows that exercise is no longer just a quality-of-life intervention for cancer patients that can be offered when and where possible. It is a treatment for colon cancer that must be made available to all patients,” says study co-lead Kerry Courneya, KSR professor, Canada Research Chair in Physical Activity and Cancer, and a member of the Cancer Research Institute of Northern Alberta.

Colorectal cancer is the second leading cause of cancer-related deaths worldwide. Previous studies on exercise and cancer outcomes have been observational, says Courneya — researchers followed patients over time to see if exercise was associated with improved survival — whereas the Canadian Cancer Trials Group CO.21 (CHALLENGE) trial was a randomized controlled Phase 3 trial, which is “the definitive test of whether or not something improves a health outcome.”

Between 2009 and 2024, 889 patients with Stage 3 or high-risk Stage 2 colon cancer were enrolled in the trial. After undergoing surgery and completing their chemotherapy, half of the patients were randomly assigned to participate in a structured exercise program involving guided, moderate-intensity aerobic activities

Did you know?

Exercise is good not just for recovery. KSR research shows it's a proven cancer treatment that boosts survival after colon cancer.

like walking, biking or exercising on an elliptical, while the other half were given the standard care, which involved receiving educational materials promoting physical activity and healthy eating. Both groups were given the same follow-up care and ongoing cancer surveillance.

“Much to our excitement, we showed that the patients randomized to the exercise group had improved disease-free survival, which includes lower risk of recurrence of the cancer, lower risk of a new secondary cancer and a lower risk of death,” says Courneya.

Five years on, patients in the structured exercise group had an 80 per cent disease-free survival rate, compared with 74 per cent in the other group, as well as a 28 per cent lower risk of recurrence or new cancers. At eight years, patients in the exercise group had a 37 per cent lower risk of death, with a 90 per cent overall survival rate compared to 83 per cent in the health education group.

Courneya says the structured approach of the program was integral to the efficacy of exercise as an intervention. He advocates for exercise interventions to become integrated into cancer care the way other treatments are, with exercise specialists included as a key part of the care team.

Next, the researchers plan to analyze blood samples from trial participants to begin identifying some of the mechanisms contributing to the exercise intervention's efficacy.

“We’ll be able to look at whether the exercise intervention caused changes in things like insulin, natural killer cell activity, T-cell activity, and those types of things,” Courneya says.



“Patients randomized to the exercise group had improved disease-free survival, which includes lower risk of recurrence of the cancer, lower risk of a new secondary cancer and a lower risk of death.”

—Kerry Courneya

Longitudinal study fills knowledge gap in infant movement habits and development

Daily balance of movement, play and sleep helps build a healthy foundation

BY ADRIANNA MACPHERSON

By revealing the ideal daily balance of movement, play and sleep, KSR researchers are giving parents and health professionals evidence-based guidance to help babies develop optimally and establish healthy movement habits from the very start.

Valerie Carson, KSR professor, and her team have found that babies who get recommended amounts of tummy time, reading time and sleep in their first six months hit gross motor milestones sooner and develop a foundation of healthy habits to build on in the coming years.

“There’s more and more evidence that the behaviours formed at this young age can become habitual and track over time,” says Carson, first author on the study. “The habits and the patterns we’re establishing in children at a young age might predispose them to behave in a certain way as they get older.”

The research is part of a longitudinal study into families’ adherence to Canadian 24-Hour Movement Guidelines, which Carson helped develop, and their associations with infant development.

A more recent phase of the study found that it’s not just one activity that matters, but the right mix of movement, play and sleep that supports overall development, including reaching motor milestones like standing and walking earlier.

The study involved 411 infants recruited at two-month immunization appointments in partnership with Alberta Health Services. Parents filled out a questionnaire with relevant information when their child was two, four and six months of age. They were also asked to report the dates their children reached six major milestones — independent sitting, crawling on hands and knees, assisted standing, assisted walking, independent standing and independent walking.

The researchers paired this main study with a sub-study in which some of the participating parents completed time-use diaries at the same two-, four- and six-month intervals. A physiotherapist also assessed the participating infants’ gross motor development at six months.

There were positive associations with all the recommendations, but one in particular played a critical role, says Carson, who is also a member of the Women and Children’s Health Research Institute. “We saw the most consistent associations between meeting the tummy-time recommendation and gross motor development.”

In infants who aren’t yet crawling or walking, tummy time is the main form of physical activity, she explains.

Did you know?

The right mix of movement, play and sleep in a baby’s first six months may help support healthy development and lifelong healthy habits.



“The behaviours formed at this young age can become habitual and track over time.”

—Valerie Carson

Exercise Physiology

Exercise Physiology research examines how the body responds and adapts to physical activity at the cellular and systemic levels. This includes studying the effects of exercise on cardiovascular health, muscle function, metabolic processes and overall physical fitness. Researchers aim to understand the mechanisms behind exercise-induced physiological changes and how these can be optimized for health and performance.

World’s first stand-alone guidelines released on postpartum exercise and sleep

Evidence-based recommendations aim to support women in their first year as moms

BY ADRIANNA MACPHERSON

New mothers in Canada now have evidence-based recommendations on exercise and sleep to support their health in the first year after giving birth, thanks to KSR professor Margie Davenport.

“It is only fairly recently that we have started to recognize that the postpartum period is far more complex than simply transitioning from pregnancy to not being pregnant,” says Davenport, who led experts in the development of the new guideline.

“There are unique considerations, whether it’s recovery from a caesarean section, mental health or barriers such as lack of sleep.”

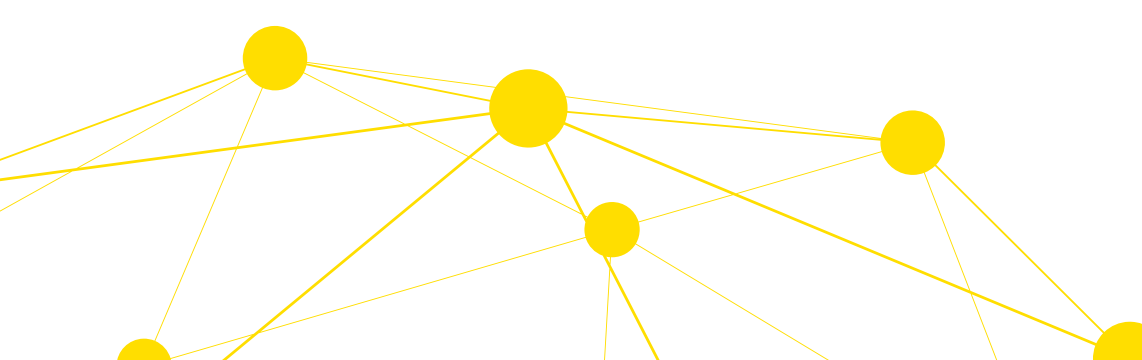
Women who follow the recommendations postpartum will likely experience a reduction in fatigue as well as improvements in mental well-being, pelvic floor health, musculoskeletal health and cardiometabolic health, according to the guideline.

The guideline recommends that women engage in at least 120 minutes per week of moderate- to vigorous-intensity physical activity to gain the greatest health benefits, including better quality sleep and improved mental health. Those who engage in this kind of physical activity in the initial 12 weeks after giving birth also have a 45 per cent reduction in the risk of depression, notes Davenport.

In addition to physical activity, the guideline also covers sleep and its role in maternal health. A newborn’s sleep schedule makes it nearly impossible for new moms to get uninterrupted stretches of sleep, but the guideline identifies a few things that could help. For example, it recommends adopting a healthy sleep hygiene routine, such as

Did you know?

Light movement soon after birth helps speed women’s recovery and supports both physical and mental health in the postpartum period.





“It is only fairly recently that we have started to recognize that the postpartum period is far more complex than simply transitioning from pregnancy to not being pregnant.”
—Margie Davenport

avoiding screen time before bed, and learning about infant sleep strategies like establishing a bedtime routine and maintaining a consistent bedtime.

Experts also found that engaging in physical activity led to reduced levels of fatigue as well as higher-quality sleep. “You may not sleep longer, you may still have fragmented sleep, but when you do sleep, you sleep better,” says Davenport.

The guideline also recommends that women do daily pelvic floor muscle training to reduce the risk of urinary incontinence, and clarifies that engaging in physical activity does not have any adverse effects on breast milk quality or supply.

As Davenport explains, the previous recommendations for physical activity postpartum were embedded in the pregnancy guideline crafted in 2003 and hadn’t been updated since, making this new guideline a much-needed resource.

The development of the guideline was supported by the Canadian Society for Exercise Physiology and the Christenson Professorship in Active Healthy Living.

Wearing a mask while exercising indoors improves lung function

Masks improve the exercise experience in both dry and cold conditions, study shows

BY MICHAEL BROWN

The COVID-19 pandemic practice of wearing a mask while exercising indoors can not only help protect us from viruses, it can preserve and improve lung function, according to a KSR study.

“We wanted to understand whether a basic cloth mask had any negatives or benefits beyond reducing virus transmission and contagion risks during exercise,” says Michael Kennedy, an exercise physiology professor in the faculty.

Study participants ran on a treadmill for the study because that is the most popular type of aerobic exercise in a fitness centre. The researchers measured lung function using handheld spirometers — devices that participants blow into — during and after exercise, both with and without masks.

Did you know?
A cloth or surgical mask helps keep your lungs happy and hydrated.

The data revealed that mask wearers experienced less reduction in the amount of air they could forcibly exhale from their lungs especially within the first second of breathing out, called forced expiratory volume (FEV1), compared with their unmasked counterparts.

“The findings suggest masks may be beneficial during indoor exercise in dry environments, as they improved lung function in most participants and also reduced post-exercise symptoms like cough, wheezing and tightness in the throat,” Kennedy says, noting that none of the participants had an extensive history of asthma or exercise-induced asthma, so these findings are applicable to most people who exercise.

Kennedy explains that with every breath, our lungs must warm the air to body temperature, 37 °C, and humidify it to 100 per cent. A mask, whether cloth or surgical, helps reduce lung constriction because it traps moisture, which can be used to humidify the air on the next breath.



“Masks may be beneficial during indoor exercise in dry environments, as they help lung function.”
—Michael Kennedy



Nic Cheung oversees data collection. His research examines how the nervous system’s fight-or-flight response is activated during stress.

Neuroscience and Movement

Neuroscience and Movement research explores how the brain and nervous system control and influence movement. This area focuses on the neurological processes involved in motor control, co-ordination and the effects of exercise on brain function. Studies often involve examining how movement affects neural pathways and how neuroplasticity can be harnessed to improve motor skills and rehabilitation outcomes.

Researchers simplify digital reconstruction of bones

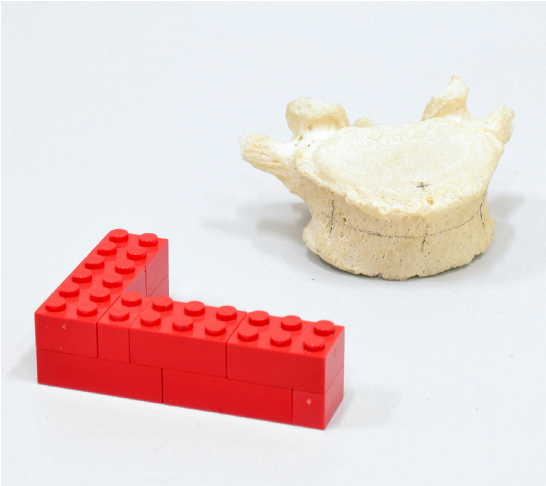
Streamlined process yields accurate, accessible and cost-effective 3D models for studying anatomy and biomechanics

BY ADRIANNA MACPHERSON

Researchers have fine-tuned a process for creating accurate digital 3D reconstructions of human bones, offering students and researchers a cost-effective and accessible way to study anatomy and biomechanics.

The new process uses a technique called 3D photogrammetry, which involves photographing an object multiple times from various angles. The result is a lifelike digital representation of the object, which can be manipulated virtually or 3D-printed to create physical models.

Their process requires only a standard digital camera and inexpensive software, making it accessible for institutions and students who don't have access to a specialized cadaver lab. And 3D-printed versions of those reproductions can be created at a quarter to a third of the cost of buying human bone reconstructions from suppliers, says Loren Chiu, an associate professor in KSR who led the research alongside former graduate student Jasmine Feddema.



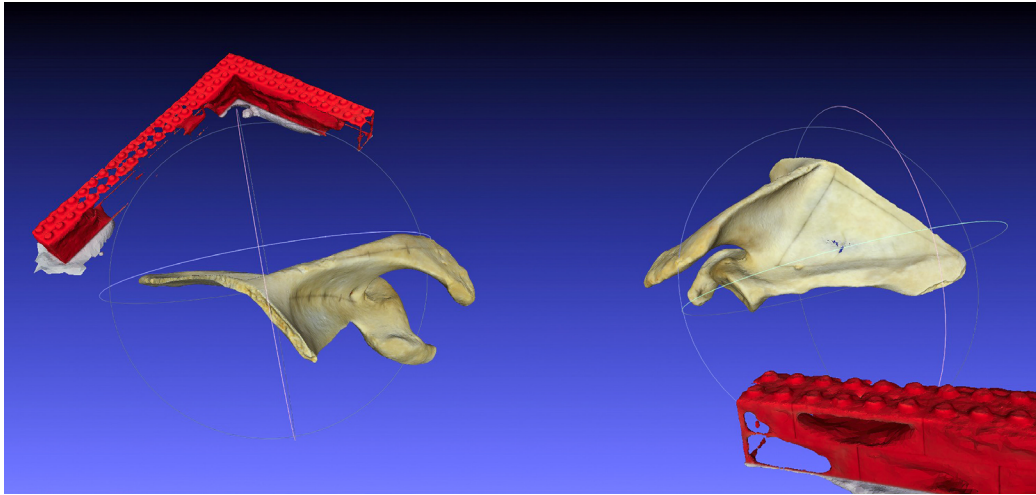
Did you know?

3D photogrammetry lets students study anatomy without a cadaver lab, making learning more accessible than ever.

“This kind of material can only be handled in specific labs that have biosafety protocols in place, so this is information that is not readily available to many people.”

For their method, Chiu and Feddema placed a bone on a turntable and rotated it, taking photos to get a 360-degree view. They then flipped the bone upside down and repeated the process to generate the full 3D image. The approach usually yields 60 to 100 photographs that are combined using software to create the digital reconstruction.

A comparison of their digital reconstructions with the five actual bones they photographed confirmed their approach produced accurate representations.



The 3D digital reconstructions can be viewed and manipulated by students and researchers to assess bones from any angle. Photo: Supplied

Smartphone swipes reveal how our brains make decisions, research finds

Results offer new, less expensive ways to study human behaviour across health care, sport and industry

BY ADRIANNA MACPHERSON

As you swipe on your smartphone, checking emails or buying something online, you leave behind clues about how your brain makes decisions – and new research shows that these movements are valuable for studying human behaviour.

“We can actually understand a lot of what’s going on inside someone’s head by carefully measuring what’s going on outside their head,” explains Craig Chapman, a KSR associate professor who heads the Actions in Complex Environments Laboratory (ACELab) at the U of A.

In a 2025 study, Chapman and his collaborators in the Neuroscience and Mental Health Institute proved that everyday devices like smartphones and tablets could collect the same kind of movement information as specialized lab equipment and mouse-tracking tests. It's a finding that could revolutionize research in this field — instead of bringing dozens of study participants into a lab, researchers could gather tens of thousands of insights virtually.

Traditionally, decision research focuses on button clicks, or on occasion mouse-tracking, without tracking anything to do with the movement involved in those decisions. In contrast, Chapman's approach makes movement a key part of the equation.

"Most other research asks: What did you choose? What was the end result? But my lab really likes to ask how: How did you choose? How did your body physically move to enact that decision for you?"

As Chapman explains, our decisions typically involve physical movements. You have to reach for an item you want or walk across the room to open a door. The "how" — the speed of your movements or the path you take — offers insight into the decision-making process.

Chapman says the ability to gather this type of behavioural data through accessible, everyday devices could be transformative for a wide range of industries. For example, tracking movement signatures could enrich standard questionnaires in corporate hiring and other assessments.

There are also potential applications in health care. Providers could track movement signatures to assess physical rehabilitation progress remotely. Sports teams and athletes could also tap into insights to optimize their performance and do return-to-play assessments.

"I want other academics to look at this and say, now I can go get thousands of people to participate in my experiments in a day," says Chapman. "The scalability of research implied by this work is massive."

The study was supported by funding from the Natural Sciences and Engineering Research Council of Canada and by an Accelerate International Internship award from MITACS.

Did you know?

Every swipe on your smartphone reveals how your brain makes decisions. KSR researchers are decoding those patterns to understand human behaviour.



"We can actually understand a lot of what's going on inside someone's head by carefully measuring what's going on outside their head."

—Craig Chapman

Recreation, Sport and Tourism

Recreation, Sport and Tourism research investigates the ways people engage in recreational activities, sports and tourism. This field explores the social, economic and cultural aspects of leisure activities and how they contribute to individual and community well-being. Research topics include the benefits of recreational activities, the impact of sport events on communities and the sustainability of tourism practices.

There's more to accessibility than availability

Research explores how people's perception and experience of public recreational spaces can create barriers

BY ADRIANNA MACPHERSON

Urban planners and developers have predetermined markers of accessibility for recreational spaces, such as parks and playgrounds that might include ramps or the ability to travel to the space using public transportation.

But whether these spaces are actually used by and functional for the communities they are meant to serve depends on "perceived accessibility," a concept Josephine Godwyll explored in a 2024 study.

While accessibility considers the opportunities for people to interact with a particular space, perceived accessibility looks at people's considerations and perceptions of whether and how they will be able to use those opportunities.

"When you consider the perception of accessibility, you go from objective ways of measuring accessibility to subjective ways of measuring it," says Godwyll, an assistant professor in KSR.

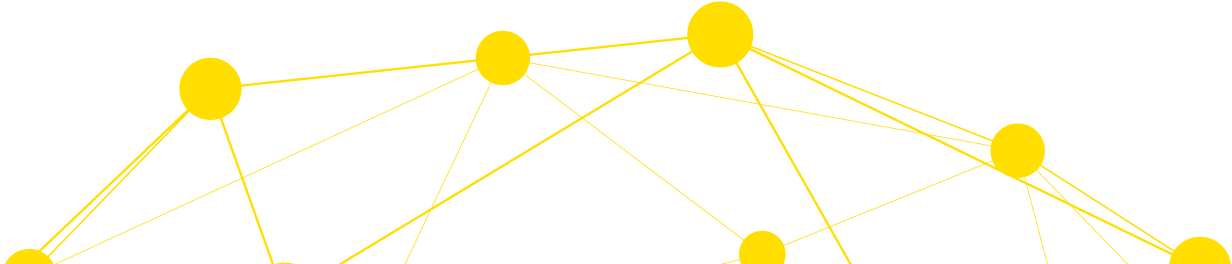
"The central focus of the paper is trying to enlighten readers on what 'access' means beyond the availability of space," Godwyll says.

The ideas she explored in the study could provide important insight for urban planners, policymakers and community leaders looking to create accessible public recreational spaces.

She and her collaborators focused on Maryvale, a low-income community in Phoenix, Ariz. They conducted participatory mapping interviews, an approach incorporating

Did you know?

Accessibility isn't just about ramps and bus routes. Research shows it's about whether people feel safe, welcome and able to use public spaces.





“Equity is not just giving everybody the same thing. It’s meeting people at their needs and considering the things that might be preventing them from using these spaces.”
—Josephine Godwyll

visual aids that encourages participants to point out particular recreational spaces, the routes they may take to reach them and other details pertinent to their perspective.

The researchers identified three themes they believe are critical to understanding perceived accessibility of recreational spaces: ease of use, planning and design engagement experiences, and the role of social interactions with and within the space.

These themes are particularly useful considerations when creating spaces for marginalized or low-income communities, Godwyll says, because they are not frequently engaged in the planning and design process or their input is disregarded.

Godwyll notes the three themes offer a possible framework for examining perceived accessibility in public recreational spaces — and a step forward in the effort to achieve the United Nation’s Sustainable Development Goal 11.7 of providing universal access to safe, inclusive and accessible green and public spaces.

“Equity is not just giving everybody the same thing. It’s meeting people at their needs and considering the things that might be preventing them from using these spaces,” she says.

“What’s the point of creating recreational spaces if they’re not used?”

Researchers reveal hidden histories of women who shaped Nordic skiing in Alberta

Women have always been part of the landscape of winter sports

BY OUMAR SALIFOU

When Lyndsay Conrad dove into her archival research on early 20th-century ski history in Alberta, she found women were missing in the standard narratives, yet leap out in U of A yearbooks from the 1930s.

“We were finding that you need to dig a little bit deeper to find evidence about women,” says Conrad, a graduate student in KSR.

Did you know?

In the 1930s, U of A women in the Varsity Ski Club were already breaking barriers — leading on the slopes and beyond.

Now, Conrad and her colleagues are on the Ski Like a Girl research team at the U of A and are working to ensure the history of women and girls in Nordic skiing is remembered and heard.

“Women were skiers; they were also leaders and builders of the ski clubs, ski industry and tourism,” says PearlAnn Reichwein, a KSR professor and lead of the research team, which also includes PhD student Charlotte Mitchell.

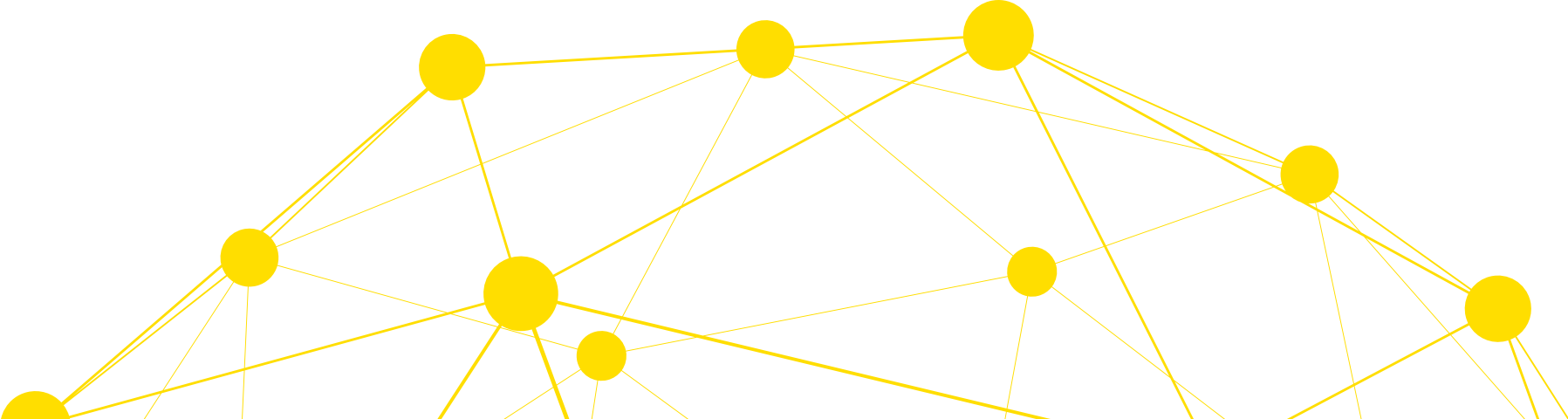
“We are bringing women and girls to the forefront of these projects,” says Reichwein. “In that way, we’re working to reshape the history of skiing and Western Canada.”



“Women were skiers; they were also leaders and builders of the ski clubs, ski industry and tourism.”
—PearlAnn Reichwein



The Ski Like a Girl research team, from left, historians Charlotte Mitchell, PearlAnn Reichwein and Lyndsay Conrad. Photo: Supplied



Sociocultural Studies of Physical Activity

Sociocultural Studies of Physical Activity research examines how societal factors influence and are influenced by sport and physical activity. This area explores the cultural, political and economic contexts of sport and physical activity, including issues of equity, diversity and inclusion. Researchers study the social impacts of sport, the role of physical activity in identity and community building, and the discourses surrounding current issues in sport and physical activity.

Beyond the quota

New handbook calls out gender gaps in sport leadership

BY JENNIFER FITZGERALD

When KSR professor Pirkko Markula-Denison sat down to co-edit a handbook on gender and sport management, she wasn't just filling a gap in scholarship — she was exposing one.

"There's quite a lot of stuff on women athletes," she said. "But there's not that much literature on women leaders in sport."

The *Research Handbook on Gender and Diversity in Sport Management* is one of the first comprehensive attempts to bring critical feminist theory to the heart of sport management, says Markula-Denison, who co-edited the volume with Annalies Knoppers, professor emerita at Utrecht University.

Sport management scholarship has long been shaped by what Markula-Denison calls a "liberal feminist" lens — one that focuses on equal access. The handbook challenges the quota approach, often implemented by international sports organizations, which helps more women be included in sports but doesn't necessarily enable them to step into decision-making power or have the ability to drive change.

Critical feminist theory, meanwhile, interrogates the broader ideological context to ask deeper questions about cultural and gendered expectations, such as why women coaches are often perceived as nurturing rather than decisive leaders. The book emphasizes theory not for its own sake, but as a tool for reform.

Did you know?

Quotas can open doors, but they don't guarantee a seat at the table. True equity in sport means sharing decision-making power, not token representation.

One of the handbook's most revealing sections examines coaching — a deliberate focus, Markula-Denison says, because coaches are not only technical experts but also everyday leaders who shape culture. The chapters show how gendered expectations complicate authority on the sidelines. In U.S. collegiate sport, for example, women strength coaches working with male athletes often had to prove physical power alongside technical expertise — a demand rarely placed on men.

Markula-Denison says the path forward lies in theory that challenges assumptions, intersectional perspectives that reveal blind spots and the persistence of scholars who refuse to let sport management remain static.



"Change won't happen overnight. But if we keep pushing, listening and widening the lens, the future of sport leadership can look very different."

—Pirkko Markula-Denison

A simple game, a complex welcome

Research follows Afghan refugees onto Edmonton's soccer fields, uncovering how sport can serve as both a source of freedom and exclusion

BY JENNIFER FITZGERALD

"We came from Pakistan to Edmonton together in 2021," says Ashraf Amiri, a project collaborator who is now pursuing his PhD at the University of Massachusetts. After two weeks of quarantine in a hotel, the newcomers were restless. "Some tried the hotel gym — closed," he says. "Others called sports clubs in the city — no luck."

Then Free Play for Kids, a local charity supported by Canadian Tire's Jumpstart Program, and U of A researchers stepped in. Buses began shuttling children to an indoor facility. "We asked, 'Why not the adults?'" says Amiri.

From those first sessions came a team, Kabul-Edmonton, that joined a co-ed recreational soccer league. Amiri helped manage and later document the season as part of a community-based research project.

"The experience was mixed — beautiful moments, but also things people did not expect," says Amiri.

KSR professor Jay Scherer, the project's co-lead, echoed that assessment. "Even with all the support — buses, equipment, registration fees — it was extraordinarily challenging," he says. "Recreational soccer here is

Did you know?

Even in one of Canada's most diverse sports, immigrants can face racism, language barriers and cultural gaps — revealing how inclusion in sport requires more than open doors.



“He told us that walking onto the soccer field for the first time in Edmonton felt like freedom. You can’t really put that into words. That’s what sport can do.”
—Jay Scherer

surprisingly competitive. Newcomers may not understand those cultural codes of how to play or at what intensity. It wasn’t as social as it could have been.” Other challenges included a lack of female players and language barriers.

Scherer remembers one player vividly. “He told us that walking onto the soccer field for the first time in Edmonton felt like freedom. You can’t really put that into words. That’s what sport can do.”

But disappointment soon followed. “They expected to be welcomed differently than they were,” Amiri says. “They felt excluded at times — by words, actions, even calls from referees.”

“The sad part of the story was that they were recipients of racism and Islamophobia,” says Scherer. “It came partly as so-called ‘trash talk,’ but it went further — attacking their heritage and where they came from.”

Scherer adds that these moments revealed deeper lessons. “It’s one thing to say the door is open for newcomers,” he says. “It’s another to actually give them the power to shape their experiences. That’s the next step.”

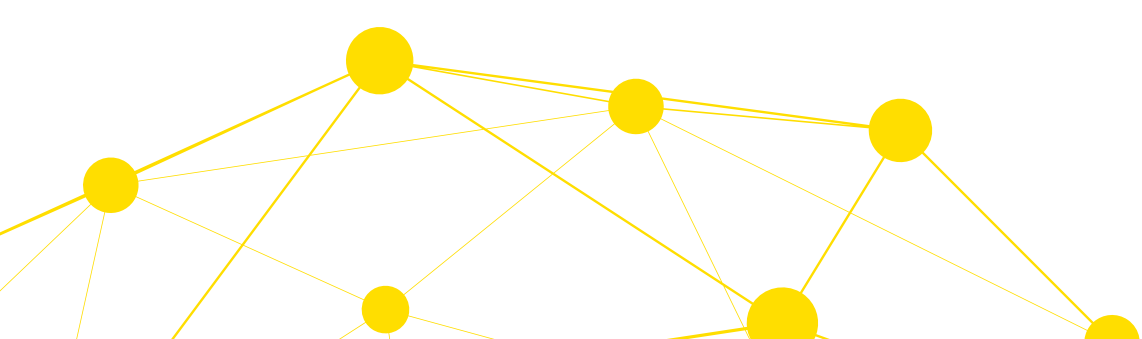
Asked what would have helped, Amiri emphasizes small gestures. “Translators at the start. A small handshake before and after games. These small things create trust right away.”

Scherer agrees policy is crucial. “We need very public anti-racist policies and mandatory workshops for players, referees and administrators — even at the recreational level.”

Though the research project focused on a single season, the impact has been lasting. “We’re now talking about a four- or five-year study on sport and Afghan refugees,” Amiri says. “Not only in Canada, but also in Pakistan, maybe even Afghanistan.”

Scherer notes the project’s collaborative method, called PhotoVoice, will remain central. “Participants take photos and write about their experiences in their own words,” he says. “They’re not just subjects — they’re co-producers of knowledge.”

Looking ahead, both Amiri and Scherer return to the same image: a field as a place of release. “After so many forces working against them, soccer gave them a moment of control, joy and freedom,” says Scherer.



Sport Psychology

Sport Psychology research investigates the psychological principles and practices involved in coaching and athletic performance. This research area explores the mental aspects of sport, including motivation, performance anxiety, team dynamics and the psychological techniques that can enhance athletic performance. It also looks at the educational and leadership qualities essential for effective coaching.

Research reveals strategies for sports programs to connect with youth at risk

Minimizing power imbalances and providing a sense of autonomy foster positive connections, study finds

BY ADRIANNA MACPHERSON

A KSR study has uncovered some practical tools to address the complex challenges facing after-school programs in mentoring youth at risk.

“Acknowledging these challenges is vital to formulate strategies to best serve and connect with youth in programming,” says Katie Kavic, first author on the study, which was also her master’s thesis in kinesiology.

Researchers, including Kavic’s supervisor Tara-Leigh McHugh and committee member Amber Mosevich, interviewed 10 staff members working in sports programs and developed practical suggestions to help foster positive connections with youth at risk.

The first was to minimize power imbalances to create an atmosphere of equality in all interactions. They also recommended providing youth with a sense of autonomy, particularly in times of high stress, while ensuring they felt supported and safe.

As one participant noted in the study, sometimes simply listening can have a positive impact on youth at risk, who are accustomed to “being told what to do ... or told what’s not OK ... without actually being heard first.”

“Findings from this study demonstrate the vital role of forming connections with youth and how these connections foster other outcomes such as confidence, competence, positive character traits and a sense of caring for others,” says Kavic.

Did you know?
Strong connections, not strict routines, are what build confidence, competence, and character in youth sport programs.

A playbook for grit: three lessons from new research

First-of-its-kind study looks at how competitive athletes develop grit and the psychology behind it

BY JON PULLIN

How can some competitive athletes push through injuries, losses and years of training without giving up, while others throw in the towel?

The idea of grit — the ability to push through setbacks and keep moving toward goals when things get tough — has been popular in performance psychology for close to a decade.

Assistant teaching professor Danielle Cormier, led a study that is the first of its kind to explore “how grit is grown” — how competitive athletes develop grit and the psychological processes that shape it.

Cormier and her team conducted in-depth interviews with 27 competitive athletes and coaches across different sports, asking them to describe their experiences with setbacks, motivation and long-term goal-setting to identify common patterns. Their findings offer new insights.

Success can come from setbacks

Major setbacks often force athletes to make a decision, says Cormier.

“Injuries, being cut from a team, losing an important match — these experiences force athletes to make a choice. Are they going to keep pushing forward? This can lead to a renewed determination to achieve their goals.”

Athletes who develop grit tend to reframe setbacks as temporary challenges rather than failures. They also adopt a mastery-oriented mindset, measuring success by continual improvement rather than just wins and losses. This mindset is often shaped by supportive coaches, teammates and parents.

Passion and perseverance work together

The study identified two key components of grit in sport: passion (commitment to long-term goals) and perseverance (pushing through obstacles).

Athletes with a strong passion for their sport have a clear vision of where they want to go with it, which keeps them focused and motivated. Perseverance keeps them grinding through challenges such as gruelling training sessions, setbacks and moments of doubt.

Did you know?

Injuries, losses and rejection can actually fuel success if athletes learn to see them as temporary challenges, not failures.



“Athletes who maintain friendships, hobbies and a sense of identity outside of their sport tend to have longer careers, more satisfaction and smoother transitions out of sports.”

—Danielle Cormier

The team’s research suggests that passion and perseverance must work together.

“You can’t just fixate on the big picture,” says Cormier. “Athletes who succeed are the ones who break their goals into small, achievable steps and celebrate progress along the way.”

Maintaining a steady balance matters

While grit can be a powerful tool for success, the study highlights that a balanced life is also important.

Different groups of athletes define grit in different ways, says Cormier, and sometimes it’s understood as an “at all costs” mindset. But this can be massively detrimental to their health and well-being.

“The ones whose identities reside solely in sport tend to experience isolation and burnout. Athletes who maintain friendships, hobbies and a sense of identity outside of their sport tend to have longer careers, more satisfaction and smoother transitions out of sports.”



KSR students Ethan Blenkhorn and Chelsea Marko demonstrating vertical jump for instantaneous muscle power.

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