



Healthy Parks, Healthy People Forum

1-2 MAY 2019
OTTAWA | SHAW CENTRE

Forum sur la santé des parcs santé des populations

DU 1 AU 2 MAI 2019
OTTAWA | CENTRE SHAW

Oral and Poster Abstract Program

Programme des résumés oraux et d'affiches

ORAL PRESENTATION 1

Wednesday 1 May

11:00-12:30

Room 201

Parks for All: Collaborative Action for Health and Wellbeing - Dawn Carr**Co-author:** Murray Kopp

Introduction/problem definition that demonstrates the need for a policy change: The detrimental effects of human disconnectedness from nature are well researched, and in Canada the barriers to experiencing the natural world are diminishing individual and societal health, well-being and resilience. In 2016, the Canadian Parks Council (CPC) and Canadian Parks and Recreation Association (CPRA) convened 200 thought leaders and decision-makers in Canada from all levels of government and across sectors to determine a common vision for the role parks play in supporting our collective health and wellbeing. The resulting program, which engaged over 4000 Canadians, put in place the development of an intergovernmental and cross-sectoral parks policy agenda.

Research methods: As the first national effort of its kind globally, the Parks for All initiative consisted of a three-phase process spanning 2-years, that systematically developed four strategic directions with priority actions agreed to by individuals and organizations from a diversity of sectors, geographic regions, and ethno-cultural backgrounds. At each phase of development, inclusive methodologies were applied to address the multitude of perspectives inherent across the continuum of parks which included facilitated in-person workshops, online surveys, and customized approaches to engage Indigenous peoples, youth and new Canadians.

Results and analysis: The final co-created product, establishes common priorities and actions supported by Indigenous knowledge and western science systems centred on the strategic directions to collaborate, connect, conserve and lead. Canada's federal, provincial and territorial ministers responsible for parks endorsed the Parks for All Action Plan in June 2018 and individuals and organizations are beginning to embed the direction provided within policy and practice. The health benefits associated with parks requires a systems approach and increased collaboration will be required to integrate Parks for All policy guidance into practice.

Recommendations and implications for policy, practice or additional research: It is essential that the Parks for All Action Plan finds common ground and purpose across sectors. Further relationship building and research is needed to understand the intersection between the health and parks sectors to ensure action-oriented policy aspirations ignite into practice across professions.

Reframing Parks as Part of an Active Transportation Network - Srimal Isaac Ranasinghe**Co-authors:** Celia Raven Lee, Katie June Lore, Noel Gerard Keough, Taylor Gordon Felt, Leticia Chapa

Introduction/problem definition that demonstrates the need for a policy change: The positive effects of parks, and therefore their raison d'être are well documented: they provide opportunities for increased physical activity, positive mental health, social capital, productivity, and quality of life to name a few. Active transport, which refers to human-powered forms of mobility, confers many similar benefits. Therefore, there is a relationship between park usage and active transport utilization. The city of Calgary, Canada, has one of the world's largest pathway systems for active transport, connecting regional parks to certain transportation networks. However, many communities outside the city core have large swathes of underutilized local park space. Based on an ongoing project in the North Eastern Calgary community of Marlborough, we propose rectifying this issue by re-examining the static, attractional view of parks simply as recreational destinations requiring special trips.

Research methods: Our project involves the community's engineered walkways, colloquially referred to as "catwalks": pathways that cut-through the street grid of Calgary communities. Initially designed to better facilitate pedestrian flow between residences, schools, and local park spaces, these pieces of infrastructure have fallen into a state of disrepair and consequent underutilization. Through a series of community centered co-

design workshops involving diverse stakeholder groups such as elementary age children and recent immigrants, we are actively re-imagining and redesigning these spaces.

Results and analysis: This process has already increased community perceptions of safety, accessibility, equity, attractiveness, community investment, and a sense of play. This results in greater park utilization too, by allowing catwalk users to stumble upon a park.

Recommendations and implications for policy, practice or additional research: Based on this process, we propose reframing and expanding the conventional view of parks, viewing them as part of a larger, seamless local primary transportation network of activated green spaces enabling safe and equitable active transportation throughout a community. This particularly impacts funding and design practices within cities, and calls for greater collaboration among provincial and municipal bodies.

Connexion N : rebuilding the youth-nature relationship - Charlene Daubenfeld

Introduction/program need and objectives: Science has shown that spending time outdoors reduces obesity, difficulties with concentration and behavioural disturbances. It also addresses the lack of connection the urban population have to nature, a deficit that leads to a lack of awareness to the importance of protecting our ecosystems. Connexion N is a program meant to reconnect our urban teenagers with the benefits offered by nature, offering them their first outdoor experience in nature for a unique weekend of activities and discoveries.

The objectives of the program are to:

- Reconnect young urbanites with nature
- Spark their interest in outdoor activities
- Raise awareness of the mental and physical health benefits of nature
- Make them true advocates of our natural heritage

The event was created by five dedicated partners:

- SNAP Québec collects funds with Thanks to Nature campaign and coordinates the event's logistics
- Sepaq offers free access to its national park, activities, equipment and educational staff
- Monique-Fitz-Back Foundation ensures contact with schools and teachers
- Association des Camps du Québec provides camping material and cooking resources
- MEC donates free outdoor shoes and sleeping bags for all participants

Program methods, activities and evaluation: Connexion N's first edition took place in 2017, as sixteen secondary 2 students from various backgrounds were brought to the parc national du Mont-Tremblant. The two-day stay included a wide range of activities such as camping, hiking, canoeing, cycling, via ferrata and educational workshops, a busy weekend that gave them plenty of opportunities to connect with nature, learn and play. The second edition took place in September this year, bringing seventeen young new immigrants in Quebec in the deep woods during the colorful season.

Program results or outcomes: Many young participants expressed their interest to renew their experience with their friends and family.

Recommendations and implications for practice or additional research: Organizations can use their core business strengths to unite with partners and offer our youth a chance to reconnect with nature at a very promising cost/benefit ratio.

À l'école on bouge!, une collaboration gagnante - Catherine Grenier

Co-author: M. Robert Bédard

Introduction/Besoin et objectifs du programme : La Sépaq s'associe au ministère de l'Éducation et de l'Enseignement supérieur du Québec (MESS) afin de permettre aux élèves d'être actif et de favoriser leur connexion à la nature. Le MEES a mis en place la mesure « À l'école on bouge ! », laquelle offre aux écoles primaires la possibilité de bénéficier de soutien pour faire bouger les jeunes 60 minutes par jour et réaliser une sortie en plein air. Dans le cadre de cette mesure, les parcs nationaux du Québec ouvrent leurs portes gratuitement aux écoles du Québec, met à la disposition ses activités et de l'équipements et ce quatre saisons.

Méthode, activités et évaluation du programme : Le programme est offert aux écoles primaires publiques de tous les milieux. Dans le cadre de la mesure À l'école, on bouge! qui vise à soutenir des établissements d'éducation préscolaire et d'enseignement primaire afin que l'ensemble de leurs élèves soient physiquement actifs tous les jours de classe pendant au moins 60 minutes, les écoles doivent, parmi les activités offertes aux élèves, inclure une sortie vers un lieu de plein air ou une classe nature. Lieux de conservation, de découverte et d'éducation, les parcs nationaux du Québec constituent de véritables terrains de jeu en milieu naturel. Les élèves y vivent des activités variées de d'initiation au plein-air, de découverte et de camping. Des équipements tel que des embarcations nautiques, vélos, raquettes et skis de fond sont mis à leur disposition gratuitement.

Résultats ou effets du programme : Près de 585 écoles bénéficient de la mesure. Grâce à ce partenariat ayant débuté à l'automne 2017, 23 000 jeunes ont vécu une expérience nature dans les parcs nationaux du Québec et cela se poursuit en 2018-19.

Recommandations et répercussions concernant la pratique ou les pistes de recherche : En unissant ses forces, le gouvernement peut créer une synergie très efficace pour permettre aux jeunes d'être actif et de profiter des bienfaits du plein air sur la santé et le bien-être.

ORAL PRESENTATION 2

Wednesday 1 May

11:00-12:30

Room 203

How to Facilitate Health and Wellness through Outdoor Recreation for New Canadians? – Ashoo Anand

Introduction/program need and objectives: Empirical research indicates that connecting Canadians with nature is becoming challenging with fewer adults and children spending time in nature as compared to their previous generations. This lack of nature connectedness is more apparent in the diverse cultural communities. Immigrants, whether they are living in Canada for a while or have recently arrived, often have no connections with their local natural environment. Most of the times they don't even know the name of the river that flows through their neighborhood or what is a conservation area and what one can do in such natural areas? However, spending time in nature is critical for their physiological and psychological wellbeing while fostering appreciation and increased awareness about Canadian natural areas. Credit Valley Conservation (CVC) has engaged more than 4000 New Canadians since 2012, in the Health and Wellness program, connecting them with outdoor natural areas promoting healthy living.

Program methods, activities and evaluation: The program is implemented in the Credit River Watershed targeting ethnic communities in the cities of Mississauga, Brampton and Caledon. This two part program involves an indoor presentation that provides an orientation to the local natural areas followed by an outdoor nature tour of a conservation area to foster appreciation for natural areas and to build their awareness on the physical activities that can be enjoyed in these areas.

Program results or outcomes: The program offers unique opportunities for New Canadians to explore, engage and experience natural areas in the company of their known social networks for recreation and physical well-being. This innovative program provides safe and friendly social environment for ethnic communities to spend time in nature and develop quintessential intrinsic connection with local natural areas.

Recommendations and implications for practice or additional research: Demand for this unique program has been exceeding every year making it challenging for us to accommodate every request. We would like to explore new partnerships and funding opportunities to evolve this program and its offerings. With knowledge sharing our expectation is that more environmental agencies would be able offer similar programming to connect and engage New Canadians in outdoor activities while promoting healthy lifestyle to combat an increasing trend of chronic diseases in all ages.

Développement collaboratif d'un parc et équité en santé : l'exemple de la Traverse du Coteau à Chicoutimi - Maëlle Plouganou

Introduction/Besoin et objectifs du programme : La Traverse du Coteau est l'un des douze projets d'urbanisme participatif coordonné par le Centre d'écologie urbaine de Montréal et soutenu par l'Agence de la santé publique du Canada dans le cadre du projet Réseau Quartiers verts (RQV). L'objectif du projet RQV est de permettre un accès équitable à un environnement bâti sain dans toutes les communautés canadiennes. Dans la communauté de Saguenay, cette approche s'est traduite par le réaménagement participatif d'un sentier sur l'emprise d'une ancienne voie ferrée pour en faire un parc linéaire de plus d'un kilomètre.

Méthode, activités et évaluation du programme : L'approche proposée vise à assurer une équité à la fois dans les processus et dans les résultats. Une dizaine d'activités ont eu lieu dont certaines ont eu un impact particulièrement important, comme l'atelier de travail professionnel. Réunissant des participants de différents horizons, il a permis de réfléchir à des solutions d'aménagement pour sécuriser deux intersections dangereuses. En plus de développer des solutions d'aménagement originales, l'atelier a amené différents professionnels à travailler ensemble avec les citoyens autour de solutions intégrées. Cinq stratégies portées par la Ville et la communauté ont été développées et sont depuis mises en œuvre de façon progressive.

Résultats ou effets du programme : À la suite de cette démarche six interventions portées par les citoyens ont vu le jour tout au long de la Traverse, permettant une plus grande appropriation citoyenne de l'espace et un lien renforcé avec la nature y compris en hiver dans un espace au cœur du centre-ville.

Recommandations et répercussions concernant la pratique ou les pistes de recherche : Suite au travail réalisé avec les partenaires sur la Traverse du Coteau, la Ville de Saguenay travaillera en collaboration avec le projet RQV pour développer un plan directeur des parcs et espaces verts en y intégrant les aspects d'équité en santé, de transport physiquement actif et de participation citoyenne qui forment la base de la démarche.

Parks and Public Health - Charles Gardner

Introduction/program need and objectives: This session will explore and highlight the important connections between community design and the mental and physical health of a community through an Ontario based Locally Delivered Collaborative Project. Parks will be used as an example to illustrate these connections.

Program methods, activities and evaluation: There will be a resource based on a review of the literature on the community design features that promote health, a review of the community planning process in Ontario, a survey and interviews on the practices that have been found to be most effective for health units to support planning for healthy community design, and on the outstanding needs of health units to fulfill these practices.

Program results or outcomes: Parks can lead to improved health outcomes by positively influencing an individual's lifestyle, behaviour, environmental contaminant exposure, and consequently, their health, wellbeing and quality of life. Phase 1 of this project will consist of a systematic review of reviews to identify the elements of health protecting, health promoting and health equity promoting design as well as document the health impacts associated with community design. Phase 2 will identify the most promising practices that have been used by Ontario health units to engage with their communities. A mixed methods research approach including

an online survey, focus groups, case studies and document review will explore health units' engagement in municipal planning for healthy communities. A purposeful sample of health units will be selected for case studies. Phase 3 of this project will utilize the findings of Phase 1 and 2 to develop an Ontario resource to support public health unit engagement in planning with their communities. It will include the most promising practices to plan, implement, monitor and measure local efforts to achieve health-protective, health-promoting and health-equitable community design.

Recommendations and implications for practice or additional research: This evidence-based resource that can be used by Ontario public health units to support them in the municipal planning and community design process. It will include the most promising practices to plan, implement, monitor and measure local efforts to achieve health-protective, health-promoting and health-equitable community design.

Over the traditional counter: Comment la médecine traditionnelle peut-elle nous renseigner sur d'autres manières d'utiliser la nature comme ressource pour la santé - M. Chúk Odenigbo

Introduction/Contexte : Le mouvement de « Parcs en bonne santé, population en bonne santé » est un appel à une approche holistique à la médecine et à la santé publique qui prend en compte l'ensemble d'une circonstance donnée. Le présent projet consiste donc d'un problème conceptuel. Afin d'explorer le rapport potentiel entre la santé d'une communauté et son environnement physique, le projet regardera la médecine traditionnelle. La médecine traditionnelle profite de son environnement afin de récolter les herbes et les ingrédients pour les remèdes herbeux. Certaines cultures soulignent l'heure du jour comme partie importante du rituel, d'autres suivent le déplacement des étoiles et des planètes. La nature dans son entièreté est prise en considération dans ces manières différentes de faire selon le/la praticien/ne, le lieu, la région, etc. Elle peut donc être clé dans cette recherche de compréhension.

Méthode : Une revue exhaustive de la littérature et des données existantes sur les pratiques des guérisseur/euses traditionnel/les autour de monde sera entreprise. Cette revue examinera les exemples spécifiques ainsi que des approches générales.

Résultats et analyse : Afin de lancer une discussion sur ce sujet peu-connu, les pratiques de médecine traditionnelle seront groupées selon des thèmes émergeant (par.ex le rôle des animaux), suivi par une discussion sur comment les pratiques groupées sous chaque thème (pourraient) démontrer(aient) un lien entre l'environnement physique et la santé publique.

Conclusions et répercussions concernant les politiques, la pratique ou les pistes de recherche : Compte tenu la potentielle richesse de l'information à la disposition de ces praticien/nes de médecine traditionnelle, il est étonnant qu'il n'existe guère d'études scientifiques qui relient les bénéfices de la nature à la santé avec les guérisseur/euses traditionnel/les. Par conséquent, les résultats contribueront à littérature sur la recherche en écosanté et contribuer au mouvement mondial de « parcs en bonne santé, population en bonne santé » en nous renseignant sur d'autres manières de se servir de la nature comme ressource pour la santé.

ORAL PRESENTATION 3

Thursday 2 May

9:00-10:30

Room 201

The impact of park access on physical activity among residents in Southern Ontario, Canada - Ghazal Fazli**Co-authors:** Sara Guilcher, Jane Polsky, Peter Gozdyra, Jin Luo, Gillian Booth**Introduction/background:** We aimed to determine whether access to parks and greenspace influences physical activity of residents in Southern Ontario, and whether these patterns vary by age group and neighbourhood walkability.**Methods:** We conducted a cross-sectional analysis using data from four consecutive cycles of the Canadian Community Health Survey (CCHS) from 2007/08 to 2013/14, including participants aged 20-74 in Southern Ontario. We used geographic information system tools to create neighbourhood level park exposures based on size of parks (small or medium: 0.5-4.9 hectares, large ≥ 5 hectares) and number of parks within 800m of participants' postal code of residence. Multivariate logistics regression was used to examine the association between park exposures and self-reported leisure time (LT) and combined leisure time and transportation (LTT) physical activity, stratified by age group (20-49, 50-74) and neighbourhood walkability, controlling for age, sex, ethnicity, household income, and season.**Results and analysis:** Our cohort was comprised of 41,945 individuals, with both age groups being equally represented. Overall access to parks was also associated with greater levels of physical activity, however, effects were greatest among younger adults. In this age group, living closer to large-sized parks was strongly associated with LT and LTT physical activity (OR=1.37, 95% CI:1.05-1.79 and OR=1.33, 95% CI: 1.05-1.68), respectively. Similar associations were seen in those over age 50. Access to small or medium sized parks demonstrated lesser associations overall with physical activity, except in highly walkable areas. For instance, residents in highly walkable areas had substantially higher levels of LTT physical activity than those in areas of low walkability, particularly in the presence of ≥ 1 small or medium park (≥ 1 parks: OR 1.61, 95% CI: 1.47-1.76; 0 parks: OR 1.21, 95% CI: 1.02-1.44).**Conclusions and implications for policy, practice or additional research:** Our findings indicate a strong association between park access and physical activity across different age groups. Although, parks may vary in size, distance and appeal, this research may help to steer future policy solutions to create supportive environments that encourage physical activity across all ages.**Quasi-Randomized Trial of Contact with Nature and Effects on Attention in Children - Daniel Rainham****Co-authors:** Shannon Johnson, Mike Lawrence, Stephanie Snow**Introduction/background:** Children today spend less time in nature than previous generations and there is concern that this shift negatively impacts children's cognitive abilities, particularly their ability to direct their attention. Theories, such as the Attention Restoration Theory (ART), suggest that contact with nature may replenish endogenous attention (e.g., directed, voluntary attention). There is a lack of rigorous research on how contact with nature is associated with attentional performance in children.**Methods:** This study employed a quasi-experimental design and included a sample of typically-developing children to investigate performance on computerized endogenous and exogenous attention tasks before and after exposure to one of two interventions – a thirty-minute walk in either an urban (n = 30) or natural (forested, n=30) environment. The two experimental groups were closely matched with regard to sex ratio, age, IQ, and connectedness to nature. Attention was assessed using the Combined Attention Systems Test (CAST), a state-of-the-art assessment tool designed to evaluate exogenous and endogenous attention characteristics. Bayesian

hierarchical modeling of both response times and errors was employed to evaluate the fixed effect of attentional measures and interactions with session and group.

Results and analysis: Consistent with predictions of ART, results support credible effects of the nature intervention on two measures of endogenous attention, but not on any of the measures of exogenous attention.

Conclusions and implications for policy, practice or additional research: The results of this work should not only be used to support efforts to increase time children spend in nature, but to also consider ways to buffer the potential negative effects of urban exposure.

“Peace in the Parks”: The place of parks and natural places in public health palliative care - Sonya Jakubec

Co-authors: Don Carruthers Den Hoed, Jennell Rempell, Heather Ray, Ashok Krishnamurthy, Ron Spice, Linda Read Paul, Leah Whyte, Julia Millen, Shana Barbour

Introduction/background: There is mounting evidence of how natural environments impact our physical, mental and spiritual well-being. Little is known, however, about the place of parks and nature at end-of-life, or the impact of parks and nature on quality of life during palliative care or bereavement experiences.

Methods: Since 2015 Alberta Parks has supported research to better understand peoples’ beliefs and experiences about the connection of parks and nature at end-of-life. Phase one combined an initial online survey (n=118) analyzed descriptively along with a narrative interviews with a subgroup of participants (n=15). Analysis focused on the meaning of people’s stories using concepts derived from ecopsychology theory concerned with nature connection, individual wellness and social/earth justice. Mobilizing these discoveries, phase two of this project further examined palliative-park connections, specifically for rural Albertans in palliative care, through a narrative interviews and physical access auditing process.

Results and analysis: This ground-breaking, collaborative project uncovered that over 80% believed that visiting a park or natural place is worth the risk involved and over 90% expressed that they personally would like to have end-of-life experiences in parks and nature. Three dominant themes were highlighted: 1. Death brings people to parks and nature, 2. Nature teaches people to grieve, and 3. Parks and nature reveal death and life. Experiencing “Peace in the Parks” was viewed as an opportunity for individual/personal exploration as well as social/relational discovery, supported by place, parks and practical processes.

Conclusions and implications for policy, practice or additional research: This study provides foundational and practical knowledge to inform policy and practice across parks and health sectors. Specifically, a novel grief and loss walking programming and parks access communication tools for those in palliative care and caregivers will be discussed, in part through documentary film. Together, this line of inquiry showcases profound experiences of “peace in the parks” for public palliative care.

ORAL PRESENTATION 4

Thursday 2 May

9:00-10:30

Room 203

Health and Parks: A Perfect Marriage - David Carr**Co-author:** Dawn Carr

Introduction/program need and objectives: The social determinants of health are the conditions in which people are born, grow, live, work and age. They are multi-faceted, interconnected and are mostly responsible for health inequities across populations. In addition, humans have evolved overtime to benefit from their environments, which have increasingly limited access and opportunity to connect with nature. Current challenges and non-prescriptive opportunities for change associated with policy and practice from the perspectives of two professionals from the the medical and parks communities in Canada will be examined.

Program methods, activities and evaluation: Two experienced practitioners from the health and parks sectors -- a family/emergency room physician and the executive director of the Canadian Parks Council -- explore professional experience and evidence to consider the following questions: 1) What academic and professional development influences have drawn attention to the relationship between health and parks; 2) What are the barriers - real and perceived - that challenge integrated relationships between health and parks; and, 3) What opportunities exist from within the health and parks sectors in Canada to realize and amplify the health benefits of connecting with nature across systems?

Program results or outcomes: While there are many publicly funded and structural similarities between health and parks professionals, and the practices they manage, systemic barriers have yet to catch up with the wave of evidence that supports closer relationships between health and nature connectedness. The parks sector, which delivers 'high dose' exposures to nature, and the health sector that connects with high volumes of people, offer plausible opportunities to marry the divide that diminishes optimal health outcomes. The evidence-based and anecdotal stories that support the disparity and alignments between the health and parks sectors will be revealed as an opportunity and reference point for change.

Recommendations and implications for practice or additional research: With the girth of evidence at hand, research that questions systemic inertia within and between the health and parks sectors, that is locally and regionally experienced in Canada, would be beneficial for helping to advance practice in favour of realizing the perfect marriage.

Links between built and natural environment for bicycling and well-being in Victoria, BC - Karen Laberee**Co-authors:** Kaitlyn Bailey, Jaimy Fischer, Martine Shareck, Callista Ottoni, Trisalyn Nelson, Daniel Fuller, Yan Kestens, Meghan Winters

Introduction/background: The INTERventions, Research, and Action in Cities Team (INTERACT) has launched cohort studies in four Canadian cities to assess the impact of urban form interventions on physical activity, social participation, well-being, and related inequalities. In Victoria, BC we recruited over 300 people who ride a bicycle to participate in a five-year study examining Victoria's All Ages and Abilities (AAA) bike network. We complement quantitative data collection with qualitative research to better understand the context for the intervention and the experiences of participants, particularly with respect to social connection and well-being.

Methods: We recruited 25 participants from the INTERACT cohort to participate in semi-structured interviews. Our recruitment approach aimed to capture a range of neighbourhoods, bicycling typologies, and ages, as well as a gender balance. Discussion themes centred on: neighbourhood, well-being, social connectivity, bicycling, and the intervention (AAA bike network). Interviews were recorded and professionally transcribed. Data and ethnographic field notes from the interviews were analyzed using framework analysis.

Results and analysis: Most participants did not feel they had a strong social connection to their local neighbourhood. Instead, their sense of community came from being part of groups with shared interests. Participants generally expressed feeling happy and attached to green and blue spaces, described them as important in their lives, and were often the places where they met people in their social circle. Bicycle infrastructure, particularly the regional trail system, emerged as an important means for accessing green space both as part of the journey and as a destination itself. In general, respondents associated feelings of well-being with time spent in the natural environment.

Conclusions and implications for policy, practice, or additional research: Despite our focus on the built environment, green and blue spaces surfaced as important components to encourage active transportation and contribute to well-being in urban environments. Parks and regional trails were valued as spaces for social connection.

Examining the link between urban green space and mental health: A scoping review and theoretical framework - Nadha Hassen

Introduction/background: Public green space provides those living in urban spaces with access to the natural environment and positive health benefits. However, little is known about how the specific features or aspects of green space impact mental health, which is necessary to develop effective health promotion initiatives.

Methods: Arksey and O'Malley's framework was used to guide the scoping review and searches were conducted in several academic databases. The research questions were a) What are the aspects of green space associated with mental health? b) What are the mediating and moderating factors influencing the relationship? A data extraction table was inductively and iteratively developed.

Results and analysis: The search returned 1430 articles and after applying inclusion and exclusion criteria a final 16 articles were selected. Three aspects of green space were identified to influence mental health are:

- 1) Quantity of green space: amount of land measured in units of area
- 2) Access to green space: ease of access and mobility within the space
- 3) Quality of green space: condition of the space including aesthetics, safety and facilities.

A total of 33 potential mediating and moderating factors were also identified and used to develop an evidence-informed theoretical framework on the link between green space and mental health.

Conclusions and implications for policy, practice or additional research: Quality of green space appears to have the most impact on mental health while quantity of green space had the least evidence of an association. The theoretical framework helps to unpack the complexity of the beneficial relationship between green spaces and mental health. Recommendations for practice were developed. There is a need for longitudinal studies to establish causality but as research in this area develops, it is necessary to implement what we do know in urban planning, policy and health-promoting initiatives.

Parcs-écoles : exemple de projets pour et par la collectivité - Mélanie Beaudoin

Introduction/Besoin et objectifs du programme : Lieu d'éducation, de rencontre et d'activités communautaires, l'école occupe un rôle central au cœur des communautés. Toutefois, les cours d'école ont longtemps été le lieu de prédilection de l'asphalte, un revêtement participant à la création d'îlots de chaleur urbains (ICU). C'est dans un souci de lutter contre ce phénomène et de protéger la santé des populations vulnérables qu'en 2010, l'Institut national de santé publique du Québec (INSPQ) a lancé un programme de subventions dans le cadre du Plan d'action sur les changements climatiques du gouvernement du Québec.

Méthode, activités et évaluation du programme : De la cinquantaine de projets de démonstration réalisés dans ce contexte, plusieurs ont intégré, comme mesure de lutte contre les ICU, l'aménagement de cours d'école plus vertes et plus actives. Une évaluation qualitative de certains de ces projets a analysé l'amélioration de la qualité de vie de ces nouveaux environnements bâtis.

Résultats ou effets du programme : Les bénéfices des espaces verts sur la santé physique et mentale des élèves sont d'ailleurs documentés dans une revue de la littérature réalisée à ce sujet à l'INSPQ et publiée en 2017: meilleure concentration, meilleur rétablissement à la suite d'un stress, prédisposition à l'activité physique. Les cours d'école verdies permettent également de lutter contre le déficit nature chez les jeunes en milieu urbain et à diversifier les modes d'apprentissage. Les projets ont souvent été portés par la communauté : OBNL, bénévoles et comités de parents ont mis en commun leurs efforts pour offrir aux élèves et à la collectivité un environnement plus sain. Ce faisant, les projets ont permis non seulement de lutter contre les ICU, mais aussi de développer un sentiment d'appartenance à la communauté et une mobilisation citoyenne.

Recommandations et répercussions concernant la pratique ou les pistes de recherche : L'expérience apprise a amené l'INSPQ à miser davantage sur l'accompagnement, par des OBNL régionaux, de projets en milieux scolaires. De nouvelles études sur la santé mentale et les parcs-écoles sont en développement.

POSTER PRESENTATIONS

Thursday 2 May

12:30-13:30

Room 207

Active Parks Design Guide - How to promote park use and physical activity - Fatime Grigorescu**Co-author:** Natasha Fearing

Introduction/background: One of the Region of Peel – Public Health’s priorities is to promote healthy, active communities by creating environments that promote physical activity in parks and playgrounds. Current toolkits and guides for park design are primarily related to addressing constraints regarding location, size, and accessibility of parks and open green spaces. There is limited understanding on what active design features and considerations promote park use and physical activity. Peel’s Active Parks Design Guide (APDG) aims to support community planning and evaluation of parks and playground designs by providing evidence on active design principles for those responsible for planning and building parks and open green spaces.

Methods: A review of grey literature was conducted to inform the recommendations included in the APDG. Following critical appraisal, information was synthesized from two guidelines, one review study, six observational studies, and three non-synthesized literature reviews. The basis of the guide is comprised of two guidelines and one review study. Findings from other literature reviews were included to supplement gaps in information.

Results and analysis: The APDG was developed using an evidence-informed approach and aimed at those responsible for planning and building parks, playgrounds, and open green spaces in the Region of Peel. The guide includes three main categories of active design features and considerations that promote park use and physical activity. These include:

- Maximizing outdoor space
- Designing spaces for multigenerational play and recreation
- Encouraging park use all year round

Conclusions and implications for policy, practice or additional research: The APDG is an innovative resource that will be useful for planning of new development and renewals of parks and open green spaces. This guide does not replace existing requirements and standards related to construction, safety, accessibility, and maintenance when planning and building parks and open spaces. However, it will be useful for promoting healthy, active communities in Peel by creating environments that encourage physical activity in parks and playgrounds.

Residential Green Space and Mental Health: Analyses of the CARTaGENE population Cohort’s data - Nolwenn Noisel**Co-authors:** Perry Hystad, Yves Payette, Catherine Boileau

Introduction/background: Built environment including green space may have an impact on health status like stress, cardiovascular diseases and mortality. However, little research has examined the effects on mental health, especially on a long-term frame. This study aims to explore the associations between depression, anxiety and exposure to green space using the CARTaGENE population cohort databases.

Methods: The CARTaGENE Cohort databases were used in this study. Participants from urban area (Quebec, Canada) with residential history (>5years) were selected (n=8,144). Green space exposures were estimated using satellite derived measures (NDVI). Health outcomes included depression and anxiety determined through different manners: administrative health databases, self-reported medical diagnosis, Patient Health

Questionnaire (PHQ-9) and Generalized Anxiety Disorder (GAD-7) scales. Linear and logistic multivariate models were used to determine associations between green space exposures and mental health.

Results and analysis: Some evidence that urban green space is associated with decreased depression and anxiety were observed, although the magnitude of association varied by assessment method. A 0.1 increase in residential NDVI (100 m radius) was associated with an OR of 0.89 (95% CI: 0.81-0.98) for ever having a self-reported medical diagnoses of depression and 0.95 (95% CI: 0.88-1.03) for depression assessed through administrative health databases in the previous 10 years. For participants who have moved in a greener environment in the last 5 years, PHQ-9 and GAD-7 scores are lower (-0.37 and -0.30, respectively, $p < 0.05$).

Conclusions and implications for policy, practice or additional research: This study demonstrates the potential of using population cohort databases to address environmental health issues. The CARTaGENE databases have the advantages to collect long-term health data (>10 years) and to allow the linkage with other databases. Trends arising from the analysis showed associations between green space and mental health that are highly dependent on the data sources.

Using new remoteness classifications to understand the population at-risk of higher rates of avoidable mortality in Canada – Shirin Roshanafshar

Co-author: Rajendra Subedi

Introduction/Background: Avoidable mortality is defined as “untimely deaths that should not occur in the presence of timely and effective health care, including prevention” [1]. Studies have shown that rural and remote populations experience poorer health, lower life expectancy and higher unmet healthcare needs [2] [3]. Rural and remote locations may influence socioeconomic, environmental and occupational choices of rural residents which, in turn, may elevate risks of avoidable mortality. This study uses a new remoteness classification to understand the risks of avoidable mortality by relative remoteness in Canada.

Methods: The continuous remoteness index developed at Statistics Canada in 2017 is classified into five different remoteness categories using a variety of methods. Remoteness categories are mapped to see spatial distribution of communities based on their relative remoteness. The remoteness categories and Canadian Vital Statistics (2011 to 2016) are used to compare and contrast the age-standardized avoidable mortality rates for some major causes of deaths across different categories of remoteness.

Analysis and results: A descriptive analysis of the data shows a clear gradient of age-standardized avoidable mortality rates by remoteness categories. The avoidable mortality rates for some specific causes of deaths are significantly higher in more remote areas compared with the easily accessible areas. The results indicate an association between higher avoidable mortality rates and remoteness in Canada.

Conclusions and implications for policy, practice or additional research: There are clear disparities in avoidable mortality rates between urban and rural populations in Canada. Understanding avoidable mortality rates by relative remoteness may help to develop specific health care and health prevention policies for the at-risk population. However, there may be other factors associated with the elevated risk of avoidable mortality in remote areas. Therefore, a multivariate model with other socioeconomic and demographic variables might be useful to understand the relative contribution of each variable.