

MOOD WALKS: The role of parks and recreation in mental health promotion

By Kyle Rich and Martha Barnes



Short Hills Provincial Park

INTRODUCTION

Since the playground movement of late 19th-century America, parks and the outdoors have been touted as venues for developing and enhancing physical, moral, and mental wellbeing. Ontario established the Public Parks Act of Ontario in 1883 which led to the creation of parks throughout the province. Early versions of parks were often the result of voluntary efforts — in 1906, for example, the first playground in Canada was built by the National Council for Women. The parks that we now recognize soon became a matter of public good that continues to be planned, maintained, and celebrated as integral to our towns, cities, and regions. Although the science has come a long way since those early calls for more “breathing spaces” in newly urbanized North American cities, in many ways we are still working out how parks and green spaces can be effectively used by individuals, communities, and municipalities to enhance the health and wellbeing of our citizens.

The Niagara region presents a unique context to consider the potential of parks and outdoor recreation to enhance health and wellbeing. The region is part of the Niagara Escarpment Biosphere Reserve, renowned for its outdoor green spaces associated with vineyards, tender fruitlands, and local waterways. The Living in Niagara Report (Niagara Connects, 2017) noted that there are 404 kilometres of municipal and privately owned trails as

well as over 165 square kilometres of municipally owned outdoor recreation facility space in the region. Although living near green spaces is linked to a variety of positive health outcomes (Aerts, Honnay, & Nieuwenhuys, 2018), having green space available does not necessarily translate into enhanced health and wellbeing of citizens. A variety of stakeholders including municipalities, community clubs, and health organizations are all invested in leveraging the use of these parks and outdoor spaces in order to promote health.

In this brief, we report on our research which examined a partnership that sought to promote mental health by encouraging participants to engage in a walking program in parks and outdoor spaces throughout Ontario. Using a social network analysis, we sought to understand how partners from health, nonprofit, and municipal recreation sectors worked together using their combined knowledge and resources to promote mental health. First, we provide a brief overview of the literature and what we know about how outdoor spaces can be used to enhance mental health as well as how organizations work together through various partnership arrangements. Next, we present our research methodology, before outlining our findings and the implications of our research for recreation programmers, municipal representatives, as well as policy makers at the regional and provincial levels.

GREEN EXERCISE

There are many benefits to being outdoors. Recent research has charted a variety of physical, mental, and emotional outcomes of being exposed to natural environments and materials. It induces relaxation by affecting our heart rate, blood pressure, and nervous system activity. These effects are caused by the sights, smells, and tactile experiences of being outdoors and/or working with natural products such as wood, plants, or flowers (Song, Ikei, & Yoshifumi, 2016). Research conducted in Niagara demonstrated that walking through naturalized spaces that were formerly landfill sites, such as the Glenridge Quarry Naturalization Site, resulted in greater individual benefits than a comparable urban walk (Geniole, et al., 2016). Although achieving these benefits do not require us to engage in physical activity or exercise, people who do engage in planned and purposeful physical activity in natural environments — what is called “green exercise” — experience enhanced benefits. Regular engagement in green exercise is associated with a reduction in all-cause, cardiovascular, respiratory, cancer, and mental health-related mortality. So, while natural environments and physical activity are both useful in promoting health, it is not surprising that regularly pairing the two leads to a variety of short and long-term health benefits.

Opportunities to passively enjoy nature or actively participate in green exercise are abundant in Niagara. While marquee places like Queen Victoria Park and the Botanical Gardens by the iconic Falls draw in droves of tourists to experience green spaces, an abundance of local parks, trails, and beaches away from the main tourist areas also offer opportunities to reap the benefits of natural environments. Hikers and mountain bikers flock to places such as the Bruce Trail or the Niagara River Recreation Trail. Paddlers, rowers, sailors, and other aquatic-minded folks head to Lake Erie or Lake Ontario, the Welland Canal, or the Royal Canadian Henley Rowing Course. Others seeking a more leisurely form of exercise might take a bike tour or engage in a trendy goat-yoga session at one of the many area wineries. In many ways, these natural environments and the activities in which we engage them are central to what makes the Niagara region special. Luckily, these environments and activities are also important resources which can be used to promote a range of health benefits. Here, we focus specifically on mental health.

MENTAL HEALTH

Recently, mental health has emerged as a key priority for policy makers. Often, however, discussions of mental health are conflated with issues related to mental illness. Mental health involves more than simply not having an illness or disorder. Mental health is characterized by emotional, behavioural, and social wellbeing, feelings of satisfaction and accomplishment, and a sense of purpose and meaning in daily living. While states of sadness and anxiety are normal for everyone to experience, people who are well or healthy are able to experience these and return to normal in a controlled and timely way. As such, promoting mental health involves more than treating illnesses and disorders. Many services and organizations within our community are engaging in mental health promotion as they seek to build relationships, create opportunities for people to develop skills and interests, or engage in playful, competitive, and risky activities. While treatment for mental illness and disorders are primarily provided through health systems (e.g., family doctors, local health units, and the Centre for Addictions and Mental Health [CAMH]), mental health promotion, either deliberately or inadvertently, takes place at schools,

community centres, churches, and local parks and recreation facilities. Essentially, anywhere you can go to meet people, participate in activities, acquire new skills or knowledge, or access social resources, represent mental health promotion within the community.

CAMH reports that each year, one in five individuals are affected by mental illness or an addiction problem. As a result, the total economic burden of mental illness in Canada is estimated to be approximately \$51 billion each year (CAMH, 2019). Despite the prevalence and staggering statistics, stigma continues to exist around mental illness and addiction preventing many individuals from seeking services and support. The Canadian Mental Health Association (CMHA) is a not-for-profit advocacy and service delivery organization focused on addressing the mental health needs of Canadians within the context of their communities (CMHA, 2019). The CMHA branch of Niagara (<https://cmhaniagara.ca/>) coordinates mental health services at the local level. CMHA Niagara provides services including crisis support; safe beds and counselling; employment services; community support

and residential services; and volunteer and training services. In the Niagara region, there is a need for a strong and coordinated mental health service approach as mental health is a growing concern among professionals working in health care, education, and policy. The 2018/2019 annual report published by CMHA Niagara indicated that through its efforts, 5,768 individuals were served (in both long-term and short-term ways); and an additional 4,057 telephone interactions occurred. As its strategic plan (2019-2024) identifies various action

steps including “expanded pathways to service through collaboration” (CMHA, 2019, p.6). One such initiative involves offering support and drop-in services for students on campus at Brock University during times when pressure on students intensifies. In order to understand how we can effectively engage in collaborative efforts to promote mental health with different community partners, it is necessary to understand the role that personal and professional networks play within service delivery.

RATIONALE AND PURPOSE

As noted above, the use of parks for health purposes is widespread. So much so, that it is acknowledged by the American Public Health Association’s (APHA) policy statement on Improving Health and Wellness through Access to Nature, which urges health professionals to recommend green exercise and nature visitation for health (APHA, 2017). The APHA recommends alliances with park agencies and organizations in order to increase park use for health promotion (APHA, 2017). By affiliating with health organizations, park agencies perceive an opportunity to bolster their relevance and reposition themselves as important community and individual health resources (Mowen, Payne, Orsega-Smith, &

Godbey, 2009). While partnerships between park and recreation agencies and public health organizations are recommended and appear to be common, they remain under-investigated. Few studies have explored how the park and recreation sector contributes to park-based health programs delivered by, or in collaboration with, the health sector.

The purpose of our research was to explore the flow of information between the health sector and the parks and recreation sector partners involved in the Mood Walks program in Ontario, Canada.



Short Hills Provincial Park

Short Hills photos by Tony Post

MOOD WALKS PROGRAM

The Mood Walks program (<https://www.moodwalks.ca>) is a group hiking program spearheaded by CMHA and aimed at supporting groups identified as being at-risk of poor mental health. Beginning in 2014, the Ontario provincial branch of the CMHA launched the Mood Walks program with a focus on older adults. In 2016, the same program focused on at-risk youth and most recently, in 2018, the Mood Walks program was delivered with a focus on serving post-secondary students.

The Mood Walks program is a multi-sectoral partnership led by the CMHA-Ontario, in collaboration with Hike Ontario, Conservation Ontario, and the Ontario Ministry of Heritage, Tourism, Culture and Sport. Mood Walks is structured to be both planned and delivered at the local level by social service agencies who are recruited into the program by the CMHA. All partners dedicate time, in-kind resources and expertise towards management of the program and capacity building of local groups and participants (CMHA-Ontario, 2017). Local social service agencies are encouraged to find local organizational partners and volunteers to help assist with delivering the program. Program providers are required to organize a minimum of 10 hikes each autumn. Hike leaders are recruited by the social service agencies. Leaders and program participants receive training regarding various aspects of hiking which is provided by Hike Ontario volunteers. Hikes take place in local and regional parks and protected areas, including conservation areas. Locally, the Niagara Bruce Trail Club has hosted a Mood Walks program for clients of the Niagara Region Mental Health Program and Brock University hosted an iteration of the Mood Walks program for students.

Organizations involved in the Mood Walks program

Hike Ontario is an umbrella organization of volunteer-based hiking clubs and associations in the province of Ontario.

Conservation Ontario is a non-profit organization representing the province's 36 local watershed management authorities under the Conservation Authorities Act. The organization works to protect natural resources and shape effective policy relevant to conservation authorities.

The **Ontario Ministry of Heritage, Tourism, Culture and Sport** supports tourism, arts, and cultural industries as well as participation in sport and recreation in the province.

Local health agencies offer a variety of services in communities. These include **Brock University, Niagara Region Mental Health, Gateway Residential & Community Support Services**, and other organizations who offer health and youth support services.

RESEARCH METHODOLOGY

In this research, we used social network analysis (SNA). SNA "is a descriptive social science methodology that maps, measures, and finds patterns in the connections between people and/or organizations" (Johnson, Honnold, & Stevens, 2010, p. 494). We used SNA to:

1. understand the structure of the Mood Walks network by identifying the location and position of each organization (i.e. actor) in the network; and
2. identify informational ties or links between actors in the network (i.e. who people contacted to get information related to mental health, hiking, grants, and the actual mood walks program).

Given the breadth of places in which mental health promotion takes place, a network approach is logical given its ability to pull in various partners working across different sectors. Networks represent "a collection of programs and services that span a broad range of cooperating but legally autonomous organizations" (Provan & Milward, 2001, p. 417). A network can be described by its lateral and horizontal patterns of exchange, by interdependent flows of resources, and by reciprocal lines of communication (Powell, 1990). Ties between organizations or individuals in a network may differ in strength (weak, moderate, strong), type (e.g. advice seeking, resource sharing, informal communication), or direction (one-way or two-way).

(Webster & Morrison, 2004). Examining the ties between organizations in a mental health promotion initiative can contribute to our understanding of multi-sector collaboration by illustrating the way information moves through the network.

To collect data, we developed a 10-question self-administered, web-based survey for the social service agencies involved in delivering the Mood Walks program. Participants were asked several demographic questions as well as who they turned to in their network to seek information about hikes, mental health, trails, grants, and the Mood Walks program. Additionally, participants were asked to identify who in their network contacted them for information about the program. The survey was sent to

social service agencies across Ontario who participated in both the 2014 and 2016 iteration of the program.

In total, 24 surveys were completed (a 40-per-cent response rate). Seventy-five per cent of respondents were female, 74 per cent held a university or post-graduate degree, and all respondents were full-time employees. The cities represented in the response ranged from large urban centres to small, rural communities and 50 per cent of respondents were involved with the Mood Walks Program offered for youth; 25 per cent with the program for older adults, and 25 per cent of respondents indicated they were involved with both iterations of the Mood Walks programs.

SOCIAL NETWORK ANALYSIS FINDINGS

SNA allowed us to map the findings of how organizations in the Mood Walks network were structured (i.e. what ties existed between organizations) as well as how information related to implementing the Mood Walks program was shared within the network. The different informational ties that were analyzed allowed us to identify who shared information on mental health, hiking trails, grants, and/or the program in general. The maps

across the different ties reveal varying patterns (i.e. number of ties) of information sharing. For example, the most ties reported was evident between organizations sharing information about hiking trails (# of ties = 48). In comparison, only 16 ties existed between organizations sharing information about mental health.

	MENTAL HEALTH	HIKING	PROGRAM	GRANTS	ALL LINKS
# of ties	16	48	25	18	82

What is interesting to note is the respondents indicated different patterns of information-sharing based on the type of tie, suggesting that many of the organizations in this study belonged to the health sector, and knew more about mental health as opposed to hiking, for example; as hiking was outside of their regular work network/topical area.

When examining the map of the all-links network (which combines all possible ties into one map) (See Figure 1), the largest circles reflect organizations with the most ties. Overall, all the ties (n=82) are one-way (i.e. meaning there is no reciprocity between organizations). The key actors are definitely health providers (e.g. Niagara Region Mental Health, branches of CMHA), but there are few instances of cross-sector linking including with recreation (e.g. Ontario Parks), social services (e.g. youth services, learning disabilities services), education, and to a lesser extent, commercial agencies. Unlike some networks that have a central organization that connects with all other organizations, the structure of the Mood Walks network

is loose and fragmented with many organizations working independently in isolation from the larger network.

What is confirmed by this research is the strategic development of the Mood Walks network. CMHA has deliberately designed the program with a multi-sector approach in mind, by recognizing that all partners have different information they can share while at the same time, different gaps in their knowledge or skillsets. As was evident with this research, mental health organizations lack knowledge about trails and hiking programs while recreation and park organizations lack knowledge about mental health services. To address these gaps, CMHA has stated that for the Mood Walks program to be successful, a wide set of local partners is required. Moving forward, it is important for the Mood Walks network to work at bringing everyone together so that the full potential of the network can be reached. The structure of the network might become denser and less fragmented, subsequently functioning more effectively.



Charles Daley Park

Photo courtesy Town of Lincoln

CONSIDERATIONS AND RECOMMENDATIONS

Based on our analysis, there are several insights that we can take away regarding the use of partnerships to promote mental health with nature and green exercise. Largely, these relate to the role of various partners and how they engage others in their network. However, they are also applicable to how we think about the role of parks and recreation in promoting health more broadly.

For those in the parks and recreation sector, there is a need to establish and promote the resources managed within the community. These resources go beyond the physical spaces of parks and facilities and include expertise in engaging community members (i.e. participants) and promoting (mental) health through both active and passive programming. These factors are central for any health promotion initiative to be successful and this role should be recognized and valued. **Parks and recreation professionals should assert their role as an important piece of broader attempts to promote community health.**

In order to take advantage of the many opportunities that exist within our municipalities, we need to acknowledge the broad scope of ways that we can promote health with our existing resources.

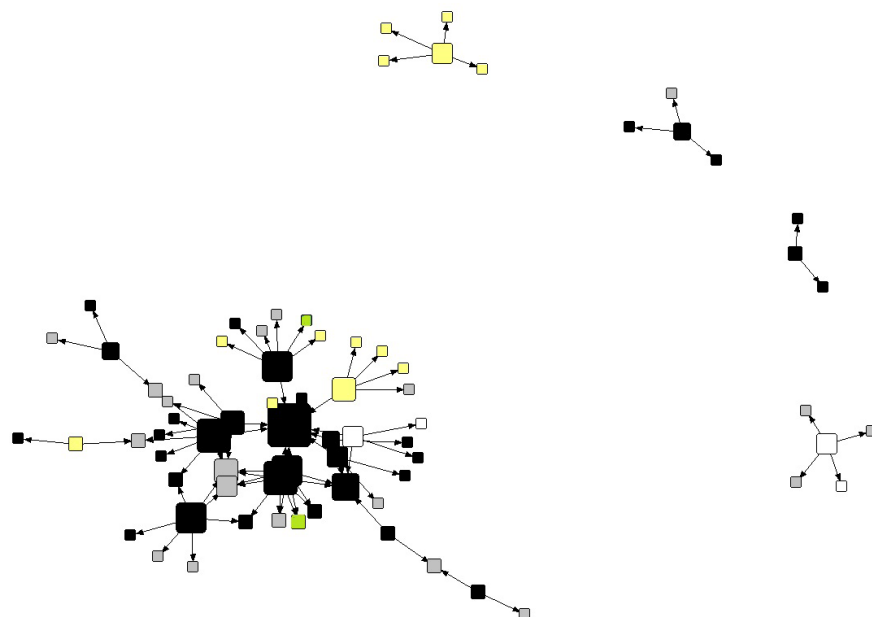
Therefore, increased awareness of the existing and extensive resources within the parks and recreation sector is required for broader uptake by stakeholders to happen. The findings of this research remind us that it is not only (mental) health professionals who are engaged in promoting the well being of residents, and we need to recognize and support the ways that we can work together across sectors in order to achieve these ends.

At the regional level, there are further considerations. Although we might consider mental health promotion to be the work of certain agencies or professionals, our research shows how different people in different sectors can play an important role in this work. **Thinking regionally, we might consider how we can build capacity and connections within our networks so that people are aware of the resources that exist and how they can be accessed.** By specifically connecting with different organizations, providing training on how to build partnerships, and increasing awareness of the resources and services available, we might be able to improve collaboration and more effectively promote health across Niagara.

COLOUR LEGEND FOR MAP BASED ON AGENCY TYPE

AGENCY TYPE	COLOUR
Health agency (hospital)	Black
Recreation agency (municipal recreation department)	Grey
Social service agency (learning disabilities, youth agencies)	Yellow
Commercial agency (e.g. hiking store)	Green
University	White

MOOD WALKS: ALL LINKS MAP



REFERENCES

- Aerts, R., Honnay, O., & Nieuwenhuysse, A. V. (2018). Biodiversity and human health: Mechanisms and evidence of the positive health effects of diversity in nature and green spaces. *British Medical Bulletin*, 127(1), 5-22. doi:10.1093/bmb/ldy021
- Andrew, C., Harvey, J., & Dawson, D. (1994). Evolution of local state activity: Recreation policy in Toronto. *Leisure Studies*, 13(1), 1-16.
- APHA. (2017). Improving Health and Wellness through Access to Nature (APHA Policy Statement No. 20137). Retrieved from American Public Health Association website: <https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/08/09/18/improving-health-and-wellness-through-access-to-nature>
- Centre for Addictions and Mental Health (2019). *Mental Illness and Addiction: Facts and Statistics*. Retrieved from <http://www.camh.ca/en/driving-change/the-crisis-is-real/mental-health-statistics>
- Canadian Mental Health Association Niagara Branch. (2019). *Annual Report 2018/2019*. Retrieved from <https://cmhaniagara.ca/wp-content/uploads/2019/07/Niagara-Annual-Report-2019-Final-Digital.pdf>

- Geniole, S. N., David, J. P., Euzébio, R. F., Toledo, B. Z., Neves, A. I., & McCormick, C. M. (2016). Restoring land and mind: The benefits of an outdoor walk on mood are enhanced in a naturalized landfill area relative to its neighboring urban area. *Ecopsychology*, 8(2), 107-120.
- Johnson, J.A., Honnold, J.A., & Stevens, J.P. (2010). Using social network analysis to enhance nonprofit organizational research capacity: A case study. *Journal of Community Practice*, 18(4), 493-512.
- Liechty, T., Mowen, A. J., Payne, L. L., Henderson, K. A., Bocarro, J. N., Bruton, C., & Godbey, G. C. (2014). Public Park and Recreation Managers' Experiences with Health Partnerships. *Journal of Park and Recreation Administration*, 32(2), 11-27.
- Mowen, A. J., Payne, L., Orsega-Smith, E., & Godbey, G. C. (2009). Assessing the Health Partnership Practices of Park and Recreation Agencies: Findings and Implications from a National Survey. *Journal of Park & Recreation Administration*, 27(3), 116-131
- Niagara Connects (2018). *Living in Niagara Report 2017*. Retrieved from <http://www.livinginniagarareport.com/>
- Payne, L. L., Zimmermann, J. A. M., Mowen, A. J., Orsega-Smith, E., & Godbey, G. C. (2013). Community Size as a Factor in Health Partnerships in Community Parks and Recreation, 2007. *Preventing Chronic Disease*, 10. <https://doi.org/10.5888/pcd10.120238>
- Poole, D. (2008). Organizational networks of collaboration for community-based living. *Nonprofit Management and Leadership*, 3, 275-293.
- Provan, K. and Milward, H.B. (2001) 'Do networks really work? A framework for evaluating public-sector organizational networks', *Public Administrative Review*, 61(4), 414-423.
- Song, C. Ikei, H. & Yoshifumi, M. (2016). Physiological effects of nature therapy: A review of the research in Japan. *International Journal of Environmental Research and Public Health*, 13(8), 781-798. <https://doi.org/10.3390/ijerph1308078>
- Webster, C.M. and Morrison, P.D. (2004) 'Network analysis in marketing', *Australasian Marketing Journal*, 12(2), 8-19.

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Niagara Community Observatory at Brock University is a public-policy think-tank working in partnership with the Niagara community to foster, produce, and disseminate research on current and emerging local issues. More information on our office, and an electronic copy of this report, can be found on our website www.brocku.ca/nco

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