Sport Canada Research Initiative Conference
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ADAMS, CARLY
University of Lethbridge
C. Hart
Standard Research Grant 2011

Imagining Community: Women's Ice Hockey, High Performance Sport and Rural Survival in Southern Alberta

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Project Summary

Statistics Canada data indicate that by 1931, more citizens (54%) lived in urban centres than rural communities. By 2006, this percentage had reached 80%. This demographic shift has serious ramifications for rural communities. For Warner, a Southern Alberta agricultural-based community of approximately 380 persons, a unique strategy was adopted to imagine a sense of community and to allow its residents the choice to remain 'in place' (Epp and Whitson, 2001). Located 65 km south of Lethbridge, the village was threatened with the potential closure of the consolidated Kindergarten to Grade 12 school (ages 5-17). The citizens of Warner established a high performance hockey academy as a stratagem to save the school, and implicitly the town itself. The purpose of this research was to examine what impact on the village was realized, with the creation of the Warner Hockey School (WHS) for young women. The case study research investigated the potential that high performance sport might play in rural community survival and revitalization.

The specific objectives of the project were to identify and analyze:

- Why the WHS was established and the process that the community undertook to make the school a reality
- How the 'imagined community' of Warner came to include high performance hockey as defined by the coaches, players and community
- The role of elite hockey academies in the Canadian hockey system and the impact of such schools on women's hockey
- The potential that high performance sport might play in Canadian rural survival

Research Methods

A case study design, with multiple qualitative data collection strategies, was utilized:

- Analysis of school and community documents related to the establishment and operations of the WHS;
- Semi-structured interviews with community members, school and hockey school staff, informed hockey experts, and past players (n=32);
- Participant observation at village council meetings, school events, hockey galas showcase camps, and games.

Research Results

Uncertainty despite success

Research on endangered North American communities indicates that schools, as integral community institutions, play a vital role in rural communities threatened by decline. Since 2003, the WHS has helped Warner accomplish its central goal – to retain kindergarten to grade 12 schooling. The WHS is a nationally and

internationally recognized elite hockey program. In 2015, the Warner Warriors won the North American Junior Women's Hockey League (JWHL) title. Over 90 percent of WHS players pursue their hockey careers at the post-secondary level, many with athletic scholarships at Canadian and American universities.

Most Warner interviewees declare emphatically that the WHS "saved the village." It brought people together to proactively image a solution to their declining community. Yet, despite the WHS success and community commitment, the village and WHS are at a crossroads. On the one hand, the hockey academy has achieved success and the school has remained open and viable. On the other, the WHS visibility and team success has not led to community revitalization or development. Although popular narratives about the creation of the school speak to consensus building and group cohesion, in reality the hockey school appears to have divided the community. As some community members realized that the school was not going to have the economic and developmental impacts initially desired and expected, it was difficult to remain supportive of the costly and time consuming initiative. Volunteer burnout was a reality. Citizens who had invested countless hours and resources (personal time, labour, and financial) in the WHS became increasingly skeptical of the impact the academy was having on the village. This has resulted in villager dissonance, those who remain supportive of the WHS and those who are uneasy with the expected support of the hockey team when tangible, visible community benefits do not appear to be forthcoming.

Imagining Community

For the Warner resident, often with close-knit intergenerational ties, there is a strong connection to history: of the town, family and school. The hockey players, while invited and welcomed, do not share this same intimate connection and the village's future prosperity. Tensions simmer as the "intruder" players join an established rural community. Inevitably, players view Warner as a timely destination, chosen because it allows one to pursue excellence in her sport and to earn the necessary high school diploma that could potentially lead to a university hockey scholarship. Warner is not "home" but a temporary stopover towards sporting excellence and educational advancement.

Players who attend the WHS Showcase tryout, do so with a specific model of the game in their collective consciousness; one comes to work, to become technically more skilled. Once chosen to attend the Academy, important decisions must be made. Annual fees currently are $33,000.00 per year. This is a serious financial outlay for which the player is responsible. Young women come to Warner, seeking quality hockey coaching, excellent competition, and in pursuit of the future university hockey scholarship.

A Culture Of Elitism: Opportunity and Threat

In 2000, Julie Stevens (2000, p.136) offered an assessment of female hockey writing "a formidable gap has emerged within the female hockey system separating the local game from the global forum." Over the last decade, a culture of elitism, professionalism, and commerce has come to saturate the game. In 2003 when the WHS opened its doors to the first recruits, it was only the second girl's hockey school in Canada. Now there are more then a dozen from coast to coast vying for girls to register in their programs. Increasingly, families who can afford the tuition fees are enrolling their children in elite hockey programs. The WHS's future is threatened by this growing popularity of elite female hockey. The tiny Warner village has little to offer players, other than quality schooling and hockey training in a small rural environment. Other amenities are scarce or non-existent. With the increase in hockey academies, Warner needs to adopt a unique promotional strategy to differentiate itself from other schools, many of them in larger urban centres with lower enrollment fees. The WHS is therefore, not an uncomplicated success story by which a small rural community turned to

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sport as a way to "save the town." The paradox for Warner is that while the success of WHS is a cause for celebration, the very existence of WHS is threatened by the rising elitism of female hockey nationwide. This juxtaposition calls into question the future of the WHS and the survival of this small rural community.

Policy Implications
Results were consistent with past research that suggests there is a rising culture of elitism in female hockey. Hockey academies, such as the WHS, are highly sought out as paths to specialized coaching, increased skill development, post-secondary athletic scholarship offers, and possible selection to elite national and international teams.

Next Steps
Further research is needed on the impact of high performance sport academies in rural and urban communities across Canada and the benefits provided for athletes, community members and the associated schools.

Key Stakeholders and Benefits
Hockey Canada; Hockey Alberta and other provincial governing bodies, post-secondary institutions that recruit graduate players.

Sport Canada – research support that Sport Canada provides is vital (and should be enriched and sustained) to investigate changing trends in elite and grassroots sport to assess the benefits and impacts of new initiatives.

ARELLANO, ALEXANDRA

University of Ottawa
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Standard Research Grant 2011

Building Meaningful Programs for Indigenous Youth

Project Summary

The main purpose of this research program was to help build more meaningful and relevant sport and recreation-based programs for Indigenous youth through the examination of a series of multidisciplinary analyses and case studies (mainly the Promoting Life-skills in Aboriginal Youth [PLAY] program from Right To Play, Project George, and Milo Pimatisiwin from Moose Factory).

Sociocultural studies of youth programming:
Most of these studies were inspired by the work of Indigenous scholars such as Taiaiake Alfred, Leanne Simpson, Glen Coulthard and Jeff Corntassel, who elaborate on Indigenous resurgence theory and practice. Study 1 explored youth experiences in the context of the PLAY program in Whitefish River First Nation and their potential for encouraging Critical Youth Empowerment and Indigenous resurgence. Study 2 presented autoethnographic reflections on sport for development from a practitioner/researcher's perspective. Study 3 examined the Indigenous game of lacrosse and reflected upon its potential as a decolonizing and re-empowering tool when understood within Indigenous knowledge. Study 4 analyzed self-critical discourses of PLAY program practitioners from an Indigenous postcolonial lens, and reflected on ways to decolonize programs. Studies 5 and 6 examined the importance of the connection to the land in youth programming. The purpose of Study 7 was to strengthen the use of Indigenous research methodologies.

Sport psychology (positive youth development) studies:
Study 8 provided an understanding of youth's experiences during a PLAY program community sport event in the PLAY program while Study 9 examined local community mentors' perceptions of the program. Study 10 presented a utilization-focused evaluation based on the perceptions of the PLAY team's successes and challenges.

Sport management study:
Study 11 explored how a community–external agency partnership attempted to use an ice-hockey program to create sustainable community development outcomes.

Research methods

All studies were based on a qualitative design and drew from emerging Indigenous methodologies' values of reciprocity and participation, through formal partnerships with the communities and/or the organization and through formal ethical principles established by our Indigenous Research Advisory Committee, which was created specifically for this project. Most studies used semi-structured and in-depth interviews as well as participant observation in a wide variety of community and sport events related to the PLAY program from Right To Play, Project George, or Milo Pimatisiwin programs from Moose Factory. Our research team worked mainly with the communities of Moose Factory, Whitefish River First Nation (WRFN), Sandy Lake, Henvey

Inlet, and Aamjiwnaang. Our researchers participated in approximately 10 different week-long PLAY events with the PLAY team, partners and local mentors from the 57 communities participating in the PLAY program.

Research results

Study 1 shows that youth experiences of the PLAY program in WRFN show great potential for youth empowerment and Indigenous resurgence. More sport and program resources could target: 1) supporting strong youth identity foundations; 2) walking youth through a healing journey; 3) addressing trauma, suicide ideation, and other mental health issues; 4) encouraging a political understanding of historical and colonial structure reproducing inequalities; and 5) encouraging Indigenous resurgence advocacy.

Study 2 indicates practitioners and academics could be encouraged to reflect critically on their positions, which have the potential to reproduce and maintain unequal power relations.

While lacrosse is presented as an excellent opportunity to revitalize Indigenous games, Study 3 shows that the epistemological significance of the game for the Anishinaabe and Haudenosaunee Nations is complex and rich.

Study 4 brings to light an increasing reflectivity amongst PLAY practitioners. Discussions on structural problems linked to the neo-liberal system in which the program operates, issues of Indigenous agency and voices within the program were examined.

Studies 5-6 reinforce the need for programs to be centered on restoring a connection to the land as it strengthens a sense of wholeness through kinship systems, a community of learning through stories and oral tradition, and recognition of women's contribution to community well-being.

Study 7 stresses that Indigenous methodologies encourage and respect the flow of Indigenous knowledge-based values throughout a project, and favour Indigenous resurgence advocacy.

Preliminary findings from Study 8 indicate community sport events provide an important and meaningful experience for all involved, including youth leaders, children, and families as they offer opportunities for skill building to program participants.

Study 9 indicates that the strategies for success in community-based sport programs in Indigenous communities are: moving away from an academic setting; participants being a positive presence through being creative and adaptable; respecting and integrating appropriate cultural heritage; and identifying partnerships and developing relationships with the community. Three barriers facing such programs are community diversity, social issues, and volunteer and program staff burnout.

Study 11 showed that sport is critical to initiate positive change within a community. Challenges exist in program funding, human resource management, and communication, all of which highlight the importance of sustainable resource planning.

Limitations:
- Whilst the PLAY program is highly dynamic, and changes very quickly, academic research tends to be somewhat slow in publishing results. Highlighted issues may have been addressed or become less relevant at the time of knowledge exchange.

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- Indigenous communities and local program contexts are extremely diverse, which presents a challenge for analysis of the research results.

Policy implications

Whilst acknowledging the excellent work on sport-based programming, it must not be forgotten that Indigenous peoples have their own sports, games, ceremonies and related values that need to be respected, not replaced. Highly meaningful Indigenous youth programs exist and could be the basis for supporting communities to revitalize and restore their own cultures (Project George, Milo Pimatisiwin or the Akwesasne Cultural Restoration program). Such programs are community-led, often politically engaged and driven by cultural restoration and Indigenous resurgence. They were developed by community members, grew gradually out of local partnerships, and only later engaged with external partners and funders. Such programs have evolved slowly by building meaningful land-based projects involving cultural and language-infused apprenticeship that provide opportunities to learn traditional practices such as hunting, trapping, medicinal and healing plant knowledge, fishing, water-use, environmental issues, and politics of land rights. Policy-makers need to ensure that Indigenous epistemologies are at the heart of program development.

Next steps

The results from this research encourage self-critical thinking about Indigenous and non-Indigenous relations at all levels, and amongst all parties, (policy-makers, organizations, academics). This process of introspection can be guided by questions and themes such as:

- Western views see sport, health, youth or education as independent, compartmentalized entities. Indigenous epistemologies see wholeness in balanced, reciprocal, respectful and relational equilibrium with the self, communities, nature, and the spiritual world.
- Western "expertise" in sport and physical activity may not be sufficient for the creation and development of meaningful and sustainable programs for Indigenous peoples.
- Are Western views and ways to understand and measure sport participation reproducing and maintaining unequal power relations between Indigenous and non-Indigenous people?
- Quantitative indicators of sport participation required by the public sector and donors are often in contrast with meaningful and relevant participation appreciation from the perspective of the Indigenous communities.
- Western systems based on funders seeking growth and economic performance outcomes are ill-suited to Indigenous values and ways. They are often at odds with each other, and Western organizations should work on how to really be accountable to Indigenous communities.
- There is a need to be aware of reproducing "white saviour" / "Indigenous at risk" dichotomies, which maintain and reproduce benevolent colonialism.
- Non-Indigenous people should continue to educate themselves on the colonial nature of Eurocentric sports that are being proposed to Indigenous communities and educate themselves in the role sport played, and continues to play, in the history of colonization of Indigenous peoples in Canada.
- Redefine "life skills" based on Indigenous epistemologies.
- Work "with" not "for" Indigenous peoples.
- Fund Indigenous programs, organizations, and academics.
- Practice Indigenous protocols acknowledging territories.
- Resist pan-Indianism by identifying specific tribal epistemologies, and avoid using the Canadian state-imposed homogenizing identity of "Aboriginal."

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- Showing awareness of these issues, questions, and values is critical to building meaningful programs with Indigenous peoples and is likely to increase participation amongst communities and contribute to the success of sport programs in engaging Indigenous youth.

Key stakeholders and benefits
- All people and organizations in both the public and private sector working with Indigenous peoples
- Ministry of Aboriginal Affairs, First Nations and Inuit Health Branch (FNIHB)
- Right to Play
- Motivate Canada
- True Sport
- Sport Matters
- Feathers of Hope Youth Forum
- National Aboriginal Achievement Foundation

BALIS, DANIEL S.
University of Manitoba
Standard Research Grant 2007

Goal Conflict as a Barrier to Regular Physical Activity

Project Summary

Many people who adopt the goal of improving physical activity do not succeed. The aim of this research was to examine goal conflict as a uniquely contributing factor to the low rate of success. Our experiments showed that goal conflict can create a barrier to regular exercise by (a) lowering performance of exercise for up to 2 weeks later, (b) preventing intrinsic enjoyment of exercise, (c) lowering mood and state self-esteem, and (d) conditioning negative emotions to exercise-related objects. They also showed that these negative consequences can be avoided through the application of specific interventions.

The research yielded 3 main conclusions. First, it is a mistake to equate goal conflict with low motivation for exercise. Goal conflict still happens to individuals with high exercise motivation, still disrupts their mood state and exercise performance, and requires a unique solution. Second, goal conflict is at least partly a matter of perception. Subtle differences in the presentation of exercise or other goals can modulate this perception (and its negative consequences) without changing people's "to-do" lists or available time, resources, or strategies for accomplishing multiple goals. Third, the negative effects of goal conflict can be avoided when people are encouraged to (a) schedule exercise in advance, (b) exercise because of the high costs of inactivity, and (c) exercise because it will actually benefit their other personal goals. Such encouragement forms little part of the standard message promoting exercise, which emphasizes "how much" rather than "when" to exercise, positive rather than negative outcomes that may be achieved/avoided through exercise, and positive outcomes for health before any and all other goals.

Research methods

The principal investigator worked together with 15 honours and graduate research associates on this research. Over 3 years, we screened over 1,000 student research-participants with high exercise motivation into a series of laboratory experiments. Ethics approval was granted by the University of Manitoba Research Ethics Board, and all participants provided written informed consent in advance.

In our typical experiment, after making a commitment to exercise, participants were randomly assigned to conditions that prompted them to think about either their conflicting academic goals, or their consistent exercise goals. Follow-up measures of the participants' mood, motivation/intentions, and exercise frequency allowed us to test the effects of this brief exposure to goal conflict, while holding other factors constant.

We also developed and validated a brief, self-administered questionnaire measure of chronic goal conflict with exercise. We used this measure in several prospective studies of exercise behaviour, occurring either naturally or in response to specific interventions.

Research results

Our experiments in year 1 showed that goal conflict can create a barrier to regular exercise by (a) lowering performance of exercise for up to 2 weeks later, (b) preventing intrinsic enjoyment of exercise, (c) lowering mood and state self-esteem, and (d) conditioning negative emotions to exercise-related objects.

The main focus of research in years 2 and 3 was to design and/or apply interventions to manage goal conflict effectively. We specifically examined the effects of (a) scheduling exercise in advance, (b) receiving promotional messages that emphasized the costs of inactivity vs. the benefits of regular activity, and (c) reviewing brochures or videos that emphasized the benefits of exercise for health vs. alternate goals. Our findings suggest that the damaging effects of goal conflict for exercise performance or enjoyment can be avoided.

Most of these studies relied on student-participants and examined goal-conflicts between exercise and either academic or social goals, which were natural to the participants' social-developmental context. Future research is needed to extend the findings and implications of this research to other social-developmental contexts.

This research also yielded durable outcomes. Our questionnaire measure of goal conflict with exercise can be used in future research. Also, our exercise-promotion videos, based on intergoal facilitation, are of a professional quality suitable for wider use and distribution. Our final report to SSHRC includes a complete listing of other academic and non-academic contributions that resulted from this research.

Policy implications

This research has potential policy implications in three areas: increasing sport/exercise participation (directed to federal/provincial-territorial ministers for healthy living), increasing representation of women in sport/exercise activities (directed to federal/provincial-territorial sport agencies), and active transportation (directed to municipal governments and community recreation agencies).

With respect to increasing exercise, two implications stand out particularly. The first is that poor adherence to exercise has psychological causes and remedies apart from individuals' knowledge of health-related risk, which is still the main target of public discourse and interventions in this field. The second is that goal conflict is likely to be fueled by a social organization of sport/exercise activity that keeps it separate from (and therefore apparently costly to) individuals' other goal pursuits. To address goal conflict, public policies and messages can shift toward the notion of sustainably integrating sport/exercise participation with other pursuits.

The *Actively Engaged* policy on gender equity in sport notes in its context that "traditional explanations of overt barriers or lack of opportunity" cannot fully account for the underrepresentation of women in sport (Canadian Heritage, 2009). However, goal conflict is *not* an overt barrier, it arises only when there *is* opportunity, and it may disproportionately affect women who are participating in the paid labour force while having major responsibilities for housework, child care, and elder care. Thus, although this research was not targeted to women, it may shed light on a problem with sport/exercise participation that holds more women back than it does men.

Active transportation provides a way to pursue recreational sport/exercise participation in tandem with other goals. As such, it may provide a way out of goal conflict. Thus, an already growing infrastructure for active transportation represents one kind of support that should be continued from the perspective of this research. Such support both complements our current regime of incentives and raising awareness of the benefits of sport/exercise participation, and specifically may enable Canadians to re-integrate sport/exercise participation in their busy lives.

Next steps

Several key unanswered questions and related social issues are these:

- How does goal conflict shape sport/exercise participation over the life-span?
- If goal conflict acts like a persistent brake on sport/exercise participation, what social-psychological factors might encourage people to lift the brake and engage, despite their fears?
- Due to multiple roles and responsibilities, does goal conflict represent a more significant barrier to regular sport/exercise participation by women than by men?

Key stakeholders and benefits

- Public Health Agency of Canada, Health Promotion Branch
- Manitoba Healthy Living, Seniors and Consumer Affairs
- Canadian Fitness and Lifestyle Research Institute
- ParticipACTION
- Physical and Health Education Canada
- In Motion
- Canadian Association for the Advancement of Women and Sport and Physical Activity
- Sport Manitoba and other provincial sport organizations
- Infrastructure Canada

BAKER, JOSEPH
York University
P. Weir, J. Starkes
Standard Research Grant 2007

Aging Expectations and Physical Activity Behaviours

Project Summary
A developing area of research focuses on 'successful aging', which has the central objective of discovering significant predictors of optimal health in later life so that risks of disease and disablement can be targeted and reduced. From this research, there is evidence indicating beliefs that older adults have of their own aging process (aging expectations) play an important role on health and healthy behaviours (e.g., sport and physical activity) throughout later life.

The current research project develops our understanding of this area by examining the relationship between older adult's expectations of aging and their involvement in preventive health behaviors such as sports and physical activity. Previous evidence shows that older adults who expect decline with age are less likely to engage in 30 minutes of moderate-to-vigorous walking activities in the previous week compared to those with affirming aging expectations; however, the impact that aging expectations have on other modes of physical activity has not yet been explored.

As a result, the main objective of this research was to discern the influence that aging expectations have on multiple kinds of physical activity behaviour.

Research Methods
249 adults aged 40 and greater (average age was 70 years) completed a multi-scale pencil-and-pen survey. Recruitment took place in the Greater Toronto Area. Participants were all community-dwelling as they were recruited from retirement housing complexes, recreational activity groups (both physical (e.g., mall walking groups) and cognitive (e.g., bridge)), and senior centers. Each individual was given a survey, a stamped and addressed envelope. The questionnaire surveyed a) multiple physical activity practices and preventive health care seeking behaviour (getting a routine annual physical exam from a health care professional), b) mental, cognitive, and physical aging expectations, and c) a number of important social, demographic, and clinical factors that are important and relevant to the associations being tested (e.g., gender, ethnicity, cultural background, income, education, chronological age, depression, reports of pain, restriction of daily activities, and chronic conditions). Ethics approval was granted from York University and all participants had to provide informed consent.

Research Results
Are aging expectations associated with multiple kinds of physical activity behaviour?

Higher aging expectations were found to significantly relate overall physical activity, participation in strenuous sport, and lawn work or yard care. Again, an examination of the aging expectation sub-scales revealed that

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these overall effects were driven by the physical health aging expectations only. Furthermore, solely physical aging expectations were also associated with participation in light sport activities, moderate sport activities, and light housework. Findings suggest that expectations of decline with age, namely declines in physical health, are associated with decreased reports of participation in various modes of physical activity. As a result, promoting positive aspects of aging may help maintain levels of physical activity across the lifespan.

Policy Implications

Our results may have considerable policy implications given the increased attention to 'Aging at Home' among many provincial and national health agencies. In general, they suggest that health messaging to older adults should reflect a more optimistic perspective since one's expectation towards their aging influences their involvement in pro-health behaviors. However, we recognize the difficulties in implementing a 'pro-aging' messaging campaign in a society that values youth and may have unreasonable expectations of what constitutes 'health' and 'fitness' particularly in older age groups.

Next Steps

The most significant 'next step' is the development of an intervention framework with older adults, in an attempt to 'disarm' the negative stigma associated with older age. We anticipate that this will not be easy (if possible at all) given the social focus on youth, beauty, and fitness – all concepts not normally associated with the aging person.

We also anticipate continued examination of the role of aging attitudes and expectations on other preventive health behaviours (e.g., diet, doctor visits) and other aspects of health (e.g., self-concept, social engagement).

Key Stakeholders and Benefits
- Provincial Ministries of Health, Health Promotion and Sport
- Health Canada
- Sport Canada
- Canadian Association on Gerontology
- Provincial Associations for Older Persons, Aging, and Gerontology

BAXTER-JONES, ADAM
University of Saskatchewan
l. Sherar, W. Proctor
Standard Research Grant 2002

The effects of adolescent physical growth and maturation on selection into sport and the long-term effects on sports participation (2013-2016)

Project Summary

Sport Canada's Long Term Athlete Development (LTAD) model acknowledges that there are limitations to ensuring appropriate development of team sports, especially with regards to selecting into chronological age (CA) bands. Adolescent of the same CA can be 4 to 5 years apart developmentally (Biological Age; BA). It's suggested that late maturation could impede selection and effect long-term sports participation. The purpose of this study was to determine whether growth and biologically maturity played a role in selection onto provincial sport teams. 820 participants (564 males, 256 females) aged 11 to 17 attending Saskatchewan youth sport team tryouts (hockey, soccer, basketball, football, volleyball, and baseball) were recruited. CA and anthropometric measures were recorded. A biological age (BA, years from peak height velocity [PHV]) was predicted. Participants were grouped into three maturation categories; pre (0.5 yrs before PHV), peri (1 year around PHV), and post (0.5 yrs after PHV). At the end of the tryouts team rosters were developed. In male athletes there were significant within group differences between the proportion selected verses not selected in both pre-PHV (37.5 vs. 62.5%) and peri-PHV (38.3 vs. 61.7%), but not in the post-PHV groups (48.7 vs 51.3%) ($p>0.05$). In females, there were no differences post-PHV (56.7 vs. 43%) ($p>0.05$), only 38.5% of peri-PHV were selected and 0% of pre-PHV. There was a significant team selection by sport and maturity grouping interaction ($p<0.05$). The proportion of athletes selected versus not selected did not differ between maturity groups in baseball, hockey or volleyball. It was also found that athletes born in the first 6 months of the selection year were favoured. In this sample of youth athlete's, selection bias during adolescence in favour of more mature athletes was only observed in males and only in specific sports: soccer, basketball and football. It can be concluded that given the older BA of the girls, maturity did not appear to influence selection. However, the results suggest provincial sport organizations need new and better strategies for dealing with the potential selection bias of maturity in males for certain sports. Furthermore, a balance of shorter-term performance outcomes with longer-term athlete development and talent identification processes should be considered.

Research methods

Between January 2014 and February 2015 fourteen to fifteen-year-old athletes were recruited during team tryout sessions across the province of Saskatchewan for the following sports: Baseball, Basketball, Football, Hockey, Soccer and Volleyball. At each try out sessions participants, height, sitting height and weight was recorded along with date of birth, test date, mother's height and father's height (either measured or recorded). From this information a child's chronological (CA) and biological age (BA) was calculated. BA was calculated in years from attainment of peak height velocity (PHV) using a regression equation developed from anthropometrics and age. The equation predicated years from the attainment of PHV. Actual PHV was calculated my adding CA to BA. Participants were grouped as pre PHV, per PHV or post PHV. In addition, birth months were quartiled, e.g. Jan to March = quartile 1, etc. In addition to the physical measures athletes also completed the following questionnaires: (i) Sports Participation Activities; (ii) Sport Enjoyment: (iii) What Am I

Like; (iv) Parental Involvement; and (v) Perception of Coaching. At the end of the tryouts coaches provided list of individuals who were selected for the teams. Participants were contacted at 6 and 24 months and invited to complete the five questionnaires again.

Research results

Initial data and 6-month follow-up has been collected. 24-month follow-up data is currently being collected. 827 participants were recruited (60 male baseball; 50 males and 34 female basketball; 73 male football; 275 males and 96 female hockey; 74 males and 64 female soccer; and 35 males and 66 female volleyball). 42% of the athletes made the provincial team. Average age of athletes was 14.5 ±0 .9 yrs. (range 11.3 to 17.9).

Males average height was 172.5 ± 9.1 cm and females 165.5 ± 8.0 cm. 18.3% were pre PHV, 42% were peri-PHV and 39% were post-PHV. Comparison between sports showed that female volleyball players were taller than hockey, basketball and soccer players (p<0.05), Differences was found between the heights of their fathers but not their mothers. In males, sports differences in height were also found with Volleyball players being significantly taller (p<0.05) and soccer players significantly shorter (p<0.05). The same patterns were found in the parents of the athletes. No significant differences in height were found between female selected and not selected (p>0.05). In comparison male selected basketball and volleyball players were significantly taller than those not selected (p<0.05). This was also true for the fathers of volleyball players.

18.3% of athletes were pre PHV, 42% were peri-PHV and 39% were post-PHV. Sports differences were observed the vast majority of Volleyball players were post PHV, indicating they were more mature for their CA. This was also true for football players and basketball players but less so for baseball and soccer players.

Looking at month of birth distribution in females only 17% were born between October and December, with the other 3 quartiles similar in distribution. A similar pattern was observed in males. Broken down by sport and sex it was observed that 74% of male basketball players were born within the first 6 months of the year. Looking at distributions for selection into teams 65% of males selected were born within the first 6 months and 56% of females.

After 6 months the vast majority of athletes were still involved in the sport they participated in at try-outs.

Policy implications

The launch of the Long Term Athlete Development (LTAD) model is a demonstration of Sport Canada and individual Provincial and National sporting organizations commitment to lifelong sports participation. The LTAD Resource paper (V2) published by Canadian Sports Centres recognizes the limitations of grouping individuals by chronological age; "Athletes of the same age between ages 10 and 16 can be 4 to 5 years apart developmentally. Thus, chronological age is a poor guide to segregate adolescents for competitions". Indeed, within many team sports, an adolescent boy with greater physical growth and maturity (either because he has a birthday early in the selection year, and thus is older and/or because he is an early maturer) will be more likely to be selected for sports teams. This is likely because of the advanced development in size, strength, speed and endurance of males with greater physical maturity. However, regardless of this recognition of the limitations of age based sport structure, youth sports is still concentrated on 1 or 2 year groupings; a structure which, at least in males, likely places

youth with less physical maturity at a disadvantage. Understanding the impact of youth growth and physical maturation on success at try-outs and then on long term (2-year) participation in sport, in males and females, will provide empirical evidence highlighting the youth most at risk for dropping out of team sports. Our results have shown that in certain sports the concentration on choosing the oldest, tallest and most maturity advanced individuals is still occurring, even though the LTAD model has sought to address this imbalance. In 2004 we worked with the Saskatchewan Minor Hockey and showed them that they were choosing the most advanced males in terms of growth and maturation for their provincial bantam team. Ten years on this study has shown that this is no longer the case. This suggest that working and educating directly with sporting bodies is a worthwhile approach to change coach's perceptions of what constitutes success for a provincial team. We would encourage this type of education in all sports.

Next steps

Although this study has addressed the fist objective to describe the role of growth and maturation on selection into teams and has shown that sports do not need to concentrate of physical maturity to choose the best athletes, The second objective is still to be addressed, that role on sports participation. We are now collecting data from these individuals as we enter the two-year period after selection camps and will have some answers to this question in the coming years. The role of growth and maturation in youth sport still continues to confound outcomes and it is important we continue to educate coaches and provide them with the tools necessary to ensure the late bloomer is not overlooked. This suggest more work is required in the area of potentially closed systems for sport talent identification in the growing years

Key stakeholders and benefits

All youth sports organization

BEAULAC, JULIE
University of Ottawa
Doctoral Stipend 2006

A Promising Community-Based Hip-Hop Dance Intervention for the Promotion of Psychosocial and Physical Well-being Among Youth Living in a Disadvantaged Neighbourhood

Project Summary

This project involved a partnership between the University of Ottawa and three community partners: South-East Ottawa Community Health Centre (SEOCHC), Culture Shock Canada, and Heron Road Community Centre. Prior to implementing a new physical activity program in South-East Ottawa, an initial study sought to better understand the needs, barriers, and facilitators to youth participation in physical activity in order to conceptualize the new intervention. This study determined that the young people and parents were aware of the benefits to youth participation in physical activity but that contextual constraints need to be addressed. The second study of this project consisted of an implementation and outcome evaluation of a new weekly hip-hop dance intervention. The implementation findings demonstrated that the program reached the intended population and provided valuable feedback on the strengths and weaknesses of this new program. The outcome findings were mixed. In general, the quantitative results did not support the program objectives; however, qualitative findings were more positive, and suggested that the hip-hop dance intervention is a promising program for the promotion of youth well-being.

Research Methods

The intervention conceptualization study involved a literature review and three focus groups: seven male youth; 10 female youth; and 13 parents/guardians. Youth participants were 11 to 14 years of age. The evaluation of new intervention study, involved ninety-one youths 11 to 16 years old. The youths were socially and ethno culturally diverse; most were female (82.4%). The evaluation involved a non-experimental pre-test/post-test design from the perspective of youth participant, parent/guardian, and program staff. Mixed methods were used including document review, observation, interview, focus group, and questionnaire format.

The intervention studied was a new, free community-based hip-hop dance program, implemented in South-East Ottawa for young people between 11 and 16 years of age. The program was designed to break down some of the barriers to participation by providing a free, relevant, and supervised activity, in an accessible location, that included transportation assistance and participation incentives. Two program formats were offered, girls-only and co-ed, across two program sessions: a winter session (13 weeks) and a spring session (12 weeks); different young people participated in each session. A final showcase production was held one week after the final class of each session where participants performed in front of their families, friends, and other community members. The young people also attended pre- and post-program evaluation classes.

The program was delivered according to a structured intervention manual. Two dance instructors from Culture Shock Canada taught the classes at a local community centre. A balance between learning new hip-hop dance skills and fostering positive peer and staff relationships was sought in order to maximize youth involvement and positive outcomes. A youth coordinator and health promoter for youth were also staffed to

provide youth with transportation assistance, on-site supervision, and to assist with coordination and outreach.

Research Results

Findings from the first study demonstrated that the young people and parents were aware of the benefits of youth participation in physical activity programs. Hip-hop dance was reported as an appealing program option. Limitations of this study are the small sample size and the use of one method. Nonetheless, the intervention conceptualization study was important in informing program development and implementation, including decisions around offering co-ed and girls-only formats, program timing, participation incentives, and transportation assistance. Findings also demonstrated the importance of involving the community in developing and implementing new programs.

Findings from the second study demonstrated that program implementation was moderately satisfactory. Strengths included: accessibility, relevance and challenge in learning something new. In addition, the participants described a mainly positive/non-competitive environment and positive connections with peers and staff. Not unlike other community-based programs for youth and disadvantaged populations, almost 50% of the youths discontinued participation in the program. Other key areas of weakness included inconsistencies in the program timing, adult management of youth behaviour, and transportation, in addition to the short length of the program and unachieved outreach objective. Improving the program would likely improve youth retention and impact. Importantly, however, the youth participants in this program reflected the target population and reported overall satisfaction with the program. Participants, parents, and staff agreed that the program should be continued, with modifications, likely requiring new resources. A strength of this study was the use of multiple methods; however, low participation rates were problematic.

This program sought to promote positive development and well-being among youth living in a disadvantaged, multicultural urban community. In general, the quantitative results did not support these objectives except for a statistically significant improvement in perceived hip-hop dance skills, likely due to small sample size, high attrition, low intervention dose, and implementation problems. However, qualitative findings suggest that the intervention is a promising program for the promotion of youth well-being. More specifically, almost all the young people, staff, and parents reported an improvement in hip-hop dancing and/or other related skills, and in self-confidence. In addition, many described improved behaviours, an increase in participation in physical activity, trying new activities, and a transfer of skills to other activities, improved physical health, shyness, mood and relationships; some also described an increase in respect for others or for diversity. Less commonly, the youths and parents also indicated that health overall and/or attention improved; a few also reported improved school performance. These findings are consistent with other research on the benefits of participation in physical activity and positive youth development programs. Although these findings suggest a promising program, they need to be interpreted in light of certain limitations, such as the small sample size and non-experimental design of the research; as a result, we cannot attribute participant changes to involvement in this intervention per say.

Policy Implications

The study supports consideration of both environmental and individual level factors in the promotion of physical activity. Currently too much emphasis is placed on individual level factors; Further, additional

resources may be necessary to appropriately meet the needs of lower-income and culturally diverse young people.

The study suggested promise in offering weekly physical activity programming for youth living in a disadvantaged community. Two particularly important program-related factors were relevance (Hip-hop dance was reported as highly relevant for intervening with youth and accessibility (i.e., program cost, location, and transportation.). Promoters of physical activity should consider these two critical factors in the development and implementation of interventions.

The evidence supports collaborative, multi-setting interventions in adolescents. Attempts should be made to combine community-based interventions with those targeting other settings (e.g., school, home) as the problem of physical inactivity, health, and social problems, is complex. This research also demonstrated the importance of involving the community in developing and implementing new interventions.

Next Steps
A more rigorous study is needed to confirm the benefits of this and other community-based physical activity programs. Future intervention research needs to include more diverse and lower-income youth in order for findings to be generalizable, and to investigate a broader range of outcomes – beyond physical health. Studies investigating implementation and other dimensions of interventions are also critical to the effective study and dissemination of new programs.

Key stakeholders and benefits
- Public Health Agency of Canada, Health Promotion Branch
- Ontario Physical and Health Education Association
- Ontario Ministry of Health and Long-Term Care
- Active Healthy Kids Canada
- Canadian Association for the Advancement of Women and Sport and Physical Activity (CAAWS)

BEESLEY, THERESA
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Doctoral 2016

Grappling for Answers: Exploring the Process of Life Skills Development in Youth Mixed Martial Arts Athletes

Project Summary

Mixed Martial Arts (MMA) is a full contact combat sport that integrates striking and grappling techniques from a variety of other combat sports (i.e. martial arts, boxing, sumo, wresting, karate, Brazilian jiu-jitsu, kickboxing, and Tae Kwon Do). MMA was legalized in Ontario in 2013. Immediately, reporters from mainstream and social media began to emphasize both positive and negative outcomes of youths' participation in MMA, which was largely anecdotal. Perhaps not surprisingly, MMA gyms have adopted only the positive media attention regarding youths' involvement in MMA, and use these claims to promote youth enrolment in the sport.

To date, few studies have examined youth MMA programs' effectiveness in promoting developmental outcomes in youth. Theeboom and colleagues (2009) identified that participation in MMA was associated with increased self-efficacy and self-confidence, as well as improved conflict management and communication skills. Moreover, they found youth were able to transfer these life skills into non-sport contexts with their peers. However, another study found concerning negative outcomes to be associated with MMA. Specifically, Endresen and Olweus (2005) examined the impact of participation in martial arts, boxing, wrestling, weightlifting (components of MMA) by males ages 11-13, finding the youth experienced an increase in antisocial and violent behaviour in non-sport environments

Currently there is no consensus amongst researchers on the positive developmental outcomes of youth participation in MMA. The discrepancies in the findings of past research stem from several methodological limitations when studying youth participation in MMA and the development of life skills. First, no study has clearly defined youth MMA, often resulting in exploration of youth martial arts, an umbrella term for all martial art forms. Second, previous research has used a deficit reduction approach, heavily modifying marital art programs to accentuate the focus on self-reflection and life skills development. Third, youth participants often have been identified as delinquent or troublesome and have been placed into a martial arts program as a remedial behaviour program. Therefore, the overall objective of this dissertation was to explore the potential benefits, factors and processes associated with youths' life skill development in MMA, through the lens of positive youth development.

Research Methods

This research project was comprised of four studies. Three main questions guided our study objectives: (1) What life skills do MMA schools say they develop? (2) What life skills do youth really develop by participating in MMA? (3) How does MMA participation develop these life skills and facilitate life skills transfer?
To address question one a content analysis of the websites for 18 MMA gyms with youth programming, based in Toronto, Ontario was conducted. A 37-item coding manual was developed to categorize the website content. Categories included: general information, MMA gym's goals, 4Cs developmental outcomes (i.e.,

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competence, confidence, connections, character; Lerner et al., 2005), 4Cs processes of facilitation, sources of information, and non-relevant messages.

To address question two, 13 youth (n=11 boys) ages 9-14 enrolled in youth MMA programs in Toronto participated in semi-structured interviews focused on their background, knowledge of life skills, MMA experiences, self-reflection, and transfer.

To address the third question, we conducted two studies. First, ten male coaches from ten different MMA gyms in Toronto, Canada, that were actively coaching a youth MMA programs for ages 9-14 participated in a semi-structured interview. Interviews explored MMA coaches' experiences in MMA as an athlete and coach, to identify their role in the process of life skills development and transfer in MMA. Next, nine youth from MMA gyms in the Greater Toronto Area, completed online journals regarding their experiences of life skills transfer. Given that previous research on youths' life skill transfer has relied on direct questions (i.e., using guiding language about transfer), in this study, half of the youth completed journals that included direct questions, and half of the youth completed journals that included indirect questions.

Research Results

1) What life skills do MMA schools say they develop?

One quarter of website content was comprised of statements regarding the positive outcomes of youth participation in MMA. We classified these outcomes into one of the 4C outcomes (i.e. competence, confidence, character, connection; Little, 1993). Competence related outcomes represented the greatest number of outcome related statements on MMA websites (38.42%), followed by character-related outcomes (26.11%), confidence outcomes (18.72%) and connection outcomes (16.75%). The most frequently stated competence outcomes were identified as fitness, anti-bullying and balance. For character they were identified as improved discipline, respect, and control. Confidence related outcomes included self-confidence, self-esteem, and self-knowledge. Three developmental outcomes represented the category of connection: social skills, communication, and cooperation.

2) What life skills do youth really develop by participating in MMA?

Youth discussed their MMA participation facilitating the development of sixteen life skills. Self-confidence (n=7), self-control (n=4), and social skills (n=4) were the most frequently mentioned life skills.

3) How do MMA schools develop these life skills and facilitate life skills transfer?

According to Youth

Youth outlined that their coaches were the main facilitators of their life skills development. Youth described that when they had positive perceptions of their coach and developed relationships that went beyond the interactions of teaching/learning technical skills (i.e. relationships as friends, mentors, and/or father figures), they experienced more opportunities for life skills development. Youth described two strategies used by their coaches to enhance their life skills learning experiences. Coaches used explicit strategies which included talking about the life skills learned in class and the importance of using life skills in non-MMA contexts. Youth also mentioned that they had an opportunity to use these life skills when their coaches paired them with younger MMA athletes or athletes with lower technical skill ability. The majority of youth did not notice if their parents remained during the MMA class to watch them and felt their presence during class was not important. However, youth suggested that their discussions about MMA class with their parents were

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important to help facilitate their self-reflection and recognize the usefulness of life skills learned in MMA into non-MMA contexts (i.e. home, school).

According to Coaches
Coaches described how their ability to facilitate life skills development in their athletes stemmed from their own personal history and experiences in the sport. Coaches attributed their own involvement in MMA with helping them overcome challenges in their childhood and/or enhancing their life skills development. Coaches had developed strong relationships with their past coaches that shaped their coaching beliefs and practices. Coaches felt that having strong relationship with their athletes' parents enhanced athletes' opportunities for life skills development during MMA classes and facilitated transfer of life skills at home. Coaches that had open communication with parents suggested these parents provided them with information about athletes' life skills needs and progress outside of the MMA class setting. Coaches described how they would focus on certain life skills or modify their strategies depending on the information provided by parents. In class strategies included explicitly addressing life skills and transfer during mat chats and open conversations, and providing youth opportunities to use life skills by pairing them with younger or less skilled youth.

Policy Implications
This research project strengthened our knowledge of the potential psychosocial benefits of youth participation in MMA and enhanced our understanding of the role of coaches, parents, peers and youth in the process of life skills development.

The main implications are as follows:
1) Currently, MMA does not have a national governing body under the umbrella of Sport Canada, (i.e., MMA does not have a National Sport Organization (NSO), Provincial Sport Organization (PSO), and is not funded by Sport Canada). One responsibility of a Canadian NSO is to provide professional development for coaches and officials within the sport; however, the absence of a NSO/PSO to govern coaching practices in MMA opens the door for extensive variation amongst coaching practices with youth. Findings from the current study provide a springboard for future professional development for MMA coaches, as participants outlined several strategies to enhance life skills development, and offered a deeper understanding of the interactions, teaching approaches, and strategies used by coaches that align with the principles of PYD. This work is particularly important, given that some coaching strategies may in fact lead to negative outcomes among youth (e.g. increased aggression).
2) Currently, MMA coaches are not required to complete a coaching program or have MMA coaching certification. Findings from this study inform MMA coaches on best practices that will facilitate positive developmental experiences in youth athletes.

The primary researcher is currently in the process of disseminating findings of this study in a brief report to MMA gyms and organizations, highlighting key findings and considerations when training youth young MMA athletes.

Next steps
MMA was identified by coaches as a unique sport, whereby their personal experiences and previous coaches and beliefs about the sport were the primary (sometimes only) coaching education they received. Future

research should explore the beliefs, customs and culture of MMA and how this is integrated into the athletes' developmental experience.

Popular/social media and the Ultimate Fighting Championship (UFC) are continuously communicating stories, videos, and images about MMA, which in turn have a tremendous influence on the public's perception of the sport. Future research should explore these media outlets and organizations, and their relationship to youth MMA, to in turn assure alignment between aims and claims of programs, and ultimate developmental outcomes among youth.

Key stakeholders and benefits
- National Sport Organizations
- Provincial Sport Organizations
- Martial art programs (regional)
- Schools

BÉLANGER, MATHIEU

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Standard Research Grant 2010

Monitoring Activities of Teenagers to Comprehend their Habits (MATCH) Study

Project Summary

The "Monitoring Activities of Teenagers to Comprehend their Habits" (MATCH) study aims at generating a better understanding of how sport participation evolves during childhood and adolescence. In this investigation, emphasis is placed on the stratification of analyses by sport type. 843 Grade 5 and 6 children were recruited in the 2011-12 school year. Since then, participants answered questionnaires three times per year. Data are also collected from school audits, phone interviews with parents, and individual yearly interviews among a subsample of 25 participants. Follow up will continue until 2018. Although the main analyses are to come, early results show that: We were able to distinguish five different sport participation profiles among active youth. Types of sports in which youth engage are influenced by motives, basic psychological needs, school environment, school policies, various barriers as well as sports in which their parents participate.

Research Methods

A total of 837 grade 5 and 6 students were recruited in 17 New Brunswick (NB) schools. MATCH participants complete self-report questionnaires every four months from grade 5 or 6 until the end of grade 11. The initial data collection was completed in fall 2011. Questionnaires collect information on types of sports practiced and frequency, and on potential determinants of participation. Beginning in spring 2013, a sub-sample of 25 adolescents took part in individual interviews. These are repeated annually in a private room provided by schools. Parents (or guardians) of students took part in a telephone-administered questionnaire. Finally, a school environment assessment was conducted for every school in collaboration with school representatives.

Research Results

The main analyses are ongoing. Here are results from the first two years of the study:
- More boys and girls participated in non-organized (80.2% and 77.8%) and individual sports (75.6% and 80.4%) than organized (44.5% and 44.6%) and group-based sports (60.3% and 53.7%).
- Students who endorsed enjoyment motives were more likely to engage in organized sports and those with higher competence motives were more likely to participate in group-based sports as well as achieve physical activity recommendations.
- Schools with favorable active commuting environments had higher levels of participation in organized sports.
- School with policies supporting sport participation had higher levels of participating in non-organized physical activities.
- Perceived barriers towards sports were best represented as two interrelated factors representing internal (e.g., "I am not interested in sports") and external (e.g., "I need equipment I don't have") dimensions. Girls reported more external barriers compared to boys. Adolescents who were meeting

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current Moderate-to-vigorous physical activity (MVPA) guidelines reported fewer barriers than adolescents not meeting guidelines. Perceived internal barriers were inversely related to MVPA.

- There was a positive association between psychological need satisfaction of competence, autonomy, relatedness and MVPA. Longitudinally: as psychological need satisfaction increased over time, so does MVPA levels.
- Parents' participation in racket sports was associated with a significantly higher likelihood of youth participating in racket sports. There were no significant associations for the other types of physical activities. The probability that parents and youth participated in the same types of activities was moderate to high, whereas the probability that neither parents nor youth participated in a particular type of activity was low to moderate.
- Our first round of qualitative interviews led to the identification of five distinct sports participation profiles: specialists, regulars, explorers, outdoor enthusiasts, and accidentally actives. These were distinguishable based on preferred types of sports, commitment towards various types of sports, variety in types of sports practiced, and contexts in which sports are practiced (e.g., individual vs group, organised vs unstructured, competitive vs recreational). Participants in these profiles were also distinguishable based on motivation for sport participation and basic psychological need satisfaction of competence, autonomy, and relatedness.

Policy Implications

Recognizing the importance attributed by children to enjoyment motives, sport practitioners, schools and communities hoping to increase participation in <u>organized</u> sports should aim at making their activities interesting, fun, and stimulating.

To increase participation in <u>group-based</u> sports, interventions may need to incorporate consideration of competence motives by reinforcing skill development and enhanced performance and offering realistic and attainable challenges through sport participation opportunities.

To increase satisfaction of psychological needs (i.e. Competence, relatedness and autonomy) which in turn can increase MVPA among youth, Schools should: 1- Provide opportunities (e.g. recess, lunch) for youth to practice new skills with the help of a sport professional and encourage them to keep practicing these skills in order to become more at ease and feel more confident (competence), 2- Allow students to choose activities according to their interests. This will group together youth with similar objectives and facilitate development of relationships (relatedness), and 3- Offer opportunities for youth to choose the activity in which they want to engage without questioning their motives or trying to control the outcomes.

School environment were strongly related to sport participation, and most specifically to participation in <u>organised</u> sports. Schools and school boards could work together to implement active commuting programs, such as "Walking school bus" programs, active transportation days, and modify policies or create infrastructures that promote active commuting to school, such as allowing skateboards on school premises, offering bike racks, and ensuring that crossing guards are present at pedestrian crossings.

Parents' sport participation may have an influence on types of activities practiced by youth, especially for <u>activities that are relatively less popular</u> among youth. Communities and sport organizations should offer more opportunities for parents to be active such as adult sports teams and walking/running/biking clubs as a strategy for increasing sport participation in youth.

Internal barriers to sports appear to have a larger influence on MVPA than external barriers: Programs aimed at increasing sport participation in youth should be discussed with youth, and their barriers, specifically their internal barriers should be taken into consideration prior to implementation.

Next Steps

With recently announced renewal of funding, MATCH will be pursued for three more years. This will enable the follow up of adolescents at a critical period of behavioural shaping, when fewer individuals consolidate adherence to different types of sports. During this period we will also continue to analyse data collected so far. Among others, planned analyses will allow to:

- Describe the association between type of motive and maintenance of different types of sports in youth;
- Test if change in motives is associated with change in level of participation in different types of sports;
- Test if change in basic psychological needs satisfaction is associated with change in the practice of different types of sports;
- Explore the sport participation related experiences of participants in various types of sports;
- Better understand the processes underlying the Sport development model.

Key Stakeholders and Benefits

Information emanating from the MATCH study is relevant for a wide variety of potential knowledge users, including:

- Sport New Brunswick
- The Healthy Eating Physical Activity Coalition
- Department of Education and Early Childhood Development of the Government of New Brunswick
- Department of Healthy and Inclusive Communities of the Government of New Brunswick
- ParticipACTION
- Canadian School Boards Association
- Public Health Agency of Canada
- Active Healthy Kids Canada

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Doctoral Supplement 2013

Examining the use of socialization tactics in team sports

Project Summary

Sport team membership provides people with opportunities to work together toward a common goal and build supportive social relationships. Quite simply, being a member of a sport team is associated with a host of psychosocial benefits. However, joining a new sport team can be a stressful experience because of the uncertainty surrounding an athlete's role responsibilities as a new group member and whether an athlete will be socially accepted by existing group members. For this reason, the early stages of involvement in a sport team are crucial for shaping the quality of an athlete's sport experiences. To inform best-practices related to managing initial group member interactions in team sport settings, we examined the strategies that sport teams employ when integrating newcomers into their existing group (i.e., socialization tactics). In Study 1, we initiated a qualitative investigation to examine how athletes are socialized into sport teams. In Study 2, we developed a questionnaire to enable us to examine which socialization tactics are more advantageous in facilitating a positive group environment. Specifically, we documented how socialization tactics differentially related to athletes' perceptions of group cohesion, commitment to their coaching staff, commitment to teammates, and their intentions to return to the same team next season. Overall, our findings revealed that teams vary in how they integrate newcomers into their group. More importantly, initial findings suggest that certain socialization tactics are more beneficial in terms of enhancing (a) perceptions of group cohesion, (b) commitment to coaches and teammates, and (c) intentions to return.

Research Methods

We used a multi-method approach to systematically investigate the use of socialization tactics in team sport environments. In Study 1, we conducted semi-structured interviews with twelve coaches and twelve athletes from Canadian Interuniversity Sport teams (i.e., basketball, football, hockey, lacrosse, soccer). Within each interview, participants detailed their experiences related to how newcomers were integrated into their group. On average, interviews were 40 minutes in duration, which resulted in a total of 425 pages of transcribed data. We then analyzed these data for common themes. In Study 2, we designed a questionnaire based on the themes identified in the foregoing qualitative study. Questionnaire items were refined through quantitative and qualitative procedures that entailed gathering feedback from athletes and experts (i.e., academics in a relevant field). To document the relationships between different socialization strategies and athletes' experiences as a group member, we distributed a pen and paper version of the questionnaire to male and female Canadian Interuniversity Sport athletes near the beginning of their season (197 athletes, 104 females), and again near the end of the season (218 athletes, 84 females). A range of CIS sports were represented, including basketball, football, hockey, and volleyball. In addition to assessing the processes newcomers undergo when joining the group (i.e., sport team socialization tactics), we measured athletes' perceptions of group cohesion, commitment, and intentions to return the next season.

Research Results

In Study 1, we identified six core themes that covered the issues newcomers encounter when joining a group and how groups attempt to manage the integration of newcomers. Coach and athlete reflections revealed that a primary focus during a newcomer's entry into the group was developing a clear understanding of his/her role within the team, and that socialization processes differed according to the ability and status of the incoming athlete. Athletes nevertheless emphasized how concerned they were with being socially accepted by others in the group. The strategies used by sport teams to integrate newcomers included formally communicating role expectations, creating frequent opportunities for social interaction between newcomers and veterans, encouraging veterans to take on a mentoring role, and balancing the enforcement of strict rules and policies with the encouragement of individuality.

Study 2 examined how these strategies related to athletes' perceptions of the group environment. The finding revealed that when teams emphasized socially inclusive integration processes (i.e., reinforcing newcomers' sense of who they are as people, organizing social activities, encouraging veterans to share their knowledge with newcomers), athletes perceived their group as more cohesive and were more committed to the coaching staff as well as their teammates. In addition, when role expectations were formally communicated to newcomers, athletes indicated higher intentions to return to the group the following season. These findings reveal that despite the ultra-competitive nature of Canadian Interuniversity Sport, the ways in which the social environment is managed during the integration of newcomers has broad implications for understanding the quality of athletes' sport experiences.

Despite the advantages of using diverse methodological approaches, there are a number of considerations worth addressing in future research. Our qualitative findings were based on interviews with athletes and coaches from five traditional sport teams, who generally recalled positive experiences. Purposefully seeking out insights from sport participants who have had negative group entry experiences may help to elucidate additional aspects of sport team socialization processes. Likewise, the challenges associated with group-entry experiences in Canadian Interuniversity Sport may differ from other socialization contexts, such as entry into a master's level sport group or a youth sport context. Finally, given that this project is the first to examine how sport team socialization tactics relate to athletes' sport experiences, it is prudent to cross-validate the questionnaire findings with a large independent sample, across multiple time points.

Policy Implications

Consistent with our findings, we suggest that the ways in which sport teams manage the entry-experiences of newcomers is an important leverage point for shaping the quality of athletes' sporting experiences. Our findings are consistent with a growing body of evidence underscoring how important it is to understand the group dynamics' issues encountered in sport teams. Yet there is a need for greater education on the relationship between the group dynamics' issues that occur in sport and athletes' sport experiences. Coaching education programs at the municipal, provincial-territorial, and federal level would benefit from incorporating group dynamics' principles into their curricula. As it pertains to this project, our findings highlight several promising strategies for creating a socially welcoming group environment (e.g., engineering protégé-mentor relationships, organizing inclusive social events for all team members). Sport organizations would benefit from recognizing that the ways in which initial group-member interactions are managed in a sport team may ultimately shape how athletes think, feel, and behave as a member of their sport group.

Next Steps

Moving forward, it is crucial to consider cultural variability in how individuals may respond to a group's socialization tactics. For example, sport team socialization tactics that are advantageous for certain individuals may elicit negative responses for others because of cultural differences (e.g., individualistic culture versus collectivist culture). To promote a culturally sensitive understanding of the socialization tactics used in sport teams, there is a clear need for continued qualitative work with participants from diverse backgrounds.

A second area that requires future attention is to extend the study of sport team socialization processes to youth sport. Our findings provide clear evidence that the social aspects of group involvement are an important component of sport experiences, even at a high level of amateur sport competition. Given how important the peer group is during adolescence, the types of socialization processes that occur in youth sport contexts may have a potent influence on the developmental experiences acquired through youth sport participation.

Key Stakeholders and Benefits
- Coaching Association of Canada
- Provincial Coaching Associations (e.g., Coaches Association of Ontario)
- National and Provincial Sport Organizations (e.g., Canadian Interuniversity Sport, Ontario University Sport Association)
- Sport Canada

BEWELL-WEISS, CARMEN
York University
Doctoral Stipend 2006

Predictors of Excessive Exercise in Anorexia Nervosa

Project Summary

The present study was aimed at determining a model that would predict excessive exercise in individuals with anorexia nervosa. This is very important because exercising excessively while underweight, as can be the case in certain forms of sport participation, has been shown to have dangerous health consequences, and has been linked to negative prognosis and higher psychological distress. At the same time, in other populations, exercising has been shown to have positive health effects (both physical and psychological). Thus, the present study examined the associations, both positive and negative, between exercise and various psychological and behavioural variables.

Research Methods

Participants were 153 patients admitted to an inpatient treatment program for anorexia nervosa. Excessive exercise status was defined as a minimum of one hour of obligatory exercise aimed at controlling shape and weight, six days per week in the month before admission. This definition of excessive exercise has been used in other published studies looking at exercise in anorexia nervosa, and, although it may appear that one hour per day of exercise is not very much, it is important to note that these individuals are at such low body weights, that any amount of activity could be considered too much. Also, many of the participants exercised much more than the one-hour minimum.

The psychological and behavioural predictors used in this research had all been previously identified in past research as independent predictors of excessive exercise, but they had never been combined in the same model. The advantage of combining them was that we could see which predictors remained strong even after their shared predictive capabilities were accounted for. For example, it could have been true that depression and self-esteem were significant predictors when run separately, but if the reason they were associated with exercise was similar (e.g., negative view of self), then one of them would likely not remain a significant predictor when both were included in the same model. All the behavioural and psychological predictors were measured using widely-used and validated self-report measures.

Research Results

The overall model found that while excessive exercise was indeed linked to negative factors, such as increased dietary restraint and higher levels of depression, it was also associated with lower levels of obsessive-compulsive symptoms and higher levels of self-esteem. It is interesting to note that past research has found the opposite relationship between obsessive-compulsive symptoms and excessive exercise. Finally, excessive exercise was linked to the restricting form of anorexia nervosa (vs. the bingeing/purging subtype), which is also in contrast to the findings of previous research; however, there is some evidence to suggest that the differences in the current study may have been driven more by the presence or absence of binge-eating rather than purging. These results would suggest that excessive exercise is related to both positive and

negative factors, and they suggest that treatment programs, which usually encourage their patients to stop exercising entirely, should consider both the potential positive and negative effects of this recommendation. They also point to the possibility of incorporating some form of moderate exercise into treatment.

To our knowledge, the present study is the first attempt to identify a model predicting excessive exercise in patients with AN, using previously identified predictors from the extant literature. It is important to note, however, that in some cases, we used different measures of specific variables than other studies used. Although all of the measures that we used have been widely utilized and have been shown to have good validity and reliability estimates, our understanding of excessive exercise in AN would be strengthened by replications of the present model by independent research groups, using the same measures we used.

Our study was also limited in that all of our participants had been admitted to inpatient treatment at the time of assessment and none were actively engaging in exercise when they were completing their questionnaire packets. Thus, it is possible that some or all of the findings may have been a reaction to not exercising. It would be a worthwhile effort to try to assess patients before they come into the treatment program to see if our current model of excessive exercise in anorexia nervosa holds. Also, it is not clear how well the results of a model of excessive exercise developed using inpatients would extend to individuals with anorexia nervosa in the community (who also often do not seek treatment and who may have less severe eating disorders).

Finally, because our study did not control for any variables (e.g., randomly assigning one group to exercise and comparing them to a group that does not exercise), we can only talk about relationships among the predictors and excessive exercise. We cannot say that the predictors cause excessive exercise, or that excessive exercise causes the predictors. It is also just as possible that they coexist together because of some other, unmeasured, variables. Future prospective research is needed to begin to determine the direction of the associations we found.

Policy Implications
The current recommendations for individuals presenting to intensive treatment for anorexia nervosa include stopping exercising entirely, as it has been shown to be associated with negative psychological variables and negative treatment outcome. The present findings partially support these recommendations, but do raise the possibility that there are positive aspects to exercising as well. Thus, the findings would suggest that further research is needed to determine the relationship between exercise/excessive exercise and the course/treatment of anorexia nervosa. It may be that some exercise, such as certain forms of sport participation, can be usefully incorporated into treatment (perhaps later in treatment as weight has begun to be restored), as long as efforts are made to prevent the exercise from becoming excessive.

Next Steps
Future research is needed to replicate the present model, determine the directions of the relationships between the predictors and excessive exercise, and evaluate the impact of incorporating some form of exercise, such as certain forms of sport participation, into treatment for anorexia nervosa.

Key Stakeholders and Benefits

At this point, the current findings may be useful for health professionals who work with individuals with anorexia nervosa and physical activity and sport leaders dealing with participants with this condition.

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Doctoral Stipend 2012

The Relocation Experiences of Aboriginal Athletes Pursuing Sport in Euro-Canadian Contexts (2015)

Project Summary
Researchers have documented the importance of sport in the lives of Aboriginal people, emphasizing how it can improve health and wellness. However, there is a lack of knowledge about the cultural issues that affect Aboriginal peoples' sport participation. This project explored the relocation experiences of Aboriginal athletes who had moved off reserves in northeastern Ontario to pursue sport opportunities within "mainstream" (Euro-Canadian) communities. The project was developed with Aboriginal community members from a local reserve. Qualitative data was collected from 21 Aboriginal athletes about: (1) the benefits of relocation, (2) the challenges of relocation, and (3) strategies for facilitating relocation. The results provide novel insights into how the sport experiences of relocated Aboriginal athletes are shaped by the dynamics of acculturation (i.e., second-culture learning).

Research methods
Utilizing a participatory action research (PAR) approach, three Aboriginal community members were engaged as co-researchers who guided the project forward in culturally meaningful ways.

Participants
Participants consisted of 21 Aboriginal athletes who had relocated off reserves in northeastern Ontario to pursue sport opportunities in Euro-Canadian contexts. Ten participants were male and 11 were female. They ranged in age from 14 to 26 years (mean age = 19.3 years) and came from seven different reserve communities.

Data Collection and Analysis
Participants created mandala drawings that reflected their experiences relocating for sport. Each drawing was then used to facilitate a conversational interview, aimed at eliciting richer narrative descriptions of their experiences. An Indigenous version of an inductive thematic analysis was performed on each participant's interview transcript to identify common patterns of meaning.

Research results
The Challenges of Relocation
The participants identified relocation challenges pertaining to experiencing culture shock, and becoming disconnected from home. In terms of culture shock, the participants described a sense of anxiety or discomfort resulting from being immersed in an unfamiliar cultural context with different rules and systems of meaning. The participants were jarred by the vast changes that the Euro-Canadian culture imposed upon

them, as well as their newfound status as cultural "outsiders" as they attempted to integrate with non-Aboriginal people. In addition, the participants were distressed by a growing sense of disconnection between themselves and their home cultural communities during their relocation. The physical distance separating the participants from their community and family networks triggered feelings of isolation. Their relocation outside of the Aboriginal community also stirred up negative reactions from their on-reserve peers, who saw the athletes as abandoning their home communities.

The Benefits of Relocation
First, the participants explained that by entering the Euro-Canadian context, they were opening themselves up to many new prospects and opportunities which they likely wouldn't have had on-reserve. They expressed much excitement related to this new beginning in the Euro-Canadian context, as they experienced what was "out there" beyond the reserve and also gained a pertinent sense of belonging in their new community. Second, the participants revealed how their relocation helped them to develop more meaningful visions for themselves as Aboriginal community members. As they worked through many of the acculturation challenges in the Euro-Canadian context they developed as people (more than just athletes) and gained a better understanding of who they are and what they are capable of achieving. In particular, they emphasized how they could contribute positively to their Aboriginal community through sharing their stories and successes as local role models.

Strategies for Facilitating Relocation & Acculturation
The participants emphasized the importance of nurturing their Aboriginal identity as a source of strength and substantiation during the relocation process. Their identities as Aboriginal community members helped them to connect their personal struggles and experiences to a more collective cultural story of survival and success, and enabled them to persist more meaningfully and resiliently as relocated athletes. The athletes also indicated that they frequently had to deal with feelings of insecurity, isolation, and marginalization within the Euro-Canadian context. As such, it was imperative that they had a network of social support around them, in both cultural contexts, that they could lean on during their relocation. The participants also identified the need to foster a strong and positive mindset, wherein they remained confident in their ability to achieve success in the "mainstream" community, despite being challenged by racist attitudes and stereotypes.

Policy implications
In keeping with the objectives of Sport Canada's Policy on Aboriginal Peoples' Participation in Sport, this research provides implications for better supporting Aboriginal athletes in the Canadian sport system during their relocation and acculturation.

First, the Aboriginal participants indicated how their adjustment as relocated athletes could either be greatly hindered or facilitated by the people around them in the host culture, such as teammates, coaches, and billets. When these host members exhibited racism or were unwilling to make an effort to engage with the participants, the Aboriginal athletes experienced isolation and marginalization, and found it difficult to acculturate within the Euro-Canadian context. Alternatively, when host community members made an effort to get to know the athletes and showed them support, the Aboriginal athletes were able to acculturate more meaningfully with a sense of belonging and connectedness within the Euro-Canadian context. Sport

practitioners and service providers need to be more aware of this social dynamic when working with Aboriginal athletes who have relocated off reserves. These athletes need to be given meaningful opportunities to share aspects of their Aboriginal culture and identity within their sport environments and teams, and feel they are supported in being their true selves. If such opportunities are not provided, sport contexts are apt to be marginalizing for these athletes.

Second, there is a critical need for Aboriginal athletes to maintain their connectedness to the Aboriginal community and culture while immersing in the Euro-Canadian context. In particular, efforts should be made to provide opportunities for off-reserve athletes to participate in Aboriginal sport contexts, such as local pow-wow events or Aboriginal tournaments. These culturally resonant sport spaces and experiences can help to substantiate relocated athletes on a cultural level that enables them to persist in Euro-Canadian contexts with a strengthened sense of identity.

Another opportunity for facilitating Aboriginal athletes' relocation is by sharing educational and inspirational stories of Aboriginal people who are pursuing their sport goals and achieving success outside their reserves. These stories would help to foster a mindset for success for aspiring Aboriginal athletes who are fighting against negative stereotypes that suggest that Aboriginal people can't "make it" off-reserve. As an example, the participants' mandala drawings from the current project were printed on a community blanket and presented as a visual storytelling display at the local reserve's Youth Center. The athletes' drawings reflect a collective cultural narrative about young Aboriginal people who are pursuing their dreams and trying to make something of themselves. The drawings are thus being used by sport and recreation staff to educate youth about what it is like to relocate off-reserve, and inspire them to pursue their own dreams. As another possibility, local Elders or Aboriginal role models could be brought in to sports programs to share cultural teachings and personal insights for fostering resilience.

Next steps
The participant group in this project consisted of Aboriginal athletes from one region of Ontario who had maintained some degree of connectedness to their home communities during their relocation. There are athletes who have moved away from their home reserves without maintaining strong connections to those communities, or who come from different regions across Canada, whose voices are not accounted for in this research. Future researchers could focus on bringing these unheard voices forward, enabling more nuanced understandings to be generated around Aboriginal peoples' sport experiences.

Key stakeholders and benefits
- Sport Canada
- National/provincial-territorial sport agencies
- Coaching Association of Canada
- Sport and Recreation Centers on reserves
- All people and organizations working with Aboriginal athletes who have moved off reserves

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Standard Research Grant 2006

Culture of National Sport Organizations and Participation in Sport

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Project Summary
This project examined the relationship between the culture of Canadian national sport organizations (NSOs) and participation in sport. The overall goal was to better understand and ultimately increase the effectiveness of policies aiming to promote sport activities such as the Sport Participation Development Program (SPDP). Generally, NSOs subscribed to a humanistic-encouraging type of organizational culture, but they did not actively promote the values of sport participation. The SPDP is perceived as a source of extra funding rather than an integral part of the strategy of NSOs. Both Sport Canada and NSOs need to embrace sport participation as a cultural process to improve its strategic management.

Research Methods
Ten Canadian NSOs participating in the 2007-2008 SPDP formed the focus of the study including Alpine Skiing, Athletics, Badminton, Ten-pin Bowling, Cycling, Gymnastics, Hockey, Rowing, Swimming and Volleyball. They represent sports with different histories, constituencies and structures, and varying degrees of professionalization. Four main methods and instruments were employed for data collection including:
- literature review (research, policy documents and reports);
- semi-structured interviews (except Rowing) – utilizing an interview guide based upon the cultural dimensions of sport organisations (Smith & Shilbury, 2004);
- monitoring and evaluating NSOs' websites using the eMICA model (Burgess & Cooper, 2000); and analyzing the use of the Internet for establishing and maintaining relationships with sport participants utilizing the Relationship-building Process Model for the Web (Wang, Head, & Archer, 2000);
- on-line surveys with members of NSOs (the Organisational Culture Inventory (Cooke & Lafferty, 1989).

Research Results
The participating NSOs showed a humanistic-encouraging primary style culture characterised with being supportive of others, resolving conflicts constructively and helping others to grow and develop. However, no NSOs' organisational culture was homogeneous as four subgroup cultures emerged: 'board member', 'coaching staff', 'middle management' and 'senior management'. This demonstrates that organizational culture is always multi-dimensional and cannot be determined by the values of one group only. A limitation of this survey was its response rate of 22% (N = 37).

Four clusters of cultural interpretations of sport participation amongst the NSOs emerged:
- 'elite culture' following a top-down approach where international success is used to promote grass-roots sport (e.g., Alpine Skiing, Athletics, Hockey);
- 'mass culture' suggesting a bottom-up process which naturally leads to elitism (e.g., Gymnastics, Swimming);

- 'sessional culture' – suggesting that sport participation 'dies when the grant dies' (e.g., Volleyball, Cycling);
- 'place culture' - suggesting that sport participation is promoted only in certain geographic areas (e.g., Badminton, Ten-pin Bowling).

There has been a distinct lack of awareness about the existence, purpose, implementation and how the SPDP would benefit the NSOs both within the NSOs staff and the general public. The SPDP was seen as a departmental responsibility and not as a core business of the entire NSO.

NSOs have largely perceived the SPDP as an additional source of funding and not as an opportunity to address the fundamental ongoing issue of sport participation. The program has not been incorporated into NSOs' strategic plans to ensure a better synergy between different departments.

Most NSOs were lacking the capacity to successfully run the program. Ownership of SPDP is an issue for some NSOs as they outsource the delivery of the program to private agencies over which they have little or no control.

The introduction of the SPDP has reinforced both the competition for funding and participants amongst NSOs, and an environment which favours those NSOs with better structures and resources that can afford the resources to implement sport participation initiatives. Less structured and funded NSOs struggled to cope with the expectations presented by the SPDP.

There is a tension between the LTAD model and the objectives of the SPDP program promoted by Sport Canada. These are based on two different philosophies and NSOs were confused about their relationship. Tensions also exist between NSOs and PSOs resulting in mistrust and resistance to implementation of national programs.

The Internet technology provides great advantages and the ten NSOs have been receptive to the use of the Web for promoting sport participation. However, they are still failing to utilise the opportunities offered by the interactive technology to effectively communicate their objectives and to develop relationships with members.

Regular communications with Sport Canada are critical to any project. In this respect Sport Canada could do more to facilitate research projects concerning its policies and the work of NSOs.

Policy Implications

NSOs need to change their perceptions about the SPDP and ensure that it is well integrated into their strategic plans. The values and practices of the SPDP should not be seen as a project managed by an officer but as an essential part of the mission of the organization, which is embraced equally by all members. NSOs need to better utilize their websites to promote a culture of sport participation.

Sport Canada needs to establish a developmental strategy to support the SPDP in three key areas:
- Establishing clear conceptual and practical linkages between the LTAD and SPDP so the two programs complement each other;

- Putting in place a capacity-building strategy to help NSOs develop the organizational capabilities needed to successfully implement the program;
- Implementing a systematic promotional campaign to assist in enhancing both the public and NSOs' awareness about the SPDP.

Next Steps

Sport participation needs to be appreciated as a process of acculturation where NSOs are cultural agents, not just as a resource or opportunity to attain other goals.

More strategic examinations into the role of the World Wide Web is needed in promoting a participation culture by investing in better designs, functionality and communications with NSOs' constituencies. Further research is needed in devising Web-based relationship strategies for initiating and sustaining participation in sport. Academia can make a significant contribution to the work of NSOs in this regard, as it possesses a great resource: technologically savvy and sport-active students. The questions 'how do NSOs' culture facilitate the socialisation of participants in and through sport?' and 'how do NSOs understand the participant and give meaning to the importance of sport?' need further investigation.

Key Stakeholders and Benefits
- Sport Canada (better informed sport promotion policies; staff development)
- Ministry of Health (better integration of health policies with sport)
- Ministry of Education (better integration of educational policies with sport)
- National and Provincial Sport Organizations (clearer visions and better targeted efforts in enhancing participation; staff development)
- Schools and Universities (better integrate their social and sport policies with Sport Canada's agenda)
- Sport event organizers (better use of sport events to promote participation)
- Academic community (use of findings to inform research and teaching)

BOWKER, ANNE

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Standard Research Grant 2008

Extracurricular Activity Involvement in Canada: Relationships with Youth Development and Variations by Age, Gender and Context

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Project Summary

The purpose of this research was to study extra-curricular activity (ECA) involvement in a broad range of Canadian youth, and to examine how this might vary by age, gender and geographical context (e.g. rural vs. urban settings). Of additional interest was how this participation contributes to positive youth development (PYD) and what intervening factors might exist. Results highlight the role of organized activity involvement, in particular sports involvement, as a longitudinal predictor of positive youth development. While youth engaged in a broad range of activities, sports participation was the most frequently cited activity, and appeared to yield the most activity engagement. Activity engagement was a particularly critical mediating factor, with relationship factors (with parents and peers) playing a significant role in the engagement process

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Research Methods

In Phase 1, 1827 youth, aged 10-18 years, completed a survey about their ECA involvement, and indicated the activity with which they were most engaged. We examined age, gender and geographical context (rural vs. urban) variations.

In Phase 2, we followed 759 youth from Phase 1, aged 11-18, representing approximately 42% of the original sample, and they again completed a series of questionnaires about their most engaging activity, describing the role of significant others in those experiences, as well as their level of motivation for their ECAs. Youth completed measures of self-esteem and perceived competence (indices of PYD) and also completed a measure of child temperament. We looked at ECA involvement at Phase 1, as a predictor of PYD outcomes at Phase 2.

In Phase 3, 125 youth were interviewed, using a semi-structured interview protocol, asking them to describe their experiences with their most engaging activity, and to describe, in their own words, what made the activity involvement so significant. Youth also discussed specific positive and negative experiences in that activity. We identified key themes, using a qualitative analytic framework.

Research Results

Phase 1 results highlight the fact that the majority of youth from middle childhood through adolescence are involved in a variety of ECA. Although the level of involvement decreased with age, the average number of activities was still quite high in Grades 11/12. Girls and rural youth tended to be more involved than boys and urban youth. Girls tended to report a greater breadth of ECA involvement (participate in both sport and non-sport activities) however both boys and girls were most likely to choose a sport as their most meaningful activity. Sports activities were the most common type of activity and when asked to choose their favourite, or

most engaging activity, 62% chose a sport. Sports were also rated as the most engaging activities. The rate of sports involvement decreased with age, whereas activities such as volunteering and more unstructured leisure activities increased with age. However, these other types of activities were significantly less common, and structured non-sports activities, such as music, dance and theatre, were mentioned by only about half of the participants. In addition, if youth were participating in these non-sport activities, they were typically only engaged in one specific activity (e.g. piano), in contrast to sports activities where many youth were involved in multiple sports.

In Phase 2, we looked at how ECAs during Phase 1, predicted PYD outcomes in Phase 2. Youth who chose structured organized activities during Phase 1 (as opposed to unstructured activities) had significantly higher self-esteem at Phase 2 than those individual who did not. Organized sports involvement was the strongest predictor of general and domain specific self-esteem over this one-year period. What seemed to be particularly important, however, was how engaged the individual was in their favourite or most meaningful activity (e.g., This activity is an important part of who I am). This seemed to be more important, in some cases, than the specific type of activity involvement. In addition, social relationships played a key role, and regardless of age or geographical location, having parental support and involvement was an important predictor of activity engagement. Being involved in a stable favourite activity over time was also a significant predictor of activity engagement, leading to an increased feeling of belonging to the team or group, which also was related to activity engagement.

In Phase 3, we identified several themes that will help us to better understand youth engagement and the role of activity involvement and PYD. These activities were highly enjoyable, and typically involved social interaction, as well as a high degree of self-growth. Youth talked about developing clear goals and purpose in the activity, and of learning important life lessons such as perseverance and persistence. It seems necessary to have an activity that is challenging, but do-able, requiring concentration, skill development, and providing lots of immediate feedback. Structured sports activities include all of these attributes, perhaps offering a partial explanation for the popularity of sports activities and the high degree of engagement reported by youth in these activities.

Policy implications

Results highlight the importance of youth engagement in sports activities (simply participating may not be enough to yield positive outcomes) and the important role of social relationships in this engagement. Youth are particularly interested in the social interactive opportunities with peers, and the role of peer relationships in sport appears to be a crucial one. Results also highlight the important role that adults (parents, teachers and coaches) play in successful sports experiences.

For programs such as ParticipAction, whose aim is to 'get Canadians moving', these results stress the important role that social relationships play in this endeavour. If we are going to encourage physical activity in youth, we need to be aware of the critical role that peers and parents play. For many youth, it is the social opportunities that draw them to the activities, not the activity itself.

Given issues of accessibility, greater efforts should be made to facilitate sports participation in school settings, where parental income is less of a limiting factor. An example of a municipal level of involvement is illustrated at one of the Manitoba sites for data collection. The City of Brandon, in collaboration with the Brandon School Division, have signed a *joint use of facilities* agreement to share facilities more effectively for youth groups and organizations. For sport, this type of agreement is vital in that it provides venues for sport that are

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within all community neighbourhoods, decreasing accessibility costs (e.g., related to transportation) for youth of all income levels.   At the provincial and federal levels, continued support of organizations that support families are vital. Though tax breaks for athletic participation are beneficial, the barriers of initial cost still remain for many youth.

Next steps

Given the high levels of sports participation, future research should include an examination of the different types of sports experiences (e.g., individual vs. team sport; recreational vs. competitive) and the importance of 'fit' between characteristics of the individual and his/her sports experience.

Clearly there are individual differences in engagement, and we would be interested in examining why some youth are generally more 'engaged' than others, regardless of the specific activity.

Future research should also examine the role of the coach and how the coach-youth relationship contributes to sports engagement and how this might interact with the parent-youth relationship.

Key stakeholders and benefits

Key stakeholders include community sports organizations at the municipal, as well as provincial level. Any amateur athletic organization could benefit from an understanding of the importance of youth engagement and the social relationships that could contribute to activity engagement over time.

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Standard Research Grant 2010

"They Believe I Can Do It!... Maybe I Can!": The Effects of Interpersonal Feedback on Relation-Inferred Self-efficacy, Self-efficacy and Intrinsic Motivation in Children's Sport

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Project Summary

Most children begin their formal involvement in sport around 8-10 years of age with the main reasons for participation being "having fun" and "learning and improving skills". Yet, many children disengage from sport after only a short time with a major reason for dropping out being they were "not having fun" anymore. Many children lose motivation to participate because they doubt their abilities to improve or be successful. Because children who are learning sport skills often lack the experience and knowledge necessary to gauge how well they are doing, communication from coaches or instructors is an instrumental factor determining how competent and motivated they feel. Beliefs in our own abilities, or self-efficacy, guide what tasks we choose to do and the degree to which we persist at those tasks. Self-efficacy beliefs arise, in part, through our interactions with others, and are influenced by the perceptions we have about what others perceive our abilities to be.

All of us have had experiences during which we felt other people believed in our abilities to accomplish certain things. These people may have been parents, teachers, coaches, relationship partners or friends. Our perceptions of another person's confidence in our abilities are called relation-inferred self-efficacy beliefs (RISE). RISE is thought to play an instrumental role in the development of self-efficacy as well as intrinsic motivation. Here, we were interested in children's perceptions about what their coaches or instructors believe about their abilities and how these RISE perceptions might affect how children feel about themselves and their sport experiences.

We carried out three phases of research to investigate children's RISE beliefs and the effects of interpersonal communication on RISE, self-efficacy, and intrinsic motivation. Phase 1 explored children's perceptions about the types of interpersonal communication that influence RISE. Phase 2 investigated how providing children with RISE-relevant communication affects their self-efficacy, intrinsic motivation, and behaviour. Phase 3 looked at how sport instructors and coaches would pick up on ways to deliver RISE-based communication in their interactions with sport participants and the effects of RISE-based communication on children's self-efficacy and intrinsic motivation in a naturalistic sport environment.

Research methods

Phase 1: Two qualitative interview studies involving 89 sport participants were carried out. The primary discussion involved children identifying specific examples of verbal and nonverbal behaviours that coaches, instructors and others (e.g., parents, peers) say or do that help them develop perceptions of RISE.

Phase 2a: Using examples of RISE communication behaviours from Phase 1, we carried out two controlled experiments. In both studies, children performed sport-relevant tasks (dart-throwing and endurance

handgrip exercise). All were given generic positive encouragement and some also received RISE-based communication.

Phase 2b: Youth recreational sport participants (soccer, hockey, ringette) completed surveys about the frequency with which their coaches provided RISE-relevant communication during practices and games as well as measures of RISE and self-efficacy for playing their sport.

Phase 3: Using examples of RISE-communication behaviours from Phases 1 and 2, we developed and conducted an educational workshop designed to facilitate RISE-communication between coaches and participants. We video/audio taped coaches' behaviours during coaching sessions and surveyed participants' perceptions of RISE, self-efficacy and enjoyment before and after the workshop.

Research results

Phase 1: Results showed participants easily identified specific examples of verbal and nonverbal behaviours from coaches and instructors they interpreted and used to develop RISE.
- Examples include verbal interactions such as a coach saying: "I believe you can do this" and non-verbal interactions such as a coach providing opportunities to demonstrate skills or lead peers in practice.

Conclusion: Exposing children to specific verbal and non-verbal cues may affect their perceptions of RISE.

Phase 2a: Results showed that providing children with RISE-relevant communication in addition to positive encouragement when they are performing or learning new motor skill tasks leads to greater RISE compared to children who do not receive RISE-relevant feedback.
- For the skill-based task (dart-throwing), children who received RISE-communication reported greater RISE as well as self-efficacy for future performance. They also reported enjoying the dart task more than children who did not receive RISE feedback although there were no differences in performance.
- For the effort-based task (endurance handgrip squeezing), children who received RISE-communication reported greater RISE. Self-efficacy for future performance did not increase; however, performance on the endurance task increased dramatically compared to their earlier performances with no differences in enjoyment.

Conclusion: Exposing children to RISE-relevant cues leads to predictable increases in RISE as well as self-efficacy, intrinsic motivation, and task persistence.

Phase 2b: Children who reported receiving more frequent RISE-relevant communication from their coaches reported higher levels of RISE and self-efficacy.

Conclusion: Providing more frequent RISE-relevant communication to youth sport participants may be important for developing RISE and enhancing self-efficacy.

Phase 3: After participating in the class-based workshop, sport coaches reported greater awareness of RISE-relevant communication, stronger beliefs in the importance of providing RISE-relevant communication, and greater intentions to use RISE-relevant communication with youth participants. Video/audio data showed increases in the use of RISE-relevant communication during practice sessions that followed the workshop compared to those preceding the workshop. Children reported greater RISE and self-efficacy following their coaches' participation in the workshop.

Conclusion: Coaches are receptive to learning and incorporating RISE-relevant communication in their coaching sessions with sport participants. Using RISE-relevant communication while instructing sport skills enhances sport participants' RISE and self-efficacy.

Overall, the results suggest exposure to specific communication cues from coaches increases rise and, in turn, may lead to greater self-efficacy, task enjoyment, and task persistence when children are acquiring sport skills in coaching and instructional sport environments. Coaches and sport camp leaders are receptive to educational and experiential initiatives aimed to enhance their use of rise-relevant communication with sport participants.

Caution should be exercised when interpreting the findings, as they are limited to youth recreational sport participants and coaches. It is not known how much rise-relevant communication is necessary to increase rise or whether excessive exposure may have detrimental consequences. It is also unknown whether the timing of rise-relevant communication may be an important factor affecting its interpretation.

Policy implications

Engaging positive interpersonal experiences between coaches and athletes is an important aspect of building confidence and encouraging motivation for sport participants. Sport coach training programs should consider incorporating content (e.g., training modules, workshop activities) that educate coaches about the effects of providing RISE-relevant feedback or communication to athletes and interactive experiences (e.g., role-playing) that will give coaches confidence in their own abilities to incorporate RISE communication in their coach-athlete interactions.

Next steps

RISE perceptions are not unique to the sport environment and should be investigated in other interpersonal settings such as healthcare, rehabilitation, and education. RISE communication may be particularly influential when people are adapting to new situations or when they doubt their personal abilities to make changes or persist when they encounter challenges.

Key stakeholders and benefits

- Coaching Association of Canada
- Community Sport Programs (e.g., Minor League Soccer, Hockey, Baseball)
- Recreational Sport Camps
- Sport coach training organizations (e.g., Canadian Ski Coaches' Federation)
- Provincial/territorial teaching organizations (e.g., Ontario Teachers' Federation)

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Doctoral Stipend 2008

Finish...Whatever it Takes: Considering Pain and Pleasure in the Ironman Triathlon (A Socio-Cultural Analysis)

Project Summary

Stemming from my own involvement in Ironman triathlons, I became interested in ideas of *pain* and *pleasure* as social constructs. How might ideas about these things in the Ironman context relate to ideas about pain and pleasure circulating in the broader socio-cultural context? Furthermore, what might these relationships tell us about contemporary understandings of *bodies* and *identities*?

The ideas about pain and pleasure that I uncovered were significantly shaped by the importance placed on finishing. Finishing an event resulted in the acquisition of an *Ironman identity,* an identity that was suggested to provide *cultural capital* since Ironman triathletes are often represented as excellent examples of health, self-empowerment, and discipline — highly valued characteristics in a neoliberal political and social context. With the importance placed on finishing, there seems to be a mostly uncritical promotion/adoption of the "no pain, no gain" philosophy. That said, many interview participants stressed the importance of negotiating the difference between *positive* and *negative* kinds of pain. Paradoxically, despite critical awareness of the different kinds of sport-related pain, injury stories were still prevalent. Thus, the importance placed on becoming an Ironman seems to mostly trump the state of participants' bodies and their overall health. It also shaped ideas about pleasure. Very few of my participants suggested that they found sensuous pleasure in their participation; rather, they found pleasure in the challenge of overcoming "limits," finishing the event, and reaping the rewards that are perceived to come along with that.

Research Methods

I conducted interviews with 19 Ironman triathletes. On average, these interviews lasted two hours. I recorded the conversations and then transcribed them. I also incorporated my own Ironman experiences through the inclusion of training journals and race reports I kept when participating in the sport. Mediated representations of the Ironman — NBC broadcasts of the World Championships (1991 to 2010) and a sample of two triathlon-related magazines (1983 to 2010) — helped to contextualize the interview and autobiographical materials. I coded and analyzed the materials in Atlas.ti (qualitative research software).

Research Results

The results here are based on my own interpretations of the qualitative materials gathered. Only 19 people from a limited geographic context (Eastern Ontario) were interviewed. This group represents a very specific demographic – the professional middle class. This reflects the triathlon/endurance sport community but not the general Canadian population. That in mind, I present the following synopsis.

Sport sociology research has revealed the problematic ways that pain and injury are seen to be a "natural" part of sport and how coaches, sport administrators, and athletes themselves can contribute to this notion.

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The people with whom I spoke, however, contended that getting injured would preclude the possibility of finishing an event and so they sought to carefully negotiate the different kinds of pain in order to avoid injury. At the same time, there seems to be disconnection between critical awareness and lived experience because injuries are still quite prevalent. I estimated that between the 19 participants and myself, we likely spent upwards of $40,000 per year on sports medicine services, a number that is part of the often under-estimated costs of sports-related injuries in Canada annually (White, 2004). Some of my participants talked about the use of NSAIDs (e.g., Advil, ibuprofen) as a pain-management and/or pain-treatment strategy. This is concerning given some of the documented side effects of excessive use of NSAIDs, including alterations in kidney function, gastric bleeding, and the increased possibility of hyponatremia (Gorski, Cadore, & Santana Pinto, 2009). There were also cautionary notes about NSAIDs in the triathlon magazines analyzed, suggesting it is a concern for the community. This further emphasizes the paradoxical nature of holding up Ironman athletes as examples of good health.

Pleasure, in the materials gathered, was constructed in instrumental ways (i.e., notions of challenge, achievement, rewards, and recognition). Considering pleasure in such limited ways is prevalent in the fitness industry more generally (Smith-Maguire, 2008) so perhaps these results are not that surprising; they are, however, no less important. When focus is placed more on, for example, the achievement of finishing than how one is experiencing one's body while being physically active, there is a greater chance of becoming injured and having to deal with the related short and long-term health impacts that injury can have.

Policy Implications

There seems a need for more thoughtful discussion about sport/fitness-related pains and pleasures. In focusing more pointedly on bodily experiences in, versus outcomes of, sport participation we can initiate a conversation that does not seem to be occurring at the present time. With an increased focus on long-term athlete development (LTAD) in Canada (including ideas of being "active for life") there needs to be, for example, more thought put into how different stakeholders in sport can talk about pain and injury (and connections to health since sport participation is being promoted as part of "healthy" lifestyle). At the moment, most reference to pain/injury assume that injury is a normal part of athletic involvement and that to deal with it, athletes should have a sport medicine strategy as part of their training plans. Official documents should include discussion of the possible costs of sport participation, rather than promoting sport as unquestionably healthy. Admittedly, incorporating these kinds of discussions will not be easy as evidenced by the many different (and sometimes competing) ways that pain was talked about in the context of my study. To ignore such discussions altogether, however, does a disservice to those who are participating in sport at any level and ignores the possibility that one can participate in sport without experiencing negative kinds of pain and injury. Finally, one of the stated objectives of LTAD is to promote "physical literacy"; it seems to me that this should include stage-appropriate discussions related to bodily experiences of pain (as above) and pleasure — with a view to move beyond pleasure being connected to achievement and rewards.

There are two places that such information could begin to be circulated: coaching certification programming (through the Coaching Association of Canada) and in Canadian sport organizations' long-term athlete development models. For example, could a discussion of sport-related pain become a part of all coach training materials developed by the CAC? Can we extend the currently limited ideas about sport-related pleasure?

Next Steps

The idea that "anyone can do an Ironman" emerged in my research. We must be cognizant of a shift in what is considered "normal" in terms of physical activity to more extreme ends of a continuum, as this will no doubt effect how people view their own bodies and the bodies of others around them. There remain bigger questions about the growth in Ironman and other "extreme" fitness practices as a form of leisure: what has been going on over the past 30 years that contributes to the continued growth of these kinds of events? It seems that people are beginning to expect more and more extreme things of their bodies, something that is readily promoted through mainstream and sport-specific media, with a focus on outcome as opposed to process. This, combined with a lack of any meaningful discussion about sport-related pain and pleasure, might result in a scenario where the costs of participation begin to outweigh the benefits, something that sport organizers and policy-makers should wish to avoid.

Key Stakeholders and Benefits

At this point in time, I believe that there are three stakeholder groups who would benefit from this and future information: (1) Sport Canada's long-term athlete development group; (2) Coaching Association of Canada; and, (3) Triathlon Canada (and potentially the provincial federations as well).

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BRUNER, MARK

Queen's University
J. Côté
Post-Doctoral Stipend 2009

Understanding the Influence of Peer Groups in Sport on Adolescent Social Development

Project Summary
The primary objective of this research was to examine how the identities that youth form through membership on sport teams – their social identities – influence their social development. Specifically, the research examined the relationships between social identity and prosocial (e.g., helping an injured opponent) and antisocial behaviors (e.g., deliberately hurting an opponent) in youth sport. A secondary objective was to investigate whether perceptions of task cohesion (perceptions of the team working together toward goals) and social cohesion (perceptions of social bonding among the team members) influenced the relationships between social identity and prosocial and antisocial behavior toward teammates and opponents. Participants included 449 high school athletes from 37 sport teams (e.g., basketball, soccer, football) who completed a survey at the beginning, middle and end of the season. The findings revealed that stronger perceptions of social identity at the beginning of the season were associated with greater frequency in prosocial teammate behavior near the end of the season. Certain aspects of social identity were found to be associated positively and negatively with antisocial behavior. Stronger ingroup ties (perceptions of similarity and connectedness to the team) were associated with more frequent antisocial behavior toward teammates and opponents while stronger ingroup affect (feelings toward the team) were associated with less frequent antisocial behavior toward teammates and opponents. In regards to the research's second objective, perceptions of team cohesion were found to influence the relationships between social identity and prosocial and antisocial behaviours of the athletes. Among the relationships, task and social cohesion were found to significantly impact the social identity-antisocial behavior relationships. Collectively, the results provide evidence of the important role of social identity in predicting the moral behaviours of youth in sport, and the potential role of cohesion in explaining some of these relationships. The findings also offer support for previous suggestions that next to family, sport teams are one of the most influential groups to which an individual can belong.

Research Methods
After obtaining institutional and school board ethics approval, coaches from three school boards were invited to participate in the study. Contact with coaches involved presentations at school board athletic meetings and invitations to speak with high school coaches at their respective schools. Participants were recruited from the high school teams of interested coaches. Participants included 449 male and female youth (Mean age =16 years) from 37 high school sport teams (n= 14 basketball, n= 10 volleyball, n= 4 soccer, n=3 ice hockey, n= 2 American football, n=2 rugby, n=1 lacrosse, n=1 cross country) who completed questionnaires at the beginning, middle and end of the regular season. The questionnaire assessed the three dimensions of social identity (ingroup ties, cognitive centrality, ingroup affect), task and social cohesion and prosocial and antisocial behavior toward teammates and opponents. The data was analyzed using structural equation modeling.

Research Results

The study findings revealed that stronger perceptions of social identity at the beginning of the season were associated with greater frequency in prosocial teammate behavior (e.g., giving constructive feedback to a teammate) near the end of the season. Certain aspects of social identity were found to be associated positively and negatively with antisocial behavior. Stronger ingroup ties (perceptions of similarity and connectedness to the team) were associated with more frequent antisocial behavior toward teammates (e.g., criticizing a teammate) and opponents (e.g., trying to injure an opponent) while stronger ingroup affect (feelings toward the team) were associated with less frequent antisocial behavior toward teammates and opponents. In regards to the research's second objective, perceptions of team cohesion were found to influence the relationships between social identity and prosocial and antisocial behaviours of the athletes. Among the relationships, task and social cohesion were found to significantly impact the social identity-antisocial behavior relationships. Collectively, the study results provide evidence of the important role of social identity in predicting the moral behaviours of youth in sport, and the potential role of cohesion in explaining some of these relationships. The study findings also offer support for previous suggestions that next to family, sport teams are one of the most influential groups to which an individual can belong.

Despite several strengths of the study including its prospective design (i.e., over the season), this study is not without limitations. First, the questionnaire items assessing one of the dimensions of social identity, cognitive centrality (the importance of the group to the individual) were excluded because of a lack of validity in this sample. A second limitation of the study was the observational nature of the study design. In other words, the group dynamic variables examined, including social identity and cohesion, were not altered by the researchers to evaluate how changes in the group variables may impact prosocial and antisocial behavior by the athletes toward teammates and opponents. Nevertheless, this naturalistic approach to adolescent development through sport provided novel findings that have practical implications in terms of program design.

Policy Implications

This research on social identity and social development in youth sport is directly relevant to the Sport Participation Research Initiative (SPRI) and the federal government's Canadian Sport Policy 2012 document. Specifically, the research supports several goals and objectives of the CSP and SPRI. The primary objective of the research was to examine the influence of social identity on adolescent social development in sport. This objective supports Sport Canada's broad goal of sport for development (sport as a tool for social development and the promotion of positive values). The objective also supports the first broad objective of the SPRI to build empirical evidence to inform programs to enhance sport participation among Canadians. The findings from the research will help inform future strategies used by youth sport coaches to foster personal and social development and promote future sport participation. In addition, the findings will inform policy by providing evidence to highlight the benefits of sport on personal and social development and sport individual participation. This outcome supports the SPRI's second broad objective and the SPRI's fifth target area [identification and assessment of the benefits and outcomes of participation in sport].

Next Steps

Several future directions emanate from the study findings. One of the interesting findings was the complexity of the social identity-antisocial behavior relationship. Ingroup ties (perceptions of similarity and connectedness with team members) was associated with more frequent antisocial behavior toward

teammates and opponents while ingroup affect (feelings associated with the team) had a negative relationship with antisocial behaviours toward teammates and opponents. Further qualitative research is needed to better understand the social identity – antisocial behavior relationships in sport. Additional research is also needed to further refine the social identity measure for use in the sport context. While previous empirical support exists for the social identity measure, this was the first attempt to adapt the multidimensional social identity scale for a youth sport context. Finally, future research should look to progress the current findings through application of experimental designs that test the identified relationships. For example, experimental work could examine the effects of group-based interventions (e.g., team-building) specifically designed to foster group processes within a team (e.g., social identity, cohesion) that may promote prosocial behaviors and deter antisocial behaviors in sport.

Key Stakeholders and Benefits
- Provincial Ministry of Health and Long Term Care (formerly Ministry of Health Promotion and Sport)
- Sport Canada
- National and Provincial Sport Organizations
- Coaching Association of Canada

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CALLARY, BETTINA

University of Ottawa
P. Trudel, P. Werthner
Doctoral Stipend 2009

Exploring the Process of Lifelong Learning: The Biographies of Five Canadian Women Coaches.

Project Summary

The purpose of this dissertation was to explore the biographies of five Canadian women coaches using Jarvis's theory of human learning to understand how the multitude of experiences throughout their lives have contributed to their learning and coaching development.

Coaches learn from a number of different situations and their past experiences influence what they choose to pay attention to and learn (Werthner & Trudel, 2009). Understanding the process of learning to coach can be explored holistically over the course of an individual's lifespan. This thesis was guided by Jarvis' (2006, 2007, 2009) theory of human learning, which takes a psychosocial perspective to understanding the way that individuals perceive their social situations, change their biographies, and become who they are over the course of their lives.

These findings add to the emerging body of literature on female coaches and coach learning by further understanding how the coaches' biographies determined what kinds of learning opportunities they each found meaningful; the importance of social connections in learning to coach; and the importance of reflection in understanding the interconnections of learning from life experiences. The study may motivate women coaches in understanding how lifelong learning influences their career paths and it informs coach education programs about the muddled reality of coaches' learning and development.

Research Methods

A constructivist paradigm was used to explore individual perceptions of social experiences (Light, 2008) and to understand how coaches learn based on their experiences. Purposive sampling, as recommended by Polkinghorne (2005), was used to select five women coaches with long careers in coaching and representing a variety of sports. Four semi-structured and in-depth interviews were conducted with each coach. Each interview lasted approximately two hours. Jarvis' (2006) theoretical framework guided the questions in the interviews. Each interview was transcribed and sent to the participants via email to be member checked. In keeping with Creswell's (2007) and Polkinghorne's (1995) outline of a narrative methodology, the interview data were chronologically organized into a narrative of the learning experiences that occurred throughout the lifespan of each participant. Each narrative was structured into approximately 20 pages single-spaced based on an in-depth examination of each transcript to ensure that all learning experiences were included in the narrative.

Research Results

The main findings of the dissertation study include:

a) the women coaches learned from situations before they became coaches (in childhood and adolescence) including experiences with family, at school, and in sport that influenced their approaches to coaching;

b) the women coaches were open to learning and sought out many meaningful opportunities to learn that helped them develop and become experienced as coaches;

c) the women coaches developed values throughout life experiences influenced coaching actions;

d) as the researcher, my own process of learning throughout the PhD degree was influenced by my lifetime of experiences to date;

e) methodologically, the constructivist research process was a co-creation between the researcher and the participants.

Limitations:

A limitation of this research was the focus on the individual. I chose a predominantly psychological approach, while not forgetting the importance of the social context; therefore, a global and structural understanding of learning from a more sociological perspective was beyond the scope of this dissertation.

Due to the framework that I used in this dissertation, the questions that I asked the participants regarded their individual learning experiences, which I cannot say with certainty were caused by their gender or social positions within the power structure of institutions or culture.

While I acknowledge that it is possible to be a coach and not learn year after year, the interview questions drew out meaningful experiences for the women coaches that helped to explore their learning.

Policy Implications

This research can be used to enhance sport participation for women coaches in two ways: (a) to help women coaches reflect on learning experiences in coaching, and (b) to create recommendations for coaching education initiatives led by the roadmap of the Canada's Sport Policy 2.0 (CSP, 2012).

a) This dissertation provides stories of real women coaches, in real settings, with real athletes, in real learning situations. It is hoped that the narratives and articles act as motivators to other women coaches who can find some similarities in the experiences and can reflect on and develop solutions to their own issues based on the understanding that they have a wealth of knowledge from their previous experiences throughout life and that they are not alone in what they are experiencing. Therefore, as suggested in the key principles of the CSP, we should include inspirational story-lines or narratives of successful women coaches to create resonance with others and build a long-term coach development concept within the policy.

b) The practical implications of this research for coaching education initiatives, instigated by the CSP to provide direction to the sport community, while allowing stakeholders to contribute in their own ways include:

- Providing women coaches with the opportunity to have a multitude of coaching experiences,
- Providing women coaches with the opportunity to tell stories about those experiences (to other coaches, facilitators, peers, mentors). For instance, networking with other coaches helped the women coaches learn information and receive advice. Coaching conferences are important forums for women to gain access to a network of women coaches, advocate for themselves, and listen to others.

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- Providing women coaches with the opportunity to learn how to reflect on their experiences, values, actions, and decisions to develop future goals and directions (to not only reflect on coaching experiences, but also other relevant experiences that may influence their coaching approach).

e.g., In courses, help facilitators learn to properly assist coaches in reflecting on their lives, on what they do, and on how they do it.

e.g., Provide coaches with the opportunity to explore personal coaching approaches while working with athletes to discover these authentic approaches.

e.g., Provide program policies on completing end-of-season progress reports and performance reviews to help coaches think about their seasons and plan for upcoming seasons.

- Providing women coaches with the opportunity to work in collaborative ways with one another so that they develop strong and professional relationships with individuals from whom they can learn. In particular, a performance management strategy, in which Sport Organizations are flexible (i.e. work sharing) and provide financial support and job security to women coaches, such as through maternity leave and through salaried coaching positions would help increase the low number of women coaches and retain them in the workforce. Such progress could be measured, monitored and easily managed to develop a more equitable gender-ratio in coaching.

Next Steps

The Canadian Sport Policy has as its goal "to maximize the benefits of sport and to mitigate its potential negative impacts" since sport can benefit persons and communities "under the right conditions". Therefore, future research can focus on how women coaches can engage in learning opportunities that are more inclusive and accessible, and help promote sustainable careers. Furthermore, research could explore how sport participation is experienced by the athletes and participants led by coaches engaged in lifelong learning. For instance, future research endeavors could focus on how coaches implement what they learned from their lifelong experiences to attempt to facilitate positive sport experiences for their athletes. More specifically, if values are developed throughout life and are inherent in coaching actions, how do these values translate to the coaches' athletes, especially youth, the aging population of sport participants, those of differing gender, cultures, and/or ethnic backgrounds? Future research could explore how relationships created between coach and athlete enhance or diminish a positive influence in sport participation and the development of life skills. In this way, the process of participation in sport can continue to be monitored and evaluated.

Key Stakeholders and Benefits

Sport Canada:

Sport Canada may benefit from the findings of this study as there are meaningful stories of women coaches who note the many lifelong experiences that led them to their coaching careers. It is important for Sport Canada, and the Canadian Sport Policy-makers, to be aware that such narratives act as motivators to other women coaches who can find some similarities in the experiences and can reflect on and develop solutions to their own issues based on the understanding that they are not alone in what they are experiencing.

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Coaches Association of Canada:
- Coaches Association of Canada may benefit from the findings of this study as there are concrete implications to coach education initiatives that derive from the research:
- Provide coaches with the opportunity to have a multitude of coaching experience
- Provide coaches with the opportunity to tell stories about those experiences (to other coaches, facilitators, peers, mentors)
- Provide coaches with the opportunity to have their stories told back to them as food for reflection
- Provide coaches with the opportunity to learn how to reflect on their experiences, values, actions, and decisions to develop future goals and directions (to not only reflect on coaching experiences, but also other relevant experiences that may influence their coaching approach)
- Provide coaches with the opportunity to work in collaborative ways with one another so that they develop strong and professional relationships with individuals from whom they can learn

CAMIRÉ, MARTIN

University of Ottawa
T. Forneris

Insight Development Grant 2013

Teacher-coaches' influence on the global development of student-athletes: An examination of perceived dual role benefits and challenges

Project Summary

Youth development research has examined the antecedents, processes, and outcomes that occur in sport contexts. One common finding that consistently emerges is that influential adults, such as teachers and coaches, play instrumental roles in facilitating the developmental process. Most of the past research on teachers and coaches has examined these two roles in isolation but in the high school context, teachers most often volunteer to coach sports teams, thereby assuming the dual role of teacher-coach. To date, very few studies have explored the benefits and challenges specifically associated with being a high school teacher-coach. To help fill this knowledge gap, the current research project was undertaken. Research objectives included conducting a qualitative exploratory study (phase one) and a national survey study (phase two) to better understand how teacher-coaches manage their dual role. In conclusion, it appears that (a) coaching provides additional opportunities to develop meaningful relationships with students and positively impacts job satisfaction, (b) coaching adds layers of responsibilities, on top of teaching duties, that create many challenges, and (c) teacher-coaches need further institutional support to help them maintain their extracurricular coaching involvement over time.

Research Methods

In phase one, a sample of 25 teacher-coaches from across Ontario were recruited to take part in in-person semi-structured interviews. In phase two, in collaboration with School Sport Canada, 3065 teacher-coaches completed an online survey, which was disseminated during the 2014-2015 academic year and took on average 35 minutes to complete. Representation was obtained from all 10 provinces and 3 territories.

Research Results

In phase one, the findings focused on relationship-building and challenges. First, being a teacher-coach influenced relationship-building with student-athletes as having a dual role was deemed to facilitate interactions, especially those that occur outside the classroom context. These out of classroom interactions were perceived to give teacher-coaches greater credibility as a result of their involvement in sport. The dual role facilitated relationship-building in part because both teacher-coaches and student-athletes participated in high school sport voluntarily, which fostered greater intrinsic motivation and created a positive motivational climate. Additionally, teacher-coaches discussed how sport presents a less formal and more emotionally invested setting than a classroom, allowing teacher-coaches to connect with student-athletes on a more personal level. The teacher-coaches reported how coaching provided them with numerous positive experiences that counter-balanced the challenges often encountered in the classroom (e.g., discipline issues).

These positive experiences were said to contribute to increased job satisfaction. The teacher-coaches also reported benefits for student-athletes as a result of building relationships. Many of these benefits involved helping student-athletes deal with issues in their personal lives, including parental separation, substance abuse, and suicidal thoughts. Second, teacher-coaches reported challenges with time, administrative tasks, colleagues, and logistics. In regards to time, some teacher-coaches discussed how taking on coaching as an additional commitment had negative impacts on their personal lives because the long hours made it difficult to spend quality time with family members. Additionally, some teacher-coaches described getting fatigued and sick as a result of overworking. Administrative issues (e.g., large amounts of paperwork required to travel to tournaments) caused significant stress for teacher-coaches. Finally, teacher-coaches also reported issues with colleagues, particularly those not involved in extracurricular activities, who complained about having to supply teach when the teacher-coaches travelled for tournaments.

In phase two, many of the results mirrored what was found in phase one. In terms of benefits, the participants ranked the enhanced opportunities to interact with students as the greatest benefit of being a teacher-coach. Such results emphasize how the relational aspect of coaching is paramount and reinforce the notion that a healthy coach-athlete relationship is a fundamental component of effective coaching. The greatest challenges faced by teacher-coaches were (a) meeting family obligations, (b) managing time, and (c) managing administrative duties. These findings are in accordance with phase one, illustrating how teaching and coaching commitments, when combined, put much stress on teacher-coaches' allocation of time. Teacher-coaches in their 30s and 40s were more likely to report these as challenges than teacher-coaches in their 20s and 50+. Limitations should be noted. The samples of participants for phases one and two consisted predominantly of male teacher-coaches. Further, the two phases did not include student-athletes as only the perspectives of teacher-coaches were documented. Finally, it is important to note that the data were self-report and cross-sectional, which precludes causal inferences.

Policy Implications

The qualitative data provided many rich insights into the benefits and challenges experienced by Canadian high school teacher-coaches. Such insights were corroborated by the national survey data, which examined a wide range of demographic and role-related variables reported by over 3,000 participants. Despite the challenges they faced, there is strong evidence indicating that teacher-coaches firmly believed that their dual role allowed them to (a) develop meaningful relationships with their student-athletes and (b) help with a number of issues in their student-athletes' lives.

From a policy standpoint, our results point to several concerning trends. More than 60% of teacher-coaches in our national survey reported coaching two or more sports during the academic year, but only 3% reported benefiting from some sort of reduced teaching load. Furthermore, with the exception of Quebec, the vast majority of teacher-coaches reported not receiving any financial compensation for their coaching duties. Although we found evidence that many teacher-coaches do remain involved in coaching long-term (based on their years of coaching experience), it is worrying that most (~ 90%) find it challenging to manage their time, take care of their administrative tasks, and meet their family obligations. Taking into consideration that teacher-coaches generally do not have contractual obligations to coach, important questions must be asked as it relates to the very viability of the current volunteer system in place, given the high prevalence of challenges reported across teacher-coaches of all demographic backgrounds.

Next steps

First, given that the samples in phase one and two were composed mostly of males, further research is needed with female teacher-coaches. Second, considering that a diverse range of extracurricular activities are offered in high schools, additional research is needed to determine if similar processes and outcomes emerge when teachers volunteer to participate in activities such as the arts, music, or academic clubs. Third, to address the limitation related to the projects cross-sectional nature, prospective longitudinal studies are needed to more accurately determine changes in teacher-coaches' perceived benefits and challenges of coaching over multiple sport seasons.

Key Stakeholders and Benefits

Several organizations stand to benefit from the findings. The Coaching Association of Canada can benefit as many of the recommendations offered by our participants to reduce challenges were focused on making coach education more accessible, both logistically and financially. School Sport Canada, as well as its member associations (e.g., OFSAA, ASAA), can use the findings to ensure they provide their volunteer coaches the resources they need to meet the demands of both teaching and coaching and thus be in positions to offer students a quality educational experience through high school sport. The findings can also be used by the Canadian Interscholastic Athletic Administrators Association (CIAAA) to help them make informed decisions related to the recruitment and retention of coaches in high schools. Finally, the findings can be disseminated to ministries of education (e.g., Ontario Ministry of Education) and teacher federations (e.g., Ontario Secondary School Teachers' Federation).

CHANDLER, KRISTA
University of Windsor
C. Hall
RT 2006

Imagery Use in Children's Leisure Time Physical Activities

Project Summary

Given the rate of children's physical inactivity, it is important to identify strategies that assist individuals in self-regulating their physical activity behaviors. Imagery is one such strategy. Children's use of imagery has been investigated in sport, but not all children are involved in organized sport. Children may accumulate their daily physical activity and use imagery during active play. As such, the overall purpose of the current research project was to gain an understanding of children's use of imagery in their leisure time physical activity (active play). Children (7-14 years) indicated using imagery during their active play. Several age and gender differences did emerge, however. In contrast to results observed in sport where young athletes employ imagery for cognitive (e.g., rehearsing skills/strategies) and motivational (e.g., being confident, in control) purposes, children indicated using imagery pertaining to the fun they experience, the competence they have for doing the activity, and the social relationships they engage in while in active play settings. Results from our applied study found that children receiving an imagery intervention maintained their levels of active play compared to those children in the control group who saw a significant decline in their levels of active play.

Research methods

The project used multiple research methods including both qualitative and quantitative approaches. Study 1 included 23 focus groups with a total of 104 children (7-14 years). The aim of the interview guide questions was to gather information on how children's imagery use was linked to the three basic needs (autonomy, competency, relatedness) during their active play. Study 2 included the development of a paper pencil questionnaire measuring children's use of active play. Two large independent samples (N = 302; N = 252) of children (7-14 years) were recruited for the PCA and CFA. Finally, Study 3 included a 4-week imagery intervention aimed at increasing active play. Children (M_{age} = 10 years) were randomized into a control (n = 26) and imagery (n = 33) group. All children received an automated script 3x/week for the duration of the study. In addition to the questionnaires used to measure imagery use, motivation, intention, and physical activity, pedometers were used to objectively measure physical activity. Ethics approval was granted from the University of Windsor and parental consent as well as participant assent was obtained. Recruitment for all three studies took place in the Southwestern Ontario (schools, clubs, camps).

Research results

Because children's use of active play imagery had yet to be explored, the use of a qualitative approach in Study 1 was deemed advantageous. The findings indicated that indeed, children use imagery during their active play for the satisfaction of three basic needs (autonomy, relatedness, competence). Given the age span used in the study (7-14 years), it is possible that the developmental stage of the participants may have influenced their ability to articulate their images. The aim of Study 2 was the development of the Children's Active Play Imagery Questionnaire. By employing a three-phased approach, which involved expert assessment

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of developed items, preliminary evaluation of the inventory and CFA, the final questionnaire consisted of 11-items (four capability, four social and three fun), rated on a 5-point Likert scale. Study 3 analysis revealed that pedometer step count remained stable for the imagery group but decreased from pre to post intervention for the control group. These findings provide valuable insight regarding imagery as a strategy to increase, or at the very least, maintain levels of active play. Moreover the results bridge the gap between theory and application of imagery use during active play.

Policy implications

Findings highlight the critical importance of children's sedentary behavior and the need for strategies, such as imagery, aimed at improving their daily physical activity. The current research project is highly relevant to Sport Canada's Research Initiative and has strong links to the core principles set by the Canadian Sport Policy 2012. The Sport Policy notes the positive impact that the core principles will have on the practice of all sport forms, including unorganized sport and in schools and parks, which are central to our research program. Physical literacy is a precondition for the lifelong participation in, and enjoyment of physical activity, including sport. It begins in early childhood and improves throughout one's life, and is learned through sport, physical education and active play. Imagery is a proven mental strategy for improving physical literacy. The potential outcomes of our research program can be linked to Canadian Sport Policy 2012 core principle of inclusion. Sport programs, in their broadest sense, include all forms of sport (ranging from introduction and recreational to high performance). Leisure time physical activity provides an opportunity for children to engage in unorganized sport. For example, children's active play often consists of road hockey, shooting baskets, kicking a soccer ball, or playing catch. An indirect outcome of our strategic imagery intervention is the introduction and development of skills fundamental to sport; this is especially true given the young age of our participants. When we increase the frequency and duration of children's active play, the development and execution of these fundamental skills are enhanced.

Next steps

By identifying the correlates of imagery with active play, future interventions aimed at improving activity levels among children and youth can be established, particularly among those who are highly sedentary. This is especially important given that Canadian children are unable to meet the guidelines which recommend 60 minutes a day of moderate to vigorous physical activity, and that at least half of their physical activity accumulation should be in active play (unstructured leisure-time physical activity; Active Healthy Kids Canada, 2010). Given the noted imagery differences among gender during active play, future interventions aimed at increasing motivation for physical activity should tailor imagery types to their desired outcomes and ensure moderating factors are taken into account. For example, when working with a population of young girls, more emphasis should be placed on developing capability images given this type was utilized more frequently than their male peers. By further examining and validating the Children's Active Play Imagery Questionnaire, more effective intervention programs can be developed which may increase current levels of physical inactivity among children. Lastly, these imagery interventions might be best implemented in school physical education settings as they could reach a large number of children and could easily be incorporated in the curriculum.

Key stakeholders and benefits
- Canadian Sport for Life (LTAD-FUNdamental)
- Active Healthy Kids Canada

- Provincial Ministry of Tourism, Culture and Sport
- Ontario After-School Program
- Canadian Fitness Lifestyle Research Institute
- Ontario Ministry of Education (School Boards, PE teachers)

CLARK, ANDREW
McMaster University (currently Western University)
Doctoral Stipend 2010

Understanding Barriers to Sport in Hamilton, ON

Project Summary

This study uses a random group of adults in Hamilton, ON to determine what barriers to sport are preventing adults from being active through sport. The research using data from a questionnaire that was part of a larger study called the Hamilton Active Living Study or HALStudy. This questionnaire data was used to address three key objectives: (1) To understand the differences in the socio-demographics between participants in sport and non-participants in sport; (2) To understand what barriers to sport exist in the city of Hamilton; and (3) To understand how barriers to organized and unorganized sport influence different sub-groups of people. These objectives were addressed using various statistical analyses to determine that vulnerable populations are most at risk of facing barriers to sport, and personal preferences, time constraints, and accessibility are the key barriers to sport for this sample. Future research is needed to further examine the accessibility barriers to determine if they are identified because of true observed accessibility or based on the perception of accessibility.

Research methods

The data used for this study comes from the Hamilton Active Living Study (HALStudy). The purpose of the HALStudy was to learn about people's participation in physical activity and the barriers preventing people from participating in additional physical activity. The sample was collected from May to September 2010 in Hamilton, Ontario, Canada. The final dataset had 201 subjects living in 40 neighborhoods. There were three components to the HALStudy: an upfront interview, a seven-day time-use diary with passive global positioning system (GPS) tracking, and a personal questionnaire. The primary data used in this study comes from the personal questionnaire, which is a detailed survey that included questions about socio-demographics and sport. Data analysis methods used in this study include difference-in-means test (Objective 1), ANOVA (Objective 1), exploratory factor analysis (Objective 2), and binary probit models (Objective 3).

Research results

Objective 1: To understand the differences in the socio-demographics between participants in sport and non-participants in sport. Results show that participants in sport are more likely to be in higher income households ($60,000 to $79,999). Non-participants are more likely to be in lower income households ($20,000 to $39,999). Participants are more likely to be a student, than not a student. Those with a degree from a post-secondary institution are more likely to be participants. Those without a driver's license are more likely to be non-participants. Finally, households with more children are more likely to be a non-participant.

Objective 2: To understand what barriers to sport exist in the city of Hamilton. Results show that there are two key barriers to sport in Hamilton common among non-participants: accessibility to facilities and sport preferences. Accessibility to facilities shows that being able to easily travel to sport facilities is essential to ensure individuals can participate in sport regularly. Furthermore, this is a measure of perceived accessibility,

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so in areas in the city where perception and observed accessibility do not match, recreation providers need to promote their facilities and programs designed for adults and seniors. Sport preferences show that some people simply do not like sports, and would prefer to do nothing, or other activities. With these individuals, recreation providers should highlight the diversity of what they have to offer, as there would be a better chance to find programs that are of interest.

Objective 3: To understand how barriers to organized and unorganized sport influence different sub-groups. Time barriers are indicated as a problem for employed individuals and parents, while those who are not single and are young do not indicate them being a problem. Senior Citizens and low income residents indicate that health concerns are a serious barrier to all sport participation, but people who are young, single, or employed rarely indicate that they have any health concerns. Accessibility to organized sport facilities and programs prevents transit users from participating in sports, while accessibility in not a barrier for unorganized sports.

Limitations: This study provides an observation of the barriers to sport in Hamilton, ON using a representative sample. Although the results show some interesting findings, the sample size is small due to cost (financial and time), limiting the complexity of analysis that can be done. Despite this limitation, the sample was collecting using a stratified-random approach, whereby subjects were recruited through random phone calls from 40 neighbourhoods that were stratified by income and walkability. Additionally, the resulting sample has been found to be representative of the city of Hamilton.

Policy implications
The findings of this study identify the barriers to sport and the characteristics of both participants and non-participants. This study has policy implications that can benefit both local organizations and government. Local recreational sport providers can help provide adults with opportunities to be active through sport, by providing and promoting sports that adults of all skill levels can enjoy. In particular, providing low cost opportunities for the vulnerable populations, such as those with low income, mobility constraints, and lower education levels, can help reduce these barriers significantly. Accessibility barriers can be minimized by providing free transportation to facilities, such as the YMCA, to allow those who may not have access to a car to travel to the facilities and programs much easier. Finally, developing family-oriented sports that allow whole families to participate together, may allow larger families to be more active in sports minimizing the time barriers they face.

Next steps
One of the major questions raised by this research is how accessibility to sport facilities relates to the observed availability in an individual's neighbourhood. This will allow researchers to understand if the barrier to accessibility is due to perception or due to an actual void of opportunities. If there really is a lack of accessibility, policy makers can determine how to complement existing infrastructure to increase accessibility. In contrast, if the facilities and programs do exist, the recreational programmers need to promote the programs to get adults engaged in sport and minimize the barriers that are perceived.

Key stakeholders and benefits
- City of Hamilton Recreation Division
- City of Hamilton City Hall

- YMCA of Hamilton, Burlington, Brantford
- Boys and Girls Club of Hamilton

COUSENS, LAURA
Brock University
Standard Research Grant 2006

Examining Interdependence in Canada's Sport System: Community Basketball

Project Summary

The purpose of this research was is to explore and assess the existence of partnerships or network collaborations within the delivery network of basketball providers in one geographic region of Canada: Niagara. Investigators used network analysis to investigate the degree of integration (incidents of network collaboration) and interdependence (partnership effectiveness) between providers of sport (e.g., basketball clubs, Boys and Girls Clubs, Parks and Recreation Departments) in one geographic region. The specific objectives of the research were: to identify the providers of the sport of basketball in one geographic region of Canada; to identify the location (central, periphery) of each actor in the network of providers, as well as the level of connectedness (density) of the network; to identify the conditions that have facilitated or hindered collaboration and integration in the networks; and to explore the environmental context (normative, regulative, cognitive) of the networks.

The study revealed a fragmented network wherein the number of actual linkages among the organizations was low (one third of all possible linkages,) with organizations working independently rather than fully exploiting opportunities for collaboration. The referees association was situated at the centre of the network given its control over a key resource, referees, valued by each of the basketball clubs.

The dedicated basketball clubs were more tightly coupled to one another than to the nonprofit organizations (e.g. Boys & Girls club; YMCA) or to the educational institutions (e.g., post secondary).

Reasons for lack of integration among local providers of basketball included:
- need for control over decision-making in the club;
- challenge of securing buy-in from other clubs to partner;
- challenges associated with working with volunteer boards of directors;
- rivalry between local clubs for athletes, facilities, and financial resources;
- lack of volunteer time and expertise to establish and manage partnerships;
- lack of realization of the economies of scale (e.g., lower administrative overhead for marketing, registration, and facility booking) available through collaboration;
- fear of uncertainty and of making long-term commitments to other organizations; and
- need to hire paid staff to manage relationships with key partners/stakeholders.
- mechanisms that facilitated collaboration uncovered:
- friendships that facilitate the use of 'social capital' to acquire resources;
- assigning board members to manage relationships with key partners/stakeholders;

- Hiring paid staff to manage relationships with sponsors, facility providers, and with the referees association;
- Establishing a framework for collaboration based upon shared goals and values; and
- Leveraging informal contacts in the basketball community to initiate partnerships.

Research Methods

Quantitative data was collected using a five-page survey adapted from Provan, Harvey, and Guernsey de Zpaien's (1995). Questions surrounding the reasons for linkages between basketball providers were drawn from the literature on community sport organizations, and included links to share information, resources, marketing, and fundraising. Respondents were asked to indicate the organizations to which they were linked from a list of basketball providers. Additional questions related to organizational goals and structure, barriers to collaboration, and key players in the community who facilitated or hindered collaboration. 11 out of 12 organizations completed the questionnaire. Data were analyzed using the UCINET 6 network analysis software (Borgatti, Everett & Freeman, 2002).

Qualitative data were collected via 11 in-depth guided interviews with basketball providers at the local, provincial, and national levels. Individuals contacted for interviews included two university basketball coaches, senior administrators or members of the board of directors of local clubs, the leaders of recreation basketball programs, as well as representatives from Canada Basketball and Ontario Basketball. Questions were posed to gain a deeper understanding of the inter-organizational relationships that existed – or did not exist - among the clubs or with other key resource providers. Each interview was recorded, transcribed verbatim, and member-checked by the interviewee for content accuracy. Each member of the research team read the data to identify codes, patterns and relationships.

Research Results

Power and dependence: Local clubs' efforts to maintain power over critical areas of their operations hindered opportunities for collaboration, not only with other local clubs, but with governance bodies in the broader environment encompassing the sport of basketball. The clubs were highly dependent upon others in their environment for virtually all of the critical resources needed to operate.

Industry rivalry: Dedicated basketball clubs clearly identify themselves as rivals in this local market, competing for athletes, volunteers, facilities, and financial resources from local governments or sponsors. Low barriers to entry (e.g., easy for start-up clubs to enter the market), and high levels of uncertainty in relation to facility access and funding from sponsors intensified industry rivalry among local basketball clubs.

Reliance on normative processes: In the case of dedicated basketball providers, it appears that some level of cooperation has arisen through normative processes that are embedded in the social relationships in this community. It appears that social norms were used as the basis of behaviors by the majority of the providers. Accordingly, the threat of punishment or sanctions (e.g., limit access to referees or facilities) worked in support of cooperative behavior.

Managing interdependence: Linkages with other organizations involve commitments, obligations, and a greater degree of inter-organizational interdependence that necessitates internal coordination. However, the

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managerial structures needed to effectively integrate inter-organizational activities were largely absent in dedicated basketball clubs. Some clubs were moving towards adopting a more structured approach to managing relationships by creating dedicated positions to facilitate interactions. Informal (e.g., friendships) means were also used to manage inter-organizational interdependence.

The results of this research are not generalizable to a broader array of individual and/or seasonal sports; however they do highlight resource constraints that are typical of many community sport clubs.

Policy Implications

- Establish, at the provincial level, a regional framework for local, same-sport clubs; one that limits club rivalry among existing clubs and creates barriers to entry for new clubs that lack specified governance frameworks and organizational structures.
- Mandate strategic planning by local sport clubs. Emphasize strategies to reduce uncertainty through long-term contracts or relationships with facility providers (municipal governments, schools) and/or corporate sponsors. The capacity of local sport clubs to increase participation is severely limited by uncertain access to facilities.
- Mandate a prescribed governance structure for local sport clubs.
- Provide incentives for collaborative structures, such as sport councils, that will alter the power and dependence relationships between sport clubs and their key suppliers.
- Create, at the municipal level, liaison mechanisms (staff, processes) that enable local sport clubs that use municipal facilities to manage their power/dependence, and to enhance communication.
- Provide a framework for longer-term access (3 to 5 years) to facilities to enable sport clubs to enhance participation through planned growth strategies.
- Develop a strategic plan for regional sport facilities that considers the facilities owned by local governments, private companies, and non-profit organizations. Consider non-traditional venues such as churches, outside spaces, and refurbished industrial buildings.

Next Steps

- What are the normative processes used by local sport clubs to manage their interdependence with resource providers and competitors?
- How do coalitions of sport organizations, such as Sport Councils, serve as mechanisms to manage the relationships among community sport clubs and their resource providers?
- How do networks encompassing nonprofit providers of sport compare to networks encompassing private and public-sector providers of sport programs?
- Which organizational structures facilitate or hinder collaboration and integration among community sport clubs and their resource providers?

Key Stakeholders and Benefits

- Local governments (in particular Parks and Recreation Departments)
- Provincial Sport Organizations
- National Sport Organizations
- Sport Councils (Commissions)

DARNELL, SIMON
Durham University
Post-Doctoral 2008

The Politics of International Sport: An investigation of the Sport for Development and Peace Movement

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Project Summary

Sport and physical activity is now mobilized in programs and initiatives designed to meet international development goals, leading to a sector known as 'Sport for Development and Peace' (SDP). A number of different organizations make up this sector, including non-governmental organizations, charities, corporations, professional sports clubs, and governments. As a result, sport is formally recognized, by organizations including the United Nations, to contribute to advancing social development, particularly in Low and Middle Income Countries (LMICs).

Drawing on interviews with program officials and policy makers from across the SDP sector, this study sought to:

- Investigate the particular mandates of, and approaches to, international development taken up within SDP
- Compare and contrast these mandates against the history of international development and the different orientations to development that have taken up post World War II.

Two main conclusions can be drawn: 1/ while the SDP sector clearly represents a new incarnation of the mobilization of sport for social change, the political dimensions and implications of conceptualizing and implementing development initiatives through SDP are not new. International development is inherently political and those working in the SDP field generally recognize it as such. In fact, the political challenges of SDP map closely onto the politics of development identified within critical development scholarship over the past several decades. In particular, balancing modernization and stewardship versus self-determination remains a challenge in SDP. As a result, and 2/ the political challenges of development preclude the mere application of sport as a solution to or panacea of international development struggles. Sport is not an answer to development, though it may be part of the process of re-imagining and in some cases resisting traditional forms of international development.

Research Methods

Semi-structured interviews (n=9) were conducted with program officials and managers from SDP organizations. These included representatives from two organizations concerned with SDP advocacy and facilitation, one celebrity athlete foundation, one charitable arm of a professional sports club focused on international development and SDP, one youth sport and coaching development organization, and four SDP NGOs working in the Global South and focused on youth education and health.

Interview questions focused on policy makers' understandings of the position and role of sport-for-development and its political dimensions and challenges. While the insights collected through the interviews

do not fully capture the ongoing changes and increasing diversity of SDP, they do offer some critical insights and reflections as to the political orientation(s) of SDP.

All interviews took place between January and July 2010.

Research Results

Three themes emerged from the interviews.

First, it is reasonable to argue that traditional notions of development as a process of modernization cling to, and influence, current understandings and conceptualizations of sport-for-development within SDP, particularly because it positions SDP as a way to facilitate improvement amongst marginalized persons and populations. Despite the sustained critical perspectives that SDP stakeholders bring to bear on their work and on the sector in general, the tendency to reduce development to a process of improvement, and of securing modernity for those currently denied its benefits, remains an attractive political platform from which to mobilize sport-for-development.

Second, it therefore remains a challenge within SDP to reconcile critical and theoretical understandings of development and ways to do development differently, against the practical challenges of how to implement new approaches to development through sport. Specifically, attempts to do development differently have led SDP practitioners and champions, particularly from NGOs, to focus purposively on local ownership of development programs as a means of challenging traditional development hierarchies. This, though, produces a set of new challenges in SDP over governance, funding and monitoring and evaluation.

Third, there is evidence that some SDP practitioners are indeed working directly to protect the development novelty that sport affords. That is, for some SDP policy makers, sport is a response to the failure of dominant development orthodoxy, even though organizing it as such is very difficult to do within the political economy of development and within the pressures to effect and measure if not prove sustainable change.

Policy Implications

The first and most significant policy implication is that the political dimensions of mobilizing sport to meet development goals cannot be ignored or dismissed even in the cases where sport is a genuinely popular activity with cross cultural appeal. International development is, and will remain, fraught political territory and policy makers would do well to embrace the political dimensions of their decisions in the SDP sector and in regard to sport-for-development more generally.

Second, there is strong evidence from the field that a wide range of stakeholders in the SDP sector are interested in, and committed to, critical self-reflexion as well as innovative partnerships within the sector. That is, traditional understandings of development as the deliverance of aid to a passive third world are understood as anachronistic within the SDP sector. Policy makers have a significant opportunity then, to re-imagine their policy models and organizations in mobilizing sport to meet development goals.

Next Steps

The main next step for my research is to examine and investigate whether there are other or alternative political orientations to development (more radical, more active, more resistant) than the traditional approach which often seems to predominate within SDP. This will allow for a comparative analysis between 'sport-for-development' (as currently practiced within SDP), versus sport-for-political-activism or resistance.

Key Stakeholders and Benefits

Any organizations or groups mobilizing and/or organizing sport and physical education for purposes of development (social, community, economic, relational, etc) may benefit from the insights of this study. This may be of particular interest to those organizations that are doing this kind of work in the Global South.

- Sport for development NGOs (e.g. Right to Play, SCORE)
- Organizing bodies (e.g. United Nations Office on Sport for Development and Peace, Streetfootballworld)
- Celebrity athlete charitable foundations (Steve Nash Foundation, Roger Federer Foundation)
- Government Ministries (Sport Canada, Canadian Heritage)
- Corporate charities (Nike, adidas)

DE LISIO, AMANDA
University of Toronto
Doctoral Stipend 2012

Economies of Deviance: Sex Work and Sport Mega-Event

Project Summary

In proposing a dissertation topic, I built from the sport for development literature to argued that (sport) event-led urban development could not be contained within or used to solely advance the socio-politicaleconomic agenda of the bourgeois, cosmopolitan class. Using this vantage point, I developed an interest in investigating the informal (sometimes viewed as deviant) economies located within host communities that seek to generate a profit from the influx of an international tourist market. These economies use the sport mega-event as a platform to either attract business or mobilize radically different cultural sensibilities. This interest led to an invitation to participate in an ongoing research collaborative with the Observatory of Prostitution at the Federal University of Rio de Janeiro (UFRJ) as a graduate student research assistant.

Research Methods

Specifically, I was based in Rio de Janeiro and focused on the movement of those involved in sex as work. That is, in the month before the first whistle was blown to the sound of the last, and in the immediate haze that followed in the aftermath, I observed each zone known for commercial sex across Rio de Janeiro, Brazil (i.e., Copacabana Beach, Ipanema Beach, Centro, Lapa and Vila Mimosa) and interacted with/learned from the working women, clientele and local law enforcement. Specifically, I examined:

1. The opportunities and difficulties faced as a result of the sport mega-event;
2. The strategies used to capitalize on/overcome these opportunities/difficulties; and
3. Whether these strategies helped to establish sustainable event-related legacies for those engaging in sex as work.

In an attempt to address each research question, I relied upon the collection of qualitative data and employed the following ethnographic methodologies: (i) document analyses of relevant prostitution2 related material, specifically those disseminated as a result of the event; (ii) participant observations of sex workers' labour rights organizations, volunteers and the working/living conditions of its members; and finally, (iii) semi-structured interviews conducted with the key informants identified in the data collection process.

Research Results

RQ1. Opportunities and difficulties faced as a result of the sport mega-event

i. Balcony Bar and Hotel Lido, located in Copacabana beach across from the FIFA Fan Zone, which famously served as a main site for sex work, was closed on June 12, 2014, the opening day of World Cup. The rationale provided by local law enforcement was due to a reported case of child sexual exploitation; however, the Child Welfare Council of the South Zone (Conselho Tutelar da Zona Sul) did

not document a single case of sexual exploitation in the period before or immediately after the 2014 World Cup.

ii. Despite the increase in police surveillance on the street, the closure of Balcony Bar and Hotel Lido decreased the level of securitization for working women, due to the fact that most of women had to now travel to an unknown area with a client for a date.

iii. Despite the increased risk, the number of women working in the South Zone of Rio de Janeiro (i.e., along Copacabana and Ipanema) increased over the course of the event. Along with Maracanã Stadium, Copacabana was the main area for World Cup activities in Rio de Janeiro — with FIFA Fan Fest, an exuberant amount of local law enforcement, FIFA staff (housed between Copacabana Palace and Sofitel) and international media. With limited opportunities for work in an indoor venue located downtown or in Vila Mimosa, women travelled to the South Zone (Copacabana Beach, Ipanema Beach and Lapa) to capitalize on the influx of tourism to recuperate the business lost. Of these women, several complained about working on the street due to the amount of drunk and disorderly men. Meanwhile, with the influx of workingwomen into a small tourist sector, competition over international clientele was fierce.

iv. Prior to the World Cup, the (inter)national media predicted a sharp increase in the sexual exploitation of children, young people and women. Nevertheless, no data collected on behalf of the Observatory ofProstitution or the agencies in which we consulted, reported a single incident of child sexual exploitation connected to the 2014 FIFA World Cup.

RQ2. The strategies used to capitalize on/overcome these opportunities/difficulties

i. In order to capitalizing on the opportunities made available as a result of hosting an internationally recognized sport mega-event, several of the women reported a new (business or otherwise) connection established between other working women, activist agencies, local law enforcement, (inter)national media and clientele.

ii. Aside from the creation of a new social network or linkage, those involved in sex as work were (somewhat forcibly) encouraged to migrate to other "tourist-saturated" communities within Rio de Janeiro 3 thus affording the women opportunities to experience a new working environment or establish business online — one which could prove to be more profitable in the future or contribute to new (transferable) knowledge (e.g., learn about the freelance market on the street versus working at a brothel downtown).

RQ3. Whether these strategies help to establish sustainable event-related legacies for those engaging in sex as work

I. Further research is needed to be conducted in order to determine whether or not a relationship established during FIFA 2014 was able to last well-after the event has died. It is possible that such an alliance could be useful next urban event, such as the 2015 Carnival or even the 2016 Summer Olympic Games.

II. Furthermore, and related to the above, additional data collection and analyses are needed to determine whether the knowledge and/or skill set accumulated as a result of aiding in the 2014 host effort, translated into future use. Moreover, I am curious to learn whether this information is used to informed Carnival 2015 and/or Olympic 2015 business strategies.

Policy Implications

In particular, this research project has provided insight into the insidious, informal economies which underpin every internationally-recognized sport mega-event while establishing a dataset that could be used to later compared and contrasted with the Canadian context — specifically, with the hosting of the 2015 Pan/Parapan American event.

Next Steps

Given the success of the 2014 World Cup project, we conducted additional ethnographic work during the 2015 Carnival in further preparation for the 2016 Summer Olympic Games. The data collected across each separate event will afford us with the information needed to better understand the manner in which informal economies organize in the midst of rapid urban change, and potentially (economically, socially and politically) profit from the more formalized injections of global capital.

DEMERS, GUYLAINE
Laval University
Standard Research Grant 2006

Description of the First Years of Experiences of Novice Female Coaches

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Project Summary

The objective of this study is to better understand the experiences of novice female coaches during their first two years of coaching. Conclusions of previous studies have shown an under-representation as well as a decreasing number of female coaches in the last 30 years. Not only are there less female coaches, those who chose this profession stay in it for approximately four years, in comparison to their male counterparts who remain in coaching for 11 years. Building on these conclusions, we have set two specific objectives: 1) describe the profile of women entering the coaching profession and 2) identify the different successes and difficulties they experience in their first two years of coaching.

Although this research is an exploratory one, identifying successes and especially problems has provided excellent leads in terms of the training of female beginner coaches. It appears, in fact, that their training should include a component on handling discipline. This is not surprising in and of itself, because young coaches often work with younger groups of athletes. The need for teaching strategies and access to a varied exercise bank appears critical to training women beginner coaches.

This study confirms that mentorship support should be available to beginners as it is for experienced coaches. The differences appear to relate to the objectives of the mentoring. Experienced coaches need more support to overcome obstacles having to do with the fact that they are women, while beginners seem to need more technical support, such as educational strategies or examples of exercises to apply.

In closing, we can state that the coaches appreciated opportunities to record their successes and problems. As one said, "It feels funny describing negative events; it gets them out of your system." They are increasingly sensitive to their experiences, and their descriptions are becoming more refined over time. This approach seems to hold potential for working with female beginner coaches.

Research methods

We have chosen a multiple case study in order to better understand the experiences of novice female coaches.

1) Recruiting the female coaches

   We recruited the novice female coaches through the Quebec school sport system. We called the athletic director of every high school to have the contact information of any new female coaches in that particular school. We also contacted few gym clubs where we new they had new females in a coaching positions. We were able to recruit 12 novice female coaches involved in gymnastics (6), basketball (1), soccer (2), taekwondo (1), curling (1), and cheerleading (1). Nine were coaching in the community stream and three in the competition stream.

2) Data collection on problems and successes

We used the critical incident technique in order to collect data on the problems and successes those novice coaches were experiencing. Each of them reported a minimum of two incidents per week (one linked to a problem, one linked to a success) for a period of time varying from 16 to 20 weeks. We collected between 32 and 40 incidents for each coach for a total of 462 incidents.

Research results

Although this research is an exploratory one, identifying successes and especially problems has provided excellent leads in terms of the training of female beginner coaches. It appears, in fact, that their training should include a component on handling discipline. This is not surprising in and of itself, because young coaches often work with younger groups of athletes. The need for teaching strategies and access to a varied exercise bank appears critical to training women beginner coaches.

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In closing, we can state that the coaches appreciated, and continue to appreciate, opportunities to record their successes and problems. As one said, "It feels funny describing negative events; it gets them out of your system." They are increasingly sensitive to their experiences, and their descriptions became more refined over time. This approach seems to hold potential for working with female beginner coaches.

Policy implications

This research is relevant to the new Policy on sport for women and girls. Specifically, it is linked to the following action plan activities (based on the Policy Intervention areas outlined in the policy):

- Program Improvement
  Support and encourage organizations funded through Sport Canada via on-going liaison processes to actively engage women and girls as governance leaders, coaches, technical leaders, officials and athletes participants (as appropriate), including through the provision of facilitation expertise and use of readiness and gap analysis tools.
- Strategic Leadership
  Advocate with Provincial/Territorial Governments to support and/or develop sport programs and initiatives that actively engage women and girls in sport as athlete participants, coaches, technical leaders and officials, and as governance leaders (as appropriate).

Next steps

Research questions

- What would be the impact of women only training session on recruitment of women coaches?
- What is the impact of mentorship on women coaches' retention?
- What do the different sport organizations do to support their new female coaches?
- Why do women stay in coaching for a shorter period of time compare to their male counterparts?
- Qualitative study to describe women's experiences in a action research project where we help beginner coaches to learn their new profession.

Practical applications
- Design women-only training workshops including the new findings (e.g. how to deal with discipline issues, how to deal with parents).
- Develop a mentorship program linked with the workshops; make that process automatic.
- Develop a network to let the local sport organizations know about who are the trained women available to coach in their sport.
- Work with the NSO so they would develop drills and exercices «handbook» for their sport (develop a template to help them).
- Write a chapter to add to the material that is used to train NCCP Learning Facilitators about women learners in a coaching workshop.

Key stakeholders and benefits
- Coaching Association of Canada (NCCP and Women in coaching program)
- National and Provincial Sport Organizations
- Canadian Interuniversity Sport
- Canadian Collegiate Athletic Association
- Sport Canada (Women and sport)
- Canada Games council
- Provincial and territorial governing bodies (ministry or secretary of sport)

DETELLIER, ÉLISE
University of Montreal
Standard Research Grant 2006

They Always Remain Girls: The Re/Production of Gender Relations in Women's Sports in Quebec, 1919-1961

Project Summary

This doctoral thesis examines how multiple factors influenced women's participation in sports in Quebec between 1919 and 1961. It shows that gender, class, age, religious and ethno-linguistic affiliation, as well as whether a facility was co-ed or not, must be taken into consideration for a better understanding of women's participation in sports, an area that was, and still is, more readily associated with men.

The thesis is based on the study of the discourse of doctors, physical education teachers –especially Cécile Grenier – Catholic clergy members, women athletes – particularly Myrtle Cook –and, to a lesser extent, of civil servants, to identify the arguments these social actors put forward to restrict or encourage women's participation in sports. This study is linked to that of women's sports played in two sports centres in Montreal, namely the Palestre nationale, a co-ed centre frequented by French-Canadians, and the Young Women's Christian Association (YWCA), a centre for women where members are predominantly English-speaking Protestants.

Research Methods

Numerous documents were consulted during this research, specifically French- and English-language medical journals, Catholic Church tracts, a number of Myrtle Cook's newspaper sports columns, and the archival records of Cecile Grenier, Conrad Poirier (photographer), and the Palestre nationale and YWCA in Montreal. In these archives, meeting minutes, annual reports, correspondence, bulletins, conference papers, articles and photographs were reviewed. By relying on a greater number of sources, the thesis highlights the complexity of the history of women's sports in Quebec.

Research Results

This thesis shows that between 1919 and 1961, many voices contributed to the discourse on women's sports in Quebec, and that practices were varied. In the province, as elsewhere in Canada, women's participation in sports therefore gave rise to social debates. The diverse prescriptive views on women's sports expressed by social actors as well as the various women's sports practices are understood in light of the definitions given according to gender, class, age, religious and ethno-linguistic affiliation, and whether a sports facility was co-ed or not, while considering the socio-historical context in which the discourses took place and the sports were practiced.

This thesis sheds some light on the complexity of studying the history of women's sports in Quebec. The analysis is foccused on the discourse of a number of social actors and on the women's sports offered in two facilities. The study of other discourses and practices would help provide a better understanding of the elements of discourse and the practices that either encourage or prevent women from participating in sports.

Policy Implications

This thesis helps provide a better understanding of the various social, economic and political interests pursued by doctors, physical education teachers, Catholic Church clergy, women athletes and sports associations in deciding on or organizing women's sports at a time (1919–1961) when the federal government, the Quebec provincial government, and the municipalities rarely intervened in this area.

Next Steps

This thesis raises many questions to be investigated about the history of women's sports in Quebec, which could help understand how gender, class and ethnicity influenced the organization of sports in the province and elsewhere in Canada, for instance by initiating the comparative study of physical education programs in English- and French-language schools and by analyzing the practices of the Young Women's Hebrew Association (YWHA) in Montreal. Although this city is a very important case study for women's sports in Quebec, as shown in this thesis, for example, researchers should also place a greater focus on the province's other cities and towns to better grasp how the gendered dimension of sports organizations is expressed and structured in a particular local context. It would also be useful to see how gender influenced the implementation of the first provincial and federal state activities in sports, an issue that requires further research.

Key Stakeholders and Benefits

Canadian Association for the Advancement of Women and Sport and Physical Activity

This thesis provides an in-depth analysis of the gender dimension of the history of sports in Quebec, therefore highlighting the complexity of the study of women's participation in the field, both in the province and elsewhere in Canada. The study of class, age and ethno-linguistic and religious affiliation, as well as the impact of whether the sports facility was co-ed or not on women's participation in sports, also reflects the complexity of the phenomenon. This thesis also makes it possible to identify, in part, the strategies used by women to overcome some of the ideas and practices preventing them from participating in sports, a field primarily associated with men.

Panthéon des sports du Québec [Quebec's Sports Hall of Fame]

This thesis enhances our knowledge of women athletes and sports organizers in the province.

Sports Quebec

This thesis provides a better understanding of the history of women's participation in sports in Quebec before the first universal state activities in the field, specifically the interests pursued by various sport organizations in the organization of women's sports, such as the Association athlétique d'amateurs Le National [National Amateur Athletic Association], the Commission de la Palestre de l'Association catholique de la jeunesse canadienne-française and Association athlétique nationale de la jeunesse.

DIONNE, MICHELLE
Ryerson University
Standard Research Grant 2006

Sociocultural Barriers to Women's Participation in Sport: The Role of Self-Objectification and Stereotype Threat

Project Summary

Women and girls in sport have endured years of cynicism regarding their physical abilities, much of which is perpetuated via media portrayals that emphasize their appearance, femininity, and (hetero) sexuality rather than athletic competence. Although female athletes have made gains in international recognition, funding and opportunity, the negative representations and resultant stereotypes about women's suitability for sport remain. Although there is speculation that such attitudes could pose truly serious barriers to women's participation and performance in sport, remarkably little research has provided tangible evidence of this effect as yet. However, a parallel body of evidence shows performance decrements on cognitive tasks when female participants are primed with stereotypes about women (stereotype threat), and other studies have shown similar effects when attention is focused on a participant's appearance (self-objectification). There is reason to believe that the domain of physical performance could be similarly affected via these mechanisms.

The connection to participation in sport is as follows. If stereotypes about women and sport are internalized, performance may be compromised. After repeated attempts where one's success is short of optimal, motivation wanes for further participation. Choices are then made to engage in other activities where performance does not have the same meaning for one's sense of self-worth. If women do not feel competent or confident in participation in sport and exercise, then they will be less likely to do so. This is the question we wish to examine.

Our specific objective was to consider whether priming stereotypes and self-objectification can lead to performance decrements on physical performance tasks, including sports activities. We further hypothesized that these effects might be at least partially mediated through changes in self-perception, effort or motivation. Our preliminary findings provide some of the first evidence that sport performance can be compromised by priming stereotypes about women. Further, these stereotypes lead women to have a diminished view of their own physical competence, and are less likely to see themselves as athletic. Similar results are seen when attention is focused on the appearance of women's bodies rather than on their physical capabilities. We believe that stereotypes can constrain women from participating in sport because of the negative attitudes they engender.

Research Methods

We used true experimental designs in the laboratory as is common in psychological research to test our hypotheses.

In one study, we asked female participants play a golf game using a Nintendo Wii with either a male or a female avatar (game character). Half of the participants were told that there are no gender differences in performance on that task, and the remaining participants were told that men typically outperform women on

the task. In addition to the performance task, participants completed self-report measures of athletic identification and physical self-perceptions.

In another study we primed a state of self-objectification (a type of self- attention on appearance) and had female participants perform an athletic task. Specifically, we randomly assigned participants to wear tight and revealing, or loose and concealing athletic wear.   Then, to exacerbate the effects of self-objectification, participants in one group were asked to attend to and estimate the size of their own body by looking in a mirror and indicating widths of their shoulders, waist and hips on a nearby screen. Participants in a control group were similarly asked to estimate the size of a control object at three designated places. Finally, all participants were asked to complete two performance tasks: an actual test of golf putting performance (mini-putt) and virtual putting using the Nintendo Wii.

Research Results

The key findings are consistent with initial hypotheses. For the stereotype threat study, results indicated that women showed marginally better performance when they played with a male avatar as opposed to a female avatar, regardless of explicit information about gender performance.   The results were even clearer for athletic self-perceptions. Women who had played with the male avatar were more likely to report seeing themselves as "athletic" and as being physically competent than those playing with a female avatar.

For the self-objectification study, results were less clear but there was a trend towards support for our hypotheses. That is, there was a tendency to see slightly worse performance from women when they were asked to wear tight-fitting and revealing clothing during the golf task. One only needs to consider the now infamous comments by Sepp Blatter (FIFA president) that women's soccer would attract more fans if they wore tighter clothing to understand where such attitudes originate and where they might lead for women's sport.

While these results are promising, there are limitations. Both studies would benefit from additional data collection and as such it will continue so that we can increase statistical power in the analyses. There are also additional controls that we would like to implement, and also replicate a parallel design with male participants to further explore gender differences.

Policy Implications

It has been established over decades of research that the media, particularly sport media, contain the types of messages theorized to contribute to self-objectification and to the formation of stereotypes about the appropriateness of sport for women. What has yet to be clearly established is evidence of the harm that these attitudes can have to women's performance in and enjoyment of sport.   If women do not see themselves as possessing the physical competence of a successful athlete, they are going to be less likely to take up sport activities and more likely to drop out once they have started. Existing policies to ensure equal access to sport for both genders, including equal access to funding, training and facilities must be continued and arguably enhanced. Researchers in this area in the US frequently refer to Title IX as a watershed moment for women's sport in that country. Canadians must continue to ensure equal access with or without such a policy.

Next Steps

One clear future direction of this research for media psychologists would be in devising and testing media interventions so that women can resist the cultural messages regarding their ability to participate and perform successfully in sport.

Key Stakeholders and Benefits

The Canadian Association for the Advancement of Women in Sports http://www.caaws.ca/e/index.cfm may find these results of interest.

DONNELLY, PETER
University of Toronto
Standard Research Grant 2012

Multiculturalism and physical culture: The case of the GTA

There are two parts to this project:
First, we have established an open-access on-line archive to collect every form of physical culture that people participate in in the Greater Toronto Area (GTA).

Second, use the on-line archive to engage in follow-up research – interviews and secondary data analysis – to answer an initial set of research questions.

Both parts of the project are ongoing, but there are enough data to provide some preliminary conclusions and recommendations.

Part 2: Background
My previous SPRI project on 'measuring participation' was striking in terms of the narrow ways that 'physical activity' had been defined. It is still most common to think of 'physical activity' in terms of organized activity, primarily constituted of gym exercises, running, major team sports, and a few other activities. But the measurement project, and other research on multiculturalism began to show that there were numerous different ways that people engaged in physical activity. We decided to see how many different types of physical activity we could find in one large community.

Physical culture is a term that we use to collectively refer to all forms of non-work physical activity – the different ways that various communities have produced to play games, compete, engage in ritual movement, and move their bodies. Our initial classification of physical cultural forms includes: sports, dances, martial arts, exercise systems, and physical games. We were well aware that it would be difficult to classify all forms of physical culture into five categories – that was a starting point, and we have enough data now to be considering some additional categories (e.g., hybrid activities: Mark Norman, 2016: https://gtactivity.ca/blog).

Multiculturalism is both celebrated and criticized in Canada, and the term has come to be misused in a number of ways. For example, we have heard the term being used to refer only to 'immigrants' or, even more problematically, to people who are sometimes classified as 'other than white'. For this project we have gone back to Canada's original formulation of multiculturalism:

[T]here cannot be one cultural policy for Canadians of British and French
origin, another for the original peoples and yet a third for all others… [T]here is no official culture, nor does any ethnic group take precedence over any other… (Pierre Trudeau, Official Statement on Multiculturalism, House of Commons, 1971)

Multiculturalism was subsequently included in the Canadian Constitution (1982) and became the law (Multiculturalism Act, 1988), but although explicitly associated with national and ethnic cultures,

multiculturalism also implicitly includes, for example, language cultures, disability cultures, religious cultures and gay culture – all cultures that may be associated with particular physical cultural forms.

The GTA, which has a population of over 6 million and covers some 7,000km2, is one of the most diverse communities in the world. In addition to the indigenous communities, there are over 200 identifiable settler communities in the GTA. And, in addition to the physical cultures produced by the indigenous peoples, every one of those settler communities brought with them various physical cultural forms from different regions of the world, different countries, and different parts of those countries.

This is the context in which we asked our original research question: "how many different forms of physical culture do people participate in in the GTA?"

At the time of writing, there are over 120 activities on https://GTActivity.ca, and we have a list at this time of over 250 activities. The activities that are currently included are a result of research by the research team; for each activity we are including video and still images of the activity, a description of the activity, and some cultural and geographical information (including a map of locations where people participate in the activity). These original activities represent a template as we are entering the citizen science phase of the project. Citizens of the GTA are encouraged to add new activities, and/or add to and/or correct information about the activities already posted. We expect that the site will eventually include many hundreds of activities, and will provide a record as some activities 'die out' and others are introduced by newcomers or produced in Canada.

Application
Given that there is no precedent for an archive of physical culture in one very large community, it is difficult to anticipate the uses to which this publicly accessible web site will be put.
As we have been adding activities to the site, and struggling with issues of classification, several new research ideas have occurred to us, and we expect that others will find the data useful for various research and policy projects.

Some possible practical uses of the site may include the following:

1) The site may help to connect communities of practice across the GTA

2) The site may help to connect individuals with particular activities – either because they remember the activity from before they came to Canada, or because they see an interesting activity that they would like to try.

3) The site may help to broaden our sense of what constitutes physical activity and active living, and will possibly lead to greater inclusion in measures of physical activity.

4) The site may help to identify, connect, and confirm particular communities in the GTA through their practice of particular activities.

5) The site will be a resource for all of the community, one in which all of the community's physical cultural forms are reflected.

Other suggestions are welcome.

Part 2: Background

In 2006, Yuka Nakamura and I wrote a research report for Sport Canada / Multiculturalism Canada title, Sport and Multiculturalism: A Dialogue.

This project is giving us an opportunity to test some of our ideas in that report, and to provide answers for some of the questions we raised. These tests and answers will derive from additional data collected through secondary source research and interviews with key informants in various communities and/or associated with particular physical activities.

These data will be accessible to other researchers, and we suspect that they will lead to many other ideas for research and practice than the ones outlined below.

Life Cycle of Physical Cultural Forms

One major research question concerns the life cycle of various physical cultural forms.

Which activities come to Canada, and which are left in the country of origin? So far, we have heard that some activities that require specific equipment, or some that require particular spaces in which to participate, may not be brought to and practiced by newcomers in Canada. Other activities may be considered to be culturally inappropriate for Canada – e.g., activities that may involve uses of animals in a way that may be illegal, or considered inappropriate in Canada; or activities that may involve a level of risk to the participants that would be considered inappropriate in Canada.

Some activities do not survive the first generation of immigrants to Canada – they 'die out', but that process of dying out involves social conditions that appear to be connected to processes of integration (e.g., when the children of the first generation become well integrated and socialized into 'Canadian' physical culture through participation in schools and community; or when the first generation's embrace of 'Canadian' culture for their children leads them not to pass on physical cultural forms to their children).

Some activities become quite well established, then 'die out', and are then revived by a new generation of immigrants. For example, economic problems in Ireland in the mid 2000s led to a new wave of young Irish immigrants to the GTA, and to the revival of hurling and camogie – games that had 'died out' in the GTA in the 1980s.

And some activities survive the first generation and become more well established in Canada. Our data show that, for the most part, the activities that survive are ones that become more integrated into the multicultural community, attracting participants from outside the original immigrant community. Some of the activities are becoming / have become quite well established in the wider community (e.g., cricket [a revived sport], salsa dancing, judo, and tai chi).

Our research will continue to drill down more deeply in an attempt to understand the life cycle of physical cultural forms.

Physical Culture and Integration

Integration is a complex process. Many immigrant families want to learn about and participate in Canadian culture, and maintain aspects of their culture of origin. People do not suddenly 'switch off' being English, or Syrian, or Vietnamese when they arrive in Canada, and immigration is an extended process.

Federal government policies after 9/11/01 reacted to a fear of 'ghettoization' of new immigrant communities by discontinuing financial and other support for single community cultural activities (including physical culture) and only supporting cultural activities that involved some aspect of integration between communities.

Our research appears to be showing two components of integration:

1) There is no reason to be concerned about 'ghettoization' (as indicated by an extensive body of literature), and that single community activities do not appear to last beyond the first generation. They either 'die out' or they integrate to include other communities by the second generation.

2) Activities that do go on to integrate add to the physical cultural repertoire of all Canadians in the region where the activities take place. And these physical cultural forms help to provide a meeting place between new Canadians from different cultures, and between new Canadians and well-established Canadians. Similar integrative activities are occurring as more well-established activities such as curling are reaching out to newcomers in an attempt to counter the decline in participation and the reputation of the sport in many areas as an activity for older Canadians.

Policy and Politics

Our research indicates that support for physical cultures associated with different ethnocultural communities varies greatly between provinces and between municipalities. For example, in 2006 we found that Calgary provided a great deal of accessible support for growing communities of new Canadians, while in Edmonton accessing the support was a great deal more complicated. We will be exploring the support available in the GTA, from both municipalities and the Ontario government.

The federal government is less involved, although it is striking that Sport Canada has never developed a policy related to multiculturalism. While there are regulations and support concerning disability, female and indigenous inclusion, and language equity, no policy has been developed to support multicultural inclusion. Sport Canada has always maintained that sports have an 'open door' policy, but it is striking that while naming certain communities for inclusion, Sport Canada has seen no need to name multicultural communities.

Our interviews and secondary research will also examine how physical cultures are being used in policies for refugee settlement and other forms of newcomer inclusion.

Finally, our research and that of others indicates the importance of physical cultures to Canada's trade and foreign policy. As Eriksen noted, with regard to sports: "The transnational networks developed selectively through sports, thus, create structures of relevance that can be exploited for other purposes (2007, p. 158).

Reference
Hylland Eriksen, T. (2007). Steps to an ecology of transnational sports. Global Networks, 7(2): 132-165.

DORSCH, KIM D.

University of Regina
D. Paskevich, H. Riemer, R. Schinke
Standard Research Grant 2006

Psychological Skills and Factors Related to Ice Hockey Officials' Coping and Performance

Project Summary

Research focusing on the development of psychological skills in sport, has been conducted primarily with athletes and coaches. However, we know little on how to assist officials to enhance their performance. Thus, the general objective of this research was to better understand ice hockey officials' experiences in their sport and factors that influence their performance. More specifically, this research aimed: (a) to explore motives for becoming an ice hockey official, (b) to identify sources and determine the extent and levels of stressful experiences, (c) to identify coping strategies used, and (d) to identify skills necessary for successful officiating performance.

Despite popular perception, officials report moderate levels of stress due to officiating; however numerous potential stressors were identified. Focusing on changing the situation was the most prevalent coping style used. Other psychological skills that increased with certification level included goal setting, concentration, confidence levels, and the ability to remain positive and calm. The complexity of officiating skills was identified.

Research Methods

A mixed methodology involving both quantitative and qualitative methods was used. The project received approval from the University of Regina's Research Ethics Board and was supported by Hockey Canada and provincial governing bodies.

Quantitative sample. The final sample included 265 officials (91.7% *males*; 8.3% females) from Level 1 (n = 63), Level 2 (n = 75), Level 3 (n = 86), Level 4 (n =29), Level 5 (n = 8), and Level 6 (n = 2). The mean age of officials was 28.2 years (SD = 13.9, Range = 10 to 59 years) with an average of 9.89 years (SD = 9.8 years, Range = 1 to 42 years) officiating experience. Two provincial associations provided lists of all registered officials. Officials in Levels 1 through 4 were randomly selected and contacted with invitations to participate. Attempts were made to contact all officials in Levels 5 and 6.

Qualitative sample. Twenty-five interviews with male referees certified in Levels 1 through 4 and 7 interviews with female referees certified in Levels 1 and 2 were conducted. Participants were recruited through their provincial hockey association. All interviews were semi-structured, audiotaped, and transcribed verbatim. All analyses were conducted with the assistance of an officiating supervisor who has 17 years of supervising experience.

Research Results

Motives for Officiating. There are intrinsic (the desire to stay involved with the sport, to stay active, and to develop skills), extrinsic (financial), and socially-related (the influence of relatives, friends, and coaches) motives for becoming an ice hockey official that may differ between genders. Effective recruitment strategies would include utilizing coaches and/or parents to support and encourage officiating as a way to stay involved in the sport.

Sources and Intensity of Acute Stressors. Despite identifying numerous sources of stress within the sport, officials, on average, reported feeling only moderate levels of stress. Three main categories of stressors were apparent: (a) fear of mistakes, (b) verbal and physical abuse from players, coaches, and spectators, and (c) working with a partner official. Officials in the higher levels felt significantly more stress from fear of mistakes than those in the lower levels. Female officials also reported having to deal with inappropriate sexual and gender-related comments from players, coaches, and spectators.

Extent of Acute Stressors. The stressors experienced most often included making a wrong call, verbal abuse by coaches, being in the wrong location to make a call, and supporting a partner official after they make a wrong call. While threats of physical abuse were scarce in the lower levels (reported by 15.9% of Level 1 officials and 18.7% of Level 2), these incidents did rise to a somewhat alarming rate as the competitive level of hockey increased (27.9% of Level 3, 44.4% of Level 4, and 25% of Level 5 officials reported being threatened at least once per season or more).

Coping Styles and Strategies. Officials are more likely to try to change the situation than deal with their emotional reactions within the situation. Officials in the higher levels as compared to the lower levels reported (a) using more goal setting strategies, (b) feeling more confident in their officiating abilities, (c) feeling better able to concentrate during games and able to handle unexpected situations better, (d) performing better under pressure, and (e) staying more positive and calm during games.

Officiating intentions. The vast majority of the officials surveyed intended to return to officiating in the next season (88.6%). However when asked if they intended to become certified at the next level, only 45.4% of Level 1 and 2 officials and 14.5% of Levels 3 to 6 officials replied positively.

Categories of officiating skills and abilities. Skills necessary for successful officiating were categorized into five themes: (a) Judgment, (b) Psychological skills, (c) Physical characteristics, (d) Communication, (e) Knowledge, and (f) Application.

Limitations. The sample included very few level 5 and 6 officials and females. Attempts to target these populations are ongoing. There is also the possibility of a biased sample. For example, those who chose to become involved are also those who are highly committed to officiating and may not be representative of the entire population.

Policy Implications

One of the defining principles guiding the Canadian Sport Policy is that by 2012 the sport environment will be focused on development. Fundamental to achieving this goal is that all participants have the right to be provided with "a safe and secure environment" (p. 14). It is the responsibility of the on-ice official to make the game "fair" and "safe" (Hockey Canada, n.d.). Consequently, from recreational to professional levels, officials are needed to maintain the safety of the ice hockey environment. But one cannot forget the safety of the

official themselves. The results of this research would suggest that officials experience a great deal of abuse, which is impacting their sport experience. Steps need to be taken to ensure officials are safe, particularly when these officials are children.

Next Steps
Numerous questions have arisen from this research. For example, reasons why officials are choosing not to go further with certification needs exploration. So too does the exploration of other performance factors and ways to assist officials gain valuable psychological skills. Finally, as one of the most cited solutions to the retention of officials is the inclusion of supervision and mentorship, ways to most effectively use this scarce resource needs to be explored.

Key Stakeholders and Benefits
The training of officials is an interesting dilemma as there is really nowhere for officials to practice their skills. Current training protocols focus mainly on rule knowledge and positioning. However, this research suggests that more intangible factors (e.g., psychological skills and judgment) are also crucial. Application of the knowledge discovered will be beneficial in the development of officiating training and development.

Key stakeholders include:
- Hockey Canada
- Provincial governing bodies
- National Hockey League
- Sport Officials Association of Canada

FRASER-THOMAS, JESSICA
York University
Post-Doctoral Stipend 2006

Understanding Adolescents' Positive and Negative Developmental Experiences in Sport

Project Summary

Currently, there is considerable public concern about youths' healthy physical and psychosocial development. As such, researchers in both developmental and sport psychology highlight a need to better understand how organized sporting activities may be contributing to youths' positive or negative development. The purpose of this study was to gain understanding of adolescents' positive and negative developmental experiences in sport. Athletes suggested their sport involvement facilitated many positive developmental experiences related to challenge, meaningful adult and peer relationships, a sense of community, and other life experiences. Athletes also highlighted negative developmental experiences related to poor coach relationships, negative peer influences, parent pressure, and the challenging psychological environment of competitive sport.

Research Methods

Participants included 22 competitive swimmers aged 14-18, purposefully sampled for maximum variation (i.e., mixed genders, clubs, coaches, competency levels, and engagement levels). Participants engaged in a semi-structured interview (approximately 1 hour) with questioning focused on participants' positive and negative developmental experiences in competitive swimming during adolescence. Data was analyzed using previously established guidelines (Tesch, 1990).

Research Results

Tables 1 and 2 present the findings that emerged from the data. Positive developmental experiences were grouped into five categories related to: challenge, meaningful adult relationships, meaningful peer relationships, a sense of community, and other life experiences. Negative developmental experiences were grouped into four categories related to: poor coach relationships, negative peer influences, parent pressures, and challenging psychological environments.

Generalizations to other sport environments should be done with caution due to substantial differences across sport programs; however, as the first study to gain such in depth understanding of adolescents' developmental experiences, findings serve as a springboard for future investigation and understanding of developmental experiences in other sport programs. It should also be noted that more females than males participated in this study. As such, future investigation should aim to gain a more comprehensive understanding of both genders' developmental experiences in sport, and potential differences in male and females' experiences.

Policy Implications

Findings highlight the critical importance of appropriate training for coaches of adolescent athletes. First, many athletes outlined concerns regarding coaches' ability to understand adolescents' psychological, social, and emotional development, highlighting a need for improved curricular content and practical learning in this area. Second, findings emphasize a 'disconnect' between coaches' perceptions of their behaviours and athletes' perceptions of coaches' behaviours. As such, coach certification programs and pedagogical workshops should place additional weight on the importance and value of self-evaluation and peer-evaluation, and should outline effective methods for conducting such evaluations. Third, findings highlight coaches' important roles in facilitating adolescents' positive adaptation to the stressful environment afforded by competitive sport. Focusing more on communication skills, and strategically weighing the provision of a challenging environment with opportunities for success in that environment, are of utmost importance.

Next Steps

Findings suggest many new research questions, areas for future investigation, and subsequent implications. The following are a few examples:

- Developmental Experiences: Do developmental experiences vary across different sport environments (e.g., different types of sports, competition levels, investment levels)? How can positive developmental experiences be facilitated in all sport environments?
- Coaches: Do certain positive coach-related experiences 'balance out' or neutralize negative experiences? Can coaches facilitate adolescents' positive adaptations to sport-related challenge and stress?
- Parents: How are different youth sport programs addressing parent education, and how effective are they in doing so? Can more innovative methodologies (e.g. journals, ethnography) be used to gain deeper understanding of parent-adolescent relationships in sport?

Key Stakeholders and Benefits

With growing concern for youths' healthy physical and psychosocial development, this research is timely and of wide reaching interest. Findings serve as a starting point for future modifications and interventions in youth sport programming aimed at enhancing healthy development and facilitating prolonged engagement. Sport Canada is encouraged to disseminate freely.

Table 1
Positive Developmental Experiences: Categories and Themes

Category	Themes	N
1. Athletes were challenged	1. Sport structure demanded a strong work ethic.	18
	2. Coaches demonstrated belief in athletes' capabilities.	13
	3. Sport required commitment, discipline, and perseverance.	13
	4. Coaches provided meaningful constructive feedback.	12
	5. Coaches taught and guided the goal setting process.	8
	6. Coaches pushed athletes and held high	7

	expectations.	
	7. Parents, siblings, and peers influenced athletes' work ethic	7
2. Athletes had meaningful adult relationships.	1. Coaches made special connections with athletes	15
	2. Sport provided an opportunity to develop special relationships with parents	13
	3. Coaches were good communicators.	10
	4. Coaches served as adult role models.	6
3. Athletes had meaningful peer relationships.	1. Sport provided an opportunity to develop close and unique friendships built on common interests.	16
	2. Club structure provided opportunities to develop special relationships with different aged peers.	15
	3. Sport provided opportunities for leadership and role modelling.	12
4. Athletes experienced a sense of community.	1. Clubs were family focused.	10
	2. Clubs hosted events.	7
5. Athletes had other positive life experiences.	1. Sport structure, coaches, and peers facilitated good time management skills.	9
	2. Sport travelling fostered independence.	9
	3. Sport experiences facilitated personal attributes.	9
	4. Sport experiences guided life values, interests, and careers.	9
	5. Sport provided opportunities to overcome stress and develop resistance.	5
	6. Sport served as a context to develop good communication skills.	4

Note. *N* represents number of participants that discussed a theme.

Table 2
Negative Developmental Experiences: Categories and Themes

Category	Theme	N
1. Athletes had poor relationships with coaches	1. Coaches were poor communicators	9
	2. Coaches had favorites	9
	3. Coaches were intimidating	7
	4. Coaches modeled a poor work ethic	6
	5. Coaches demonstrated inappropriate behaviors	6
2. Athletes were negatively influenced by peers.	1. Peers were jealous and negative towards each other.	4
	2. Peers demonstrated a poor work ethic	3
3. Athletes were burdened with parent pressure.	1.Parents pressured athletes to excel	4
	2. Parents pressured athletes to stay in the sport	3
4. Athletes experienced a challenging	1. Sport provided a context for excessive stress.	6
	2. Sport provided a context for negative self-	3

psychological environment	perceptions.	

Note. *N* represents number of participants that discussed a theme.

FRASER-THOMAS, JESSICA

York University
J. Côté, N. Holt, T. Beesley, D. MacDonald, K. Tamminen
Standard Research Grant 2008

Assessing Youth Sport Programs' Facilitation of Positive Youth Development

Background / Context / Objective

With growing societal concern for youths' healthy development, extensive literature suggests organized leisure activities serve as optimal contexts to foster positive youth development (Larson, 2000), and sport has consistently been found to be the most popular organized activity among youth (Hansen & Larson, 2007). While youth's involvement in sport is associated with numerous positive outcomes (e.g., increased self-esteem, competence, academic achievement), it is also associated with negative experiences and outcomes (e.g., increased alcohol use, low moral reasoning) (See Zarrett et al., 2008 for a review). One possible explanation for these apparently conflicting findings, is that existing research has typically viewed sport as a single entity and largely overlooked the significant diversity in program philosophies, structures, goals, atmospheres and coaching approaches (Gould & Carson, 2007). As such, the purpose of this project was to examine associations between sport program characteristics and youths' developmental experiences within these programs.

Research Methods

Participants included 920 youth athletes aged 10-18 (M=14.2, SD=2.4; 53% male) in 32 different sports (80% team, 20% individual; e.g., soccer, competitive swimming, hockey, volleyball, basketball, field hockey). Given the purpose of the study, participants were recruited from varied sport programs; they were from diverse sport contexts (36% school, 64% club), were of mixed levels/abilities (i.e., 39% regional, 55% provincial, 6% national), and came from across communities (population 105-1.3 million) in three provinces (i.e., Ontario, Alberta, Nova Scotia).

To assess sport programs' characteristics, participants addressed numerous questions about their sport program, leading to the operationalization of 12 program-level variables: sport type (team, individual), sport context (club, school), number of coach(es), team manager (yes, no) age of coach(es), sex of coaches, training time (per year), competition time (per year), team sex (coed, same sex), age range of athletes, size of team, and community size. Participants' demographic data was also collected, leading to 5 individual-level variables: age, sex, years of involvement, birth month, and competition level.

To measure youths' developmental experiences in their sport programs, participants completed the Youth Experience Survey for Sport (YES-S; MacDonald et al., 2012), a 37-item tool measuring youths' experiences in 5 domains: (a) personal and social skills, (b) cognitive skills, (c) goal setting, (d) initiative, and (e) negative experiences.

Analyses involved five separate multiple regressions with the five domains of the YES-S (above) serving as the five dependent variables. Given the exploratory nature of the investigation, a stepwise regression model was used, with all 17 independent variables included in each of the five models.

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Results

In the first regression analysis, we found 7% of the variance in personal and social skills was attributable to predictor variables. Significant predictors were sport type, training time, and team sex. Specifically youth involved in team sports, who were involved in more training, and were members of mixed-sex (co-ed) teams had higher scores in the area of personal and social skills.

In the second regression analysis, 7% of the variance in initiative was attributable to predictor variables. Coach sex was a significant predictor of initiative development, meaning programs where coach and athlete sex were matched (i.e., males coaching males, females coaching females, or males and females coaching co-ed teams) were associated with more developmental experiences in the area of initiative. In addition, age was a significant predictor of initiative, meaning older athletes had more developmental experiences in the area of initiative.

In the third regression analysis, 9% of the variance in cognitive skills was attributable to predictor variables, with age being the only significant variable. Accordingly, older athletes had more developmental experiences in the area of cognitive skills. Finally, in the fourth and fifth regressions, there were no significant predictors, meaning none of variance in goal setting and negative experiences was attributable to the 17-predictor variables.

Policy Implications and Future Directions

Findings have important implications for enhancing sport participation among youth, and highlight areas for further research.

First, we found higher amounts of training time was associated with higher scores among youth in the area of personal and social attributes. The Long Term Athlete Development Model offers recommendations for training and competition percentages throughout development, with an increasing focus on competition with age and level. Clearly, while competition is important for the development of technical skills and tactical strategies, it appears that training may offer a more beneficial context for the development of important personal and social skills, and should not be overlooked. As such, it is important that policy and practice recognize the value of training time versus competition time in developing the person within the athlete.

Second, we found mixed-sex teams were also associated with higher scores in the area of personal and social attributes. These findings highlight the need to consider methods to create more opportunities for co-ed youth sport involvement, whether through exhibition games, training camps, etc.

Third, team sports were also associated with the higher scores in the area of personal and social attributes. One would assume that this is due at least in part to the interactive nature of team sports. Future research may want to focus on exploring how individual sports can also better facilitate personal and social attributes such as leadership and teamwork.

Fourth, we were particularly interested by the finding that coach-athlete sex match was associated with higher scores in the area of initiative. These findings suggest that when considering initiative development, we should be promoting females coaching females, males coaching males, and mixed-sexes coaching co-ed teams at youth levels. As such, these results highlight the continued importance of the Women in Coaching

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program. In particular, the program may want to prioritize the training and placement of female coaches on female-only and co-ed teams at youth levels. Future research may also aim to focus on why sex-matched coaches may be doing a better job of facilitating initiative among youth sport participants.

Finally, we feel it is also important to note non-significant findings of our study. We were somewhat surprised by our findings that the sport program characteristics examined <u>did not</u> predict youths' development in 3 of the 5 domains (cognitive skills, goal setting, or negative experiences) and that 8 of the 12 program characteristics examined (i.e., sport context, number of coaches, team manager, age of coach(es), competition time, age range of athletes, size of team, community size) did not predict any developmental experiences. Further, when program variables were significant, they only accounted for a very low amount of variance in developmental experiences. Despite this, past research highlights that youth sport programs have the to potential to facilitate both positive and negative developmental experiences and outcomes (Zarrett et al., 2008), so there is clearly more to investigate around this research question. Future research and policy should perhaps shift focus from program-level variables to other factors <u>within</u> programs that may be contributing to youths' developmental experiences in sport. For example, a growing body of literature is highlighting the critical role of the coach in facilitating positive developmental experiences among youth (e.g., Camiré et al., 2011), emphasizing the need to better understand coaches' roles and characteristics, in addition to their coaching processes and mechanisms, in order to best optimize resource allocation and distribution to facilitating youths' positive development.

Key Stakeholders and Benefits
NSOs, PSOs, True Sport, Women in Coaching, CS4L, Kidsport, PHE

FRASER-THOMAS, JESSICA

York University
P. Safai, P. Donnelly
Standard Research Grant 2011

Trickle down effect? Exploring the influence of the Olympic Games on preschooler sport participation and development

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Background / Context / Objective

The benefits of sport participation among youth are well recognized, yet little work has focused on understanding sport participation among very young children, despite growing participation at increasingly early ages. The first objective of this project was *to explore sport participation and development among preschoolers.* Findings suggest that while parents often believe preschoolers experience extensive benefits, there are many shortcomings within programs hindering optimal developmental outcomes. In our study, sport programs typically offered limited physically active time, high amounts of instruction and feedback, and few examples of positive relationship building. Modifications surrounding program structure (e.g., smaller groups, shorter sessions) and coaching (e.g., training requirements focused on group management, communication skills, and child development) may lead to more optimal outcomes for preschoolers through sport; however, there appears to be a need for additional research in and development of strategies to improve preschooler engagement and ability in sport. Further research may be particularly worthwhile, focusing on developmental outcomes associated with organized sport participation, in comparison to other forms of physical activity such as unstructure play, dance, etc.

The second objective of this project was *to examine preschoolers' sport participation patterns pre- and post Olympic Games.* There is a commonplace assumption that exposure to major games such as the Olympics positively influences sport and physical activity behaviours at the grassroots level (i.e., the 'trickle down effect'), but there is little to no empirical evidence to support this effect broadly (e.g., Craig & Bauman, 2014; Donnelly et al., 2010), and no research conducted among very young children specifically. Parent proxy data for 30 preschoolers suggested no significant difference in frequency of sport/physical activity participation before and after the Games. Given high rates of study withdrawal (69% from pre- to post-Games) and homogeneity of the sample, additional investigation of the potential 'trickle down effect' is necessary among this particular age group. Major Games are also commonly seen as showcasing sport as 'good' (e.g., friendship, respect, fair play), yet we have little understanding of if and how these values may be transferred to very young children. The third objective of this project was *to explore the influence of the Olympic Games on preschoolers' psychological and social development.* Parents and childcare providers saw the Games as a vehicle to teach preschoolers about pro-social values (e.g., work ethic, perseverance, teamwork, role models), and the complexities of winning and losing (i.e., doing one's best, being a good sportsperson, experiencing disappointment and pride). Adults also suggested preschoolers gained an enhanced sense of national identity through the Games, as evidenced by their recognition of and excitement surrounding the Canadian flag and national anthem, coupled with adult-facilitated discussion about other countries' geographies, flags, and cultures; a lack of discussion of plural national identities within Canada's multi-cultural context may have been a product of the largely homogeneous sample. In sum, the Games, coupled with active adult engagement, appeared to offer a platform for the facilitation of some specific developmental and educational outcomes among preschoolers. As children are suggested to be among the most significant beneficiaries of

the Olympics/Olympic legacy, enhanced focus on educational resources (e.g., curricula, materials, activities) to explicate the connection between the Games and pro-social norms/values may be beneficial.

Research Methods

Data was collected in the spring/summer of 2012 just prior to the summer Olympic Games in London, England, and again in the spring/summer of 2013, one year following the Games. Participants were recruited through 16 childcare centres located in three diverse urban centres in Ontario, Canada (populations approximately 2.5 million, 700,000, and 20,000).

The first and third research objectives (i.e. related to preschoolers' development) were addressed through interviews with parents of preschoolers (N=19) and childcare providers (N=8), as well as focus groups with preschoolers (N=57, ages 2-5). In children's focusgroups, drawing was used as a tool to facilitate conversation related to play, sport, and the Olympics.

The second research objective (i.e., related to preschoolers' pre- and post-Olympic Games sport participation) was addressed through a parent-proxy survey using a 7-day sport and physical activity recall tool (adapted from Kowalski et al., 2004), as well as an Olympic Games Exposure Log, in which parents recorded children's media and discussion-based exposure to the Olympic Games. 30 parent participants completed the survey in both 2012 and 2013; high dropout rates (n=66; 69%) were attributed to childcare turnover rates and lifestyle challenges (i.e., lack of time).

Research Results

Study 1 addressed the first objective *to explore sport participation and development among preschoolers.* Findings reflect that parents and childcare providers perceived benefits paralleling those of youth sport. Adult participants spoke most prominently about preschooler sport as a platform for psychosocial and life skill development (i.e., interpersonal skills, confidence, competence, being a team player, learning to win and lose), in addition to being a pathway to physical health and motor skill development; however, there was often little consensus on whether developmental outcomes were actually attained, and what the mechanisms and processes were within preschooler sport, which facilitated such development. For example, while programming was seen as an opportunity for fostering life skills and maximizing teachable moments, parents suggested coaches were often ill prepared to teach and manage their group, and rarely focused on children's personal development. Further, teamwork and sense of team were highly valued by parents, yet most preschoolers were unable to cognitively process complexities of cooperative play. Additionally, it was suggested sport served as a venue for physical health, fitness, and motor skill development, but preschoolers appeared to have minimal opportunities to be active within their sport programs, and the overly-structured approach to teaching motor skills coupled with excessive feedback often led to frustration and a stifling of children's creativity. Consistent with past submissions among older youth, sport appears to have the potential to facilitate positive developmental outcomes for preschoolers; however, considerable program modifications are required to consistently assure such benefits, coupled with further research to assess the effectiveness of such programs moving forward.

Study 2 addressed the second research objective *to examine preschoolers' sport participation patterns pre- and post-Olympic Games*. Parent proxy data for a small final sample of preschoolers (N=30) suggested no significant difference in frequency of sport/physical activity participation before and after the Games. Paired

sample t-tests indicated preschoolers participated in a mean 10.3 (SD=7.5) activity bouts/week in 2012, and 12.1 (SD=6.5) activity bouts/week in 2013 (t(29)=.47, p=.64). Although pre- and post-Games means suggest a (non-signficant) trend of increasing participation, it should be noted that the 30 participants who remained in the study, typically recorded very high levels of Olympic exposure (i.e., viewings, conversations). Given limitations of high rates of study withdrawal (69% from pre- to post-Games) and homogeneity of the sample, further investigation of the potential 'trickle down effect' among this particular age group is necessary.

Building upon findings from Study 2, Study 3 *explored the influence of the Olympic Games on preschoolers' psychological and social development.* While the children showed relatively minimal awareness of the Games both immediately prior to and one year following the 2012 Games, most childcare providers and parents felt the Games positively influenced the children. At home, Olympic-related activities involved watching the Games on television or the Internet followed by conversations about the Games. In childcare settings, activities also included conversations about the Games (e.g., circle time, teachable moments), as well as creative activities (e.g., creating flags, colouring the rings, counting medals), boards/walls (e.g., media clippings, pictures), and physical activity/games (e.g., races, modified Games' events). Both parents and childcare providers appeared to place greater focus on the Games as a tool to teach children positive life skills (i.e., the value of hard work, the value of practice, work ethic, athletes as role models, the value of being part of a team, teamwork, perseverance), than on increasing their child's sport participation. There also seemed to be a large focus on teaching preschoolers about nationality, culture, and identity, with a focus on Canada, the Canadian flag, as well other countries of the world; national identity was often suggested as the most clearly remembered Olympic-related concept among preschoolers; however, a lack of discussion of plural national identities within Canada's multi-cultural context may have been a product of the largely homogeneous sample. Adults also drew upon the hierarchical structures of medals (i.e., gold, silver, bronze = first, second, third) to teach important lessons around winning and losing, often "softening" the outcome to emphasize the positive in not winning gold (e.g., "at least you tried," "everyone is a winner" or "just because that athlete didn't win the gold, it doesn't mean they didn't try their hardest"). While competition outcomes were usually too complex for younger preschoolers, adults suggested older preschoolers came to understand defeat and the accompanying emotions of disappointment, in contrast to winning, and the subsequent emotions of pride and happiness, while recognizing good sportspersonship and role models. Overall, age seemed a critical determinant for whether preschoolers could capture the perceived positive messages associated with the Games, with 4 years of age typically representing the tipping point for relevance, excitement, or energy around the Games. Aligning with findings of Study 2, childcare providers suggested family engagement with the Olympics was a determining factor in whether and how children connected to the Games. As children are suggested to be among the most significant beneficiaries of the Olympics/Olympic legacy, more research is necessary to determine if this claim indeed holds true, why children may be among optimal beneficiaries, and how to in turn increase children's opportunities for positive developmental experiences through major Games acutely, as well as through sustained and long-term community-based programs and initiatives.

Limitations
There were many challenges associated with conducting longitudinal research with young children (e.g., reliance upon parent-proxy surveys, high turnover rates at childcare centres, facilitation of meaningful discussion with young children). Study 2 had a particularly high participant dropout rate (N=96 participants in 2012; N=30 participants in 2013; 69%). Additionally, adult participants were notably homogenous in terms of social location (i.e., predominately white, financially stable, some post-secondary education).

Policy Implications and Future Directions

Findings of Study 1 suggest preschooler sport programs are not consistently delivering quality programming or facilitating optimal development. Greater consideration of coaches' preparedness appears warranted; coach training should be preschool age-specific, focusing on group management, practice planning and design, effective communication, and children's stage of cognitive and social functioning; program structure modifications (i.e., shorter session duration, increased physical activity, modified rules) may also be beneficial.

Results of Study 2 do not uphold the notion of Olympic-inspired increased sport/physical activity participation among young children (i.e., the 'trickle down effect'). As such, policy-makers, program developers as well as physical activity/sport organizations at all levels (i.e., federal, provincial-territorial, municipal) should focus research and action on improving mechanisms by which to promote and enhance opportunities for participation (including behaviour change) through the Games, as well as outside the Games.

In Study 3, we found the Games did appear to have the potential to facilitate beneficial outcomes among preschoolers in areas of psychosocial development (e.g., perseverance, teamwork, sportspersonship, national identity); these attributes are not traditionally encompassed when considering the 'trickle down effect'. Critical attention from policy-makers, program developers as well as physical activity/sport organizations to this educational element of high performance sport may be valuable. One potential output could be the development of age-appropriate educational curricula, materials and activities that explicate the connection between the Games and pro-social norms/values for utilization among childcare providers, community programs, and parents.

Key Stakeholders and Benefits
- National Sport Organizations
- Provincial Sport Organizations
- Municipal Recreation Programmers
- Community-Based Sport Programs (e.g. Timbits)
- Canadian Sport for Life (LTAD)
- Coaching Association of Canada
- Canadian Olympic Committee
- Early Childhood Education (Provincial and National)
- Early Years Centres (e.g. OEYC)

FRISBY, WENDY
University of British Columbia
L. Thibault
Standard Research Grant-RT Stipend 2006

Combating Social Exclusion in Sport and Recreation through Participatory Policy Development

Project Summary

The purpose of this study was to examine how experiences with physical activity for recent immigrant Chinese women living in Vancouver can inform Canadian sport and recreation policy at the local, provincial, and national levels to increase their participation. The Chinese population is the largest 'visible minority' group' in Canada, yet little is known about the role of physical activities in local community centres in their settlement into a new country. While many important sport and physical activity initiatives are aimed at children and youth, much less emphasis is placed on adults or immigrants, which is surprising given immigrations rates, the aging of the Canadian population, and the related costs to the health care system. Our focus was on women because their sport and physical activity participation rates are lower than men and our previous research has shown that women want to be positive role models for their children, they desire the health benefits, and they have a major influence over sport participation decisions within the family (Frisby, Reid, & Ponic, 2007).

Research Methods

Multiple qualitative data collection strategies included:
- an analysis of documents related to multiculturalism, sport and physical activity participation,
- interviews with immigrant Chinese women in Mandarin, Cantonese or English (n=50),
- interviews with local, provincial, federal policy makers (n=36) and staff from an immigrant service agency (n=5).

In addition, we organized a two-day workshop that brought the immigrant women, policy makers, immigration workers, and researchers together to discuss the findings and identify action steps that continue to be tracked through ongoing email communications with study participants.

Research Results

Our analysis reveals that involvement in community sport and physical activity has an important role to play in helping immigrant Chinese women with settlement. While many of them expressed interest in continuing activities done in their homeland, they were also interested in learning more about "Canadian activities" to improve fitness, decrease stress and social isolation, be good role models for their children, and adjust to their new country. Yet, most receive no information on the opportunities available to them.

Even though 1 in 5 Canadians are born outside the country (Statistics Canada, 2008) and we were able to find sport and recreation equity policies for girls and women, persons with disabilities, people on low income, and aboriginals - no policies were found related to multiculturalism and sport or physical activity. This confirms the findings of an earlier study by Donnelly and Nakamura (2006). Local, provincial and federal policy makers saw multiculturalism as an important policy development area, but were often unsure how to proceed because of

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the complexities involved. Government jurisdictions that create divisions in how sport, physical activity, and recreation are defined, resourced, and operationalized are a contributing factor.

Another overall finding was that sport and physical activity are not seen as a priority by immigration workers because of the emphasis placed on housing and employment, even though some had portfolios in the areas of health, community services, and public education. Yet the immigration workers saw potential health benefits for their clients by developing partnerships with local community centres to promote sport and physical activity programs, and expressed interest in being involved in future discussions on the topic.

Several action ideas on how to promote inclusion were generated when the new Canadians, sport and recreation policy makers, immigration workers, and researchers came together at the workshop. These included: providing free passes in the first year (and in subsequent years for those who continue to live on low income); partnering with immigration services; providing free facility tours and information sessions; childcare; multi-lingual communications, and family instruction in "Canadian sports."

Policy Implications

The results of this study contribute directly to the Canadian Sport Policy goal, that has been adopted by the provinces, of increasing access and equity in sport for under-presented groups including visible minorities. It also informs Leisure Access Policies in recreation departments/community centres in Canadian municipalities.

We are preparing a Multiculturalism, Sport, and Physical Activity Workbook to share the 'learnings' obtained through this study with others and we plan to make it available through the Leisure Information Network (LIN). It is not our intent to provide a simple 'recipe' for policy development that can be implemented in other communities, because needs and interests differ both within and between different cultural groups. Rather our intent is to emphasize a process that includes partnerships and citizen engagement that can be adapted by different individuals, groups, and organizations to meet their specific aims and circumstances.

Next Steps

Replications of this study are needed to determine if the findings can be transferred to other Chinese immigrants and immigrants from other cultural groups. More research with cultural groups that considers intersections with gender, age, social class, disability, sexuality, etc. will enhance our understanding of the importance of sport and physical activity in their lives, the barriers they face, and the distinction, if any, between sport and physical activity for these groups.

Research is also needed on the sport and recreation policy and program development at the local, provincial and federal levels that can build capacity to support the inclusion of new Canadians and increase their participation rates (including those of adults), so they can reap the same benefits as other citizens. In addition, future research should examine multiculturalism, sport, and physical activity policy and success stories in other countries that could serve as a guide to new initiatives in Canada.

Key Stakeholders and Benefits
- Sport Canada and their provincial affiliates
- Canadian Parks and Recreation Association and their provincial affiliates

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- Local sport organizations, clubs, leagues, teams
- Local community centres in municipal recreation
- Non-profit sport organizations (e.g. YWCA, YMCA)
- Immigration and social service organizations
- Local health authorities

GAGNÉ, CAMILLE
Laval University
Standard Research Grant 2007

Influence of Structural and Psychosocial Factors on the Level of Physical Activity of Preschoolers Attending Daycare

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Project Summary
Objectives
- Check the level of physical activity of children aged three to five attending daycare.
- Identify the factors that affect the physical activity of children who attend daycare.
- Identify the factors that motivate educators to get children moving for at least two hours per day (as recommended by the *National Association for Sports and Physical Education*).
- Identify the factors on which should be based the interventions aimed at increasing the physical activity of children attending daycare.

Theoretical framework: Theory of planned behaviour (Ajzen 1991) and the Cohen et al. structural model (2000).

Research Methods
Population: Children aged three to five attending a child care facility, run by the government of Quebec, in the National Capital and Chaudière-Appalaches regions (Quebec, Canada), and their daycare workers.

Sample: Randomly selected child care centres from a list of daycare centres available on the Quebec Ministère de la Famille et des Aînés Web site. The final sample to identify the determinants of behaviour comprised 46 volunteer educators from 20 child care centres and 242 children whose parents agreed to their participation in the study. The sample to identify the determinants of commitment consisted of 174 daycare workers.

Measurement instruments: The psychosocial variables were measured through a self-reporting questionnaire, developed according to the guidelines of the theory of planned behaviour (Ajzen 1991). The structural variables and democratic-style interventions of the educator were measured with certain indicators on the Educative Quality Observation Scale (Bourgon & Lavallée, 2004). The children's physical activity was measured with an ActiGraph GT1M accelerometer, which was worn for four days, from the time they arrived at the daycare centre to the time they left. The accelerometer captured movements every 15 seconds.

Data analysis: Multilevel analyses, simple multiple regression and logistic regression were conducted to help answer the research questions.

Research Results
Children aged three to five participating in this study attended a day care service for an average of eight hours per day. While they were at the daycare centre, they engaged in low-, moderate- or high-intensity physical activity for an average of 53 minutes (SD=23.55) per day. On average, 13 (SD=9.19) of these 53 minutes

involved moderate- to high-intensity physical activity. The following factors account for 19% of the variation in physical activity of children at the daycare centre: the daycare worker's commitment to getting the children moving, their perception that the other daycare workers do or do not get the children moving for two hours per day, the worker's democratic-style intervention, the daycare worker's age, the quality of the material, and the age and sex of the child. The results also indicate that 33% of the daycare workers are not *highly* motivated to get the children moving for at least two hours per day. The following factors account for 85% of the variation in the daycare workers' commitment (motivation) to involving children in physical activity for at least two hours per day: their perception of control in terms of being able to get the children moving, the ethical standard and the worker's perception that individuals who are important to her think that she should get the children moving.

These results suggest that it would be useful to intervene in daycare centres to raise the level of physical activity of children aged three to five. Intervention should specifically increase the motivation of daycare workers who show a lower level of commitment to getting the children moving. This could be done, especially, by removing the perceived barriers (busy schedule, lack of time, inclement weather, etc.). Furthermore, they would need to perceive that the management of the daycare service, the children's parents and their fellow workers support their efforts to get the children moving for at least two hours per day. Child care centre managers and parents must therefore clearly formulate their expectations in this regard. It also seems that involving the children in physical activity is not a significant value for many poorly motivated workers; this aspect should therefore be developed further. For workers who are already motivated to get the children moving, it would be important to intervene to ensure they act on their commitment. The implementation intentions strategy (Gollwitzer, 1993, 1999) could also prove useful in this context. Daycare workers could also facilitate cooperation between children while laying down rules regarding safety and discipline. Lastly, it appears that children are more physically active when the material is of good quality (for example when they are adapted to their needs or foster various dimensions of development). This aspect could therefore be emphasized in daycare services concerned with getting the children moving.

The findings and suggestions presented here are applicable to the sample of daycare workers and daycare centres studied as part of this research. It is possible that the variables that explain the physical activity of children are not the same as those for another sample of daycare workers or child care centres. If this were the case, the intervention methods could therefore be different from those suggested here.

Policy Implications
According to the Long-Term Athlete Development Model proposed by Sport Canada, it is important that physical literacy be developed early in life. To this end, it is important to provide young children with the opportunities to explore and try out a variety of movements. Yet, the results of this study are in line with other findings in the literature and indicate that children aged three to five attending daycare centres are not sufficiently active. The findings of this study are useful particularly for developing or updating the child care centres' educational programs and post-secondary training programs for daycare workers. The results are also relevant to the management of child care centres and groups involved in child care, such as the Association du personnel-cadre des CPE. Organizations such as Québec en forme and Kino-Québec also have an interest because of their concerns about the active lifestyle and health of children.

Next Steps

This study has shown that it is important that daycare workers be better informed of the benefits and risks of physical activity. The findings also indicate that daycare workers do not have a clear idea of what is expected of them regarding the physical activity of the children they are responsible for. They would therefore have to obtain the proper training, equipment and support they need to promote the physical activity of children aged three to five.

Key Stakeholders and Benefits

The Quebec Ministère de l'Éducation, du Loisir et du Sport, Québec en forme, Kino-Québec, the Canadian Society for Exercise Physiology, the Canadian Fitness and Lifestyle Research Institute, Sports Québec, Active Healthy Kids Canada, the Quebec Association des CPE, the Quebec Association du personnel-cadre des CPE, the Canadian Child Care Federation, the Quebec Fédération des kinésiologues, the Canadian Kinesiology Alliance, the Quebec Institut de la statistique and others.

GAGNON, JOCELYN

Laval University
D. Martel, V. Michaud, L. Nadeau
Standard Research Grant-RT Stipend 2006

Strategies Used by Physical Educators to Implement a Program that Encourages Their Students to "Adopt a Healthy and Active Lifestyle

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Project Summary

Essentially, the purpose of this research project is to implement a program, such as Team Pentathlon, in primary and secondary schools to encourage physical activity and study various aspects of the program implementation process. More specifically, we:

- describe the development of the students' physical activities (nature, frequency, and duration of physical activity sessions) throughout Team Pentathlon;
- describe the students' views about their physical educators' actions to encourage them to participate in Team Pentathlon;
- analyze the action strategies used by physical educators to establish a process for "adopting a healthy and active lifestyle" during the implementation of Team Pentathlon; and
- analyze the students' response within their team as part of Team Pentathlon to improve or maintain their level of physical activity.

The analysis of preliminary research data shows that 84% of the students, both boys and girls, who participated in the pentathlon were active or very active during the eight weeks of the program. More specifically, the pentathlon led them to increase the frequency, duration and intensity of their physical activity and diversify their activities by trying new activities and new sports. In fact, the amount of time the participants spent practicing physical activity is well above the recommendations of Quebec, Canadian and US organizations.

Research Methods

Team Pentathlon is an event that takes place over eight consecutive weeks, during which the members of each team of five students must collectively log at least 160 hours of physical activity. There are five activity categories. The 160 hours must include at least 15 hours of aquatic activity, 35 hours of team sports and games, 15 hours of cycling, 35 hours of artistic games and activities and 10 hours of two-person sports and games. A meaningful contribution from each student is imperative for the team to be successful. Five symbolic awards (Award of Excellence, Gold Medal, Silver Medal, Bronze Medal, Honorable Mention) are given out at the end of the pentathlon to the teams that meet those particular standards. Over the course of four training sessions, physical educators are instructed on methods to implement and complete Team Pentathlon. During the pentathlon, the students organize and manage their individual and team activities, as needed, to most effectively fulfill the pentathlon requirements. They record their results daily on a sheet provided for this purpose. Every two weeks, program administrators collect the students' results, entering them on spreadsheets to produce summary reports that they then give to the physical educators. The physical educators, like the students, will use these results to re-adjust their action strategies, as needed, to promote the students' successful response as much as possible.

Since the project started, nine physical educators from primary schools and three from secondary schools have introduced Team Pentathlon to over 1,150 students. Four other physical educators from secondary schools plan to test the program with their students in February and March 2011.

Each morning during the pentathlon, the classroom teacher gives the students a few minutes to record on the sheet all of their physical activity sessions from the day before. This way, the data on the students' physical activity is collected systematically. However, the students' level of practice and, as a result, their level of success, depends in part on the strategies used by their physical educator to educate, support and motivate them during Team Pentathlon. The description of these action strategies is created based on the physical educators' planning (what they want to do) and their reports on what they actually did during meetings with their students. Furthermore, the critical incidents technique (Brunelle et al., 1988) is used to gather descriptions from the students of how their physical educator's actions encouraged them to participate in Team Pentathlon.

It is also important to stress that Team Pentathlon is an event that requires a meaningful contribution from each student to be successful. Interviews are held at the end of the pentathlon with each team of students to determine the individual and team response to improve or maintain the level of physical activity. Finally, during the reporting phase, the students will fill out a questionnaire, giving their opinion on the design and requirements of Team Pentathlon, based on their experiences.

Research Results
Team Pentathlon really does encourage students to be more active over the eight weeks of the program. What's more, most participants said that they have maintained a good level of physical activity after the program. The motivating effect of the pentathlon is observable in both girls and boys. More specifically, 84% of the students, both boys and girls, who participated in the pentathlon were active or very active during the eight weeks of the program. More specifically, the pentathlon led them to increase the frequency, duration and intensity of their physical activity and diversify their activities by trying new activities and new sports. In fact, the amount of time the participants spent practicing physical activity is well above the recommendations of Quebec, Canadian and US organizations.

However, boys and girls do not have the same preferences when it comes to the type of physical activity they practice. Girls prefer individual or artistic activities, while boys participate more in team sports.

Most notably, 85% of students who participated in the pentathlon said that they wanted to do the program again because it really helped them be more active.

Policy Implications
This action research encouraged many students to participate in regular physical activity and sports. In addition, many students who were already active benefited from the program by experiencing new sports or activities that they did not already practice on a regular basis. Lastly, the study helped identify factors that contribute to students being more active (the data for this part of the study is still in its analysis stage).

Next Steps

Since the analysis of the results of our project is not finished, we have not yet fully met all of our objectives. We are presently working on describing the teachers' actions and students' strategies that had a positive impact on physical activity. However, our project has raised new questions. We found that some students who were fairly inactive prior to the pentathlon became active during the program, while others remained completely or fairly inactive. Future research should look at the characteristics of this particular group. It would also be worthwhile to compare the effects of the pentathlon on students from various socio-economic backgrounds. Lastly, it would be interesting to examine the long-term "pentathlon effect" by measuring participants' physical activity on a regular basis after the program is over.

GAVIN, JAMES
Concordia University
Standard Research Grant 2009

"Matching Activities to Personal Style (MAPS): Developing a Physical Activity Guidance System for High School Students"

Project Summary
A series of investigations was designed to create building blocks for a process of guiding physical activity choices among high school students and young adults based on psychosocial information and experiential processes. The initial studies explored patterns of physical activity (PA) interests and motivations over the lifespan, as well as their relationships with individuals' personal style characteristics. Additional studies provided insights regarding the degree to which perceptions about the psychosocial characteristics of different physical activities were commonly held in the population. The final study supported by this grant was an attempt to determine whether beliefs about changes fostered by physical activity could be influenced through information and personal experience.

Research methods and results
Lifespan differences: How do perceptions of and motivations for different sports and physical activities change with age? As a foundational study in this series of investigations, we examined data obtained from a sample of 1,885 individuals ranging in age from teens to 70s. They were grouped into 5 age categories: Teens, 20s, 30s, 40s, and 50s+.

Activity Interests: Based on a questionnaire evaluating participants' interests in 50 different types of activities, eight factors or dimensions showed different levels of interest over the lifespan. On three of these dimensions (yoga and stretching, non-gym leisure activities, weight training), interests remained consistent across the lifespan; for the dimensions of martial arts, class training, group cardio, competitive sports, and outdoor activities, significant differences among age groups were found, along with linear declines in interests across the lifespan.

Motivational Interests: Using the same sample and methodology, another instrument in the questionnaire measured 20 motives for exercising. These were reduced to four dimensions through factor analysis, and scores on these dimensions were compared across five age groups. Motives relating to remaining 'toned and fit' as well as those pertaining to stress reduction remained relatively constant across the age groups. Surprisingly, however, motivations to exercise based on having fun and being with friends, as well as those involving a quest for challenge, adventure, enhancement of self-esteem, and learning new skills for life declined with age.

Physical activity and character development: In our research we explored a model of physical activity guidance based on the belief that individuals could be assessed on different psychosocial dimensions (e.g., sociability, risk taking) that were also embedded in psychosocial demands characteristic of different physical activities. The intended guidance process underpinning our work rested on a premise that each physical activity has a unique psychosocial profile that would match to varying degrees with individual participants' psychosocial

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profiles. Before advancing toward the design of a guidance process, we needed to know whether our premise was valid.

Psychosocial profiles of physical activities: We chose eight distinct categories of physical activity and asked individuals to rate these activities on seven psychosocial dimensions. Moreover, we selected our sample based on their 'knowledge-level' pertaining to sports and activity, and grouped participants into three categories – social science students (206), exercise science students (146), and exercise professionals (76). The eight activities were: dance, solo cardio, team sports, martial arts, racquet sports, weight training, yoga, and fitness classes; the seven psychosocial dimensions were: sociability, predictability, aggressiveness, competitiveness, motivation, mental focus, and risk taking. The eight activities differed significantly on all seven psychosocial dimensions. Moreover, ratings were relatively homogeneous with few significant differences on the psychosocial requirements across the three knowledge levels.

Relating 'personality' to activity interests: Having demonstrated that activities could be distinguished on their psychosocial characteristics, we then explored whether different 'types' of individuals (based on psychosocial characteristics) showed different PA interest patterns. Two studies examined this question. The first involved the sample of 1,885 participants mentioned above. Here we found that individuals with higher competitiveness, greater risk taking propensity, and stronger aggressive characteristics showed stronger preferences for martial arts, competitive sports, and adventurous outdoor activities. In a similar vein, data revealed that individuals with higher propensities for thrill seeking and spontaneous actions were drawn more to martial arts and adventurous outdoor recreation. Finally, this study revealed that individuals with greater emphasis on predictability, higher mental focus, and self-motivated action tended to have stronger preferences for weight training and lesser interests in class-based activities. Our second study involved a smaller sample and a slightly different measurement strategy. With 286 participants who rated themselves on seven psychosocial dimensions and interest levels for eight types of activity, we discovered that (1) individuals with lower levels of competitiveness expressed less interest in team sports and weight training, (2) individuals desiring high predictability in their programs and who had stronger degrees of self-ascribed aggressiveness showed greater preferences for fitness class and solo cardio activities, (3) individuals with lower self-reported risk taking were less keen on martial arts, and (4) highly social individuals expressed greater interests in dance, fitness classes, and yoga/Pilates, but less interest in solo cardio activities.

Changing beliefs: In moving closer to creating sound building blocks for a guidance system based on psychosocial profiling, we designed a field experiment to estimate whether beliefs about 'what changes' through physical activity participation can be influenced in a way that would allow individuals to draw upon a broader range of motivations for participation. Our experiment involved 208 participants who were exposed to a 2-hour information + experience session focusing on exercise-induced personal changes, and involving a comparison of their psychosocial profiles with those of different sports and physical activities. Beliefs about changes in cognitive, physical, psychosocial, and spiritual functioning were assessed before and after the intervention. Though beliefs about cognitive, physical, and spiritual changes remained relatively constant, the intervention was shown to have a significant impact on participants' beliefs about the degree to which sports and exercise can change one's personal characteristics.

Policy implications
A few of the policy implications of these investigations are as follows:
1. Different strategies seem warranted for increasing PA participation in different age cohorts.

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2. Promotional campaigns for increasing rates of active living should emphasize different motivational bases.
3. The linkage between personality and sport interest might be further explored to understand the causal direction of this relationship.
4. Support should be increased for research that emphasizes intervention processes related to life-enhancing non-physical changes supported by PA participation.

Next steps

The current research provided support for important elements underpinning the creation of a sport and physical activity guidance system rooted in multidimensional characteristics of the individual. However, further documentation is necessary. For instance, further validation of measurement tools is deemed critical. Moreover, research addressing the types of non-physical changes promoted by regular engagement in physical activity would be most useful. Finally, investigations exploring experience-based exercises that increase individuals' awareness about the wide-ranging changes supported by PA engagement would add directly to guidance system development.

Key stakeholders and benefits

As publications appear on the results of these investigations, press releases have been and will be generated to increase public awareness of the findings. In addition, large conferences involving physical educators and fitness professionals would provide excellent venues for enhancing understanding of these findings. At this point, more research would be required before more systematic interventions into fitness agencies, health centers, and school systems would be justified.

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Doctoral Stipend 2012

Survey on Participation in Amateur Soccer in Canada

Project abstract

In general, sport is seen as a powerful contributor to social and personal development (Sport Canada, 2002). The benefits of physical activity and sport have been the subject of numerous studies (Gendron et al., 2005; Parfitt & Eston, 2005). Nonetheless, the number of young North Americans who play sports has been decreasing for a number of years (CDC, 2005, 2006; Sport Canada, 2003). In 1998, barely half of Canadian children aged 5–14 were actively involved in sport (Sport Canada, 2000). Why does participation in physical activity and sport decline constantly among Canadian, beginning in adolescence? Soccer, the most frequently played federated sport in the country, is a world-wide phenomenon that knows no boundaries or limitations and enjoys unprecedented popularity among young people. How can we learn from the sport situation in Canada in order to maintain a solid rate of participation among young people in a healthy and formative environment?

The *Survey on Participation in Amateur Soccer in Canada* had four objectives: (1) to develop and validate four versions of the survey questionnaire (player, parent, trainer, referee; English and French versions); (2) to compare the views of players, parents, trainers and referees in terms of the factors that could influence participation in soccer among U12 to U18 players; (3) to identify the factors relating to the decision of young Canadian players to start participating and to continue or abandon the sport. The results will be used to compare the views of the various stakeholders and to identify the positive aspects and potential issues. Preventive action may be recommended. The ultimate purpose of this research is to help produce healthy, responsible and engaged Canadians.

Research methods

In total, 3,178 participants filled out one of the four versions of the questionnaire (on paper or online) (n players = 1,395, of which 50.8% were women; n parents = 1,130 of which 61.0% were women; n coaches = 557 of which 85.8% were men; n referees = 96, of which 78.2% were men). The participants were recruited on a voluntary basis through an invitation sent by the Fédération de Soccer du Québec and the Ontario Soccer Association to their clubs/members. The four versions of the questionnaire (which were later translated from French to English) were developed and validated with either an expert committee and/or a sample of players.

Two theoretical approaches were used because of their complementarity. In terms of development, Bandura's social learning theory (1986) was selected: according to this theory, people develop though a constant bidirectional influence of three sets of factors: personal, behaviour and the environment. This behavioural theory was chosen because specialists agree that in addition to specific personal predispositions, the environment and the individual play an important role in behavioural adoption (Kauffman, 2005; Weinberg & Gould, 1997). Moreover, having four sources of information (players, parents, coaches and referees) provides additional information.

In terms of environment, Ajzen's theory of planned behaviour (1985) was chosen in order to study the effect of environmental and political interventions on the adoption and maintenance of an active lifestyle. The Ajzen model (1985) verifies whether an environment is conducive to the practice of physical activities such as soccer, either through the quality of the conditions of play, the quality of the sport and leisure equipment or the quality of the physical activity programs offered. The different scales of the theory of planned behaviour present acceptable internal consistency coefficients: behavioural beliefs (11-12 items, $\alpha = .61$ to $.66$); normative beliefs (17-18 items, $\alpha = .73$ to $.89$); control beliefs (7 items, $\alpha = .88$ to $.94$); external variables – unsportsmanlike behaviours (11 items, $\alpha = .89$ to $.91$).

Research results

Initial factors associated with participation:
The four actors (players, parents, coaches, referees) agree on their first four choices of behavioural beliefs associated with the benefits of playing soccer (pleasure, physical fitness, friendships, technical improvements). In fact, these four factors are general and could well be found for other sports activities to explain the benefits the players wish to experience from playing a sport.

Factors associated with continuing participation:
Opinions of family members can play an important role with respect to the factors associated with and influence on a given behaviour (ref. social standards and normative beliefs). When asked about the factors that could result in a player deciding not to continue playing league soccer in a subsequent season, the respondents' opinions are varied. The first choice of the four actors assigns a determining role to another person with the power to influence the player's decision to stop playing soccer (players = quality of refereeing; parents = quality of the coaches' training; coaches and referees = pressure from parents concerning the team's athletic performance). Among the list of factors, the choices (especially for players) focused on the atmosphere and the quality of the adults' training as a possible explanation for a potential decrease in pleasure in playing soccer and for ending participation altogether. The cost of basic equipment, the equipment provided by the club and the quality and availability of fields seem to have little impact.

The players' opinion on the ability to continue playing soccer in the future (ref. control beliefs) is less definite than that of the adults. The role of the father (and the father's opinion) with respect to the player's decision to continue or stop playing soccer seems to predominate over that of the mother. According to the results we obtained, star professional players are not a factor in amateurs' decisions to continue playing; as to whether star players have an influence on the behaviours of amateurs when they play their sport, another study will need to be carried out to investigate that question.

External variables – unsportsmanlike behaviours:
The presence of unsportsmanlike behaviours (ref. verbal intimidation (VI), physical intimidation (PI), physical violence (PV)) represents a risk that a player will stop playing soccer. Among the factors with the most power to influence the player's decision to stop playing soccer, the four actors all had the same second reason, the presence of unsportsmanlike behaviour. Of 11 behaviours studied, intentional pushing (PI), elbowing (PV), mockery or sarcasm (VI) and insults (VI) are among the top five reasons given by all the actors. It should be noted that the players and referees (actors on the field) reported a much higher number of unsportsmanlike behaviours than did the parents or the coaches (the figure was almost double in some cases). The standard deviations are high, which leads to a large variability in results. This calls for caution in terms of interpreting and generalizing; complementary analyses will need to be done factoring in the differences based on variables such as sex, age and competition level.

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Limitations of the study:

The limitations include limited access in reaching participants by email (Ontario portion); the high cost of paper surveys on the sides of playing fields during tournaments; a sample from two provinces (the majority from Quebec); and a representation between the sexes in each group that was not as expected (e.g. players, parents). Finally, the results of the questionnaire reflecting the view of each of the actors would benefit from being cross-validated through observations in a game setting.

Policy implications

The results of this survey will give provincial and regional soccer associations and federations a better understanding of what makes young people take up a sport, continue participating in the sport and what affects their (possible) decision to continue to stop participating during adolescence. The strategic polices of the FSQ and the OSA and coach and referee training may be improved by taking into account the various results and findings. Moreover, the ethical code of each actor involved in the sport (players, parents, coaches, referees) may be enhanced and explained through the examples from the survey report. In addition, in light of these results, the Canadian Sport Policy (2012) may reiterate the importance of implementing a safe, healthy environment in which young people can play their sport by meeting their needs to have fun, stay active and healthy and to be surrounded by friends and adults who are skilled in their coaching and developmental roles.

Next steps

The next steps of this research will including publishing the results of the analyses based on different variables (e.g. sex, age, competition level, region) and overcoming specific obstacles in order to do a follow-up with the participants (mini survey) to verify whether they continued or stopped playing soccer, and the reasons why. In terms of the adults, it would be worthwhile to further analyze the socioeconomic and familial issues related to soccer, especially for competition levels AA or higher (e.g. travel, various costs). A subsequent study could therefore focus on the influence of moral action (e.g. moral reasoning, moral atmosphere, social environment), as well as of pre-existing factors (frustration, activation), on the players' behaviour. By collecting the views of the players and adults involved (parents, coaches, referees) concerning moral action in given situations, we would like to better understand the process and factors influencing the decision of Canadian amateur soccer players to resort to aggression.

Key stakeholders and benefits

For all the reasons listed in the "Policy implications" section, we would suggest distributing the report to the following organizations: Sport Canada, Soccer Canada, provincial and regional soccer associations and federations, the National Coaching Certification Program, the Officials Training and Certification Program, provincial physical activity promotion organizations (e.g. Kino-Québec, ParticipAction).

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Doctoral Stipend 2008

A Framework for Creating a Campus Culture of Compassion: A Participatory Action Research Approach to Equality

Project Summary

This dissertation united key stakeholders from the University of Guelph community in order to examine issues around accessibility and inclusion of students with disabilities in campus recreation and sport opportunities. The research team included representatives from the University of Guelph's Centre for Students with Disabilities and the Department of Athletics, an undergraduate student with a disability, and two university alumni. The ultimate goal was to develop a planning framework to guide universities in supporting the human rights and inclusion of students with disabilities in extra-curricular campus life. What emerged from data analysis was the development of a framework for creating a Campus Culture of Compassion. This framework, which encompasses six guiding principles, three fundamental characteristics, and six process pieces, explores how universities can implement programs, policies, services and practices that better respond to the changing and diverse needs of university students with disabilities in order to ensure their full engagement in all areas of campus life.

Research Methods

This dissertation used a Participatory Action Research approach as the strategy of inquiry. This involves the researcher working as part of a collaborative research team in order to connect the research to larger social change efforts. The overall goal was to develop a framework to guide universities in creating an inclusive campus community, particularly pertaining to extra-curricular activities. In order to ensure that the framework included perspectives of all key stakeholders, interviews were conducted with five research team members and 18 University of Guelph stakeholders, including: students with and without disabilities, staff members from the Department of Athletics and the Centre for Students with Disabilities, faculty members, and senior administrators. Transcripts of the interviews were analyzed for common patterns which were then clustered together into broader categories. Based on this analysis, a five page draft of the framework was created and then shared with all members of the research team. The research team collectively worked through and reflected on the initial framework in order to provide examples for the components and to identify areas that needed further development. In order to ensure that the framework truly reflected the perspectives of the participants, all participants were invited to participate in a 'focus group' where we provided an overview of the preliminary findings. Suggestions and recommendations from the focus group and team meetings were incorporated into the final framework.

Research Results

What emerged from data analysis was the development of a framework for creating a Campus Culture of Compassion. This framework centres around six principles that help guide universities toward developing a campus culture that is compassionate. Essentially, a campus culture of compassion values: (a) access for all; (b) diversity and uniqueness; (c) interdependence and social responsibility; (d) diverse knowledge bases,

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voices, and perspectives; (e) the power of learning and education as a tool for social change; and (f) the whole person. The framework also indicates three fundamental characteristics that a campus culture of compassion must possess. In essence, post-secondary institutions and their community members must be: (a) interconnected, (b) supportive and enabling, and (c) informed. Six process pieces are included in the framework which enables a campus culture of compassionate to be fuelled and sustained over time. These pieces include: (a) creating a vision for the future, (b) constructing a plan to achieve the vision, (c) securing funding to put the plan in place, (d) thinking critically and measuring actions against the vision, (e) being proactive to making change happen, and (f) reaching beyond compliance. The framework encourages university stakeholders to collectively reflect, dialogue, and collaborate in order to create broader systemic changes. These changes are necessary since constraints to campus engagement can threaten a student's well-being and sense of self. This framework can serve as a starting point to initiate these conversations and inspire universities to use a participatory approach to encourage positive social change within the university context.

Policy Implications

This study offers insights into the barriers that students with disabilities face when seeking to participate in campus recreation and athletics while providing practical strategies to combat these barriers.

Government of Canada policy acknowledges that in order to have claim to full citizenship, athletes with a disability must be provided equivalent opportunities to develop their abilities and to compete at provincial, national and international sporting events. The framework that emerged from my dissertation is aligned with this initiative and seeks to shed additional light on the important role that recreation and athletic engagement plays within an individual's life, and within a community as a whole. The framework informs communities on the core values, characteristics and process pieces that are essential to creating an inclusive and accessible environment.

The framework from this dissertation reveals that a major component of being involved in sport and physical activity is being adequately informed. Thus, persons with disabilities must have access to information regarding: a) the benefits of being physically active, b) available programs and services, and c) the accessibility of an event or service prior to participation. This study highlights the benefits of developing mutually benefiting partnerships both within and outside of one's core community in order to streamline services, provide support in a holistic approach, blend resources, and diminish redundancies. A collaborative approach will also help to increase participation rates, reach a broader target audience, and provide diverse and supportive services.

Next Steps

The perspectives of key stakeholders within a university, highlighted in this study, may be transferable to other community groups and within other community contexts. The components of this framework can ideally be used to encourage communities to collaborate and create community conversations that raise awareness of each other's perspectives and work towards collective problem solving. However, future research may need to explore the perspectives of other community groups, particularly those who are marginalized, in order to enhance the relevance and usability of the framework within a generalized community setting.

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Future research could also develop a 'tool kit' for creating community cultures of compassion based on the main components of the framework. The 'tool kit' would draw upon the insights gained from the framework, and would follow a similar format of guiding principles, characteristics, and process pieces. Future research could document the process by which a university, or other community, utilizes the framework or 'tool kit'. Such a study would provide insight on the usefulness of the framework or 'tool kit' within another community context both in terms of its ability to create campus partnerships and conversations, as well as its ability to facilitate action or social change. It would also shed additional light on the process by which university stakeholders, or community members, can use a participatory approach to unite relevant individuals in order to achieve a shared outcome.

Key Stakeholders and Benefits
The following organizations could benefit from the findings of this study:
- Ontario University Athletics Association (OUA)
- Canadian Interuniversity Sport
- Canadian Intramural Recreation Association (CIRA)
- Sport Canada
- Canadian postsecondary institutions
- Canadian Sport Associations

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Doctoral Stipend 2012

"Keep trying, it took me a while to get that too!" The effects of peer feedback on relation-inferred self-efficacy (RISE), self-efficacy, and motivation in youth sport

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Project Summary

Peer influences are among the strongest social influences of children's attitudes and behaviours at early ages. Yet, despite the potential for peer influences to change behaviour, few studies have investigated the role of peer influences on children's thoughts about their physical capabilities or sport participation. Beliefs in our own abilities, or self-efficacy, guide what tasks we choose to do and the degree to which we persist at those tasks. Self-efficacy beliefs arise, in part, through our interactions with others, and are influenced by the perceptions we have about what others perceive our abilities to be. Our perceptions of another person's confidence in our abilities are called relation-inferred self-efficacy beliefs (RISE). RISE is thought to play an instrumental role in the development of self-efficacy as well as motivation.

Many children drop out of sport after just a short period of time because they are "not having fun" anymore or doubt their abilities to improve or be successful. Children often rely on feedback from coaches and instructors to influence their perceptions of their sporting abilities as they often lack the experience and knowledge necessary to gauge how well they are doing when they are learning sport skills. However, in many sport environments there are usually only one or two coaches instructing several participants, which may limit opportunities for children to receive performance feedback or encouragement. In comparison to limited contact with coaches, there are usually many peers or teammates who can provide positive encouragement or feedback.

Here, we were interested in children's perceptions about what their peers believe about their abilities and how these RISE perceptions might affect how children feel about themselves and their sport experiences.

Research methods

Semi-structured interviews were conducted with 30 children aged 8-12. Children responded to a series of questions and provided examples as well as contextual information regarding their sport experiences when they received feedback from their peers that informed their self-efficacy and RISE.

Research results

Results showed that children are cognizant of self-efficacy and RISE within sport settings and often use verbal and nonverbal feedback from peers to inform these perceptions. Examples from study participants include:

- Efficacy-building Statements

  "They encourage me to make me feel more confident. They say things like "Come on, you can do it, you got that swing going!" I like playing [baseball] *more because I am not getting bullied in it. It makes me feel happy on the inside and it makes me just want to play more."*

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> "*In hockey I don't really shoot and I am shy buy when my friends say "you can do it" I shoot more and I feel like I can really do it because they think I can*"

- Task Instruction

  "*I was batting and I was holding my hands like this* [demonstrated] *and my friend showed me how to hold it like this* [demonstrated] *and then I did it like that and it worked. I hit it straight so I do it like that all the time.* [What's special about that?] *When they show me tips and then say "I know you can do it now" it makes me feel like I will be able to do it and do it right.*

- Challenging/Special Opportunities

  "*When they put me in important positions I know they believe in me.* [Can you tell me a story about when this happened?] *One time we were playing football and my friend wasn't throwing that good and he wanted me to play quarterback instead because he knew I could do it better. It made me feel special and I knew I would do a good job*"

- Conclusions: We found that children can identify specific communication cues from peers that can increase their RISE as well as self-reported confidence, motivation, and sport participation. Although all of the participants were easily able to provide specific examples, caution should be exercised when interpreting the findings as the participants' sporting experience ranged from recreational to competitive environments and we are uncertain whether feedback from peers may be more or less influential in these different environments.

Policy implications

Engaging positive interpersonal experiences between children and their peers is an important aspect of building confidence and encouraging motivation for sport participation. Coaches and instructors should be aware of the potential positive impact that children can have on each other in sporting environments and are encouraged to utilize athletes to provide feedback to each other (e.g., demonstration of a skill followed by an efficacy-building statement).

Next steps

Future research is needed to investigate when to encourage children to use RISE-enriched feedback with their peers, what types of feedback may be the most influential for certain sporting situations, whether the skill of the athlete determines if this feedback is more or less influential, and ultimately if systematic use of RISE-enriched feedback has an enduring impact on continued sport participation.

Key stakeholders and benefits

- Recreational Sport Camps
- Community Sport Programs (e.g., Minor League Soccer, Baseball, Hockey)
- Coaches Association of Ontario
- Coaching Association of Canada
- Provincial/territorial teaching organizations (e.g., Ontario Teachers' Federation)

Although research investigating the positive impact that peers can have in youth sporting environments is still in its infancy, coaches, sport instructors, and teachers are encouraged to be aware of the potential impact that children can have on their peers when providing RISE-enriched feedback. As well as, the possibility of using

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children to provide RISE-enriched performance feedback to each other when they may be otherwise unavailable to do so themselves.

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HAMM, SHANNON
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Doctoral Stipend 2006

Can Conflict be Productive? An Examination of Conflict in Non-profit Sport Boards

Project Summary
Given the importance of board decisions on the development of sport programming in Canada, an investigation of the impact of conflict within these groups is essential for effective board functioning. Thus, the purpose of this project was to examine the nature, level, and impact of task, relationship, and process conflict in provincial sport organization (PSO) boards. In defining group conflict, three types of conflict were examined: Task conflict was viewed as disagreement among group members about the content of tasks; process conflict was defined as disagreement about how to accomplish tasks; and relationship conflict was described as disagreement that is personal in nature. For each conflict type, perceptions of conflict, the factors that influence perceptions of conflict and the outcomes of conflict were explored.

Research Methods
This study of sport organization boards was conducted in the fall and winter of 2007/2008. A survey was used to collect data regarding the individual (e.g., age) and group (e.g., routine or non-routine decision type) characteristics of members and their boards, as well as each board member's perceptions of: intragroup conflict, board decision quality, satisfaction with their board and board commitment.

A sample of board members of PSOs within Ontario was surveyed. The study was limited to active board members and included individuals with central (e.g., president) or peripheral (e.g., treasurer) roles. This sample was chosen because of the influence of PSO board members whose decisions ultimately impact the delivery of sport within the province.

A total of 41 of the 86 registered PSOs in Ontario agreed to participate in the survey study. Two hundred (200) surveys were sent out. The survey was completed by 74 board members for a response rate of 37%.

Research Results
Decision Quality. When task, relationship, and process conflict increased, the quality of the board's decisions decreased; decisions were less likely to be based on the best available information or the board's current strategies. Further, relationship conflict was the strongest predictor of decreased decision quality (i.e., when conflicts were personal in nature, lower decision quality resulted).

Board Member Satisfaction: When each conflict type increased, board member satisfaction with their board decreased. Relationship and process conflict were the strongest negative predictors of board member satisfaction (i.e., when disagreements were personal in nature or about "how you do things" as a board, participants had negative feelings toward their board).

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Board Member Commitment: When all three types of conflict increased, board member commitment decreased. Relationship conflict was the strongest predictor of decreased board commitment (i.e., when differences of opinion were personal, board member identification with their board decreased).

Further, task conflict and process conflict led to, or triggered, relationship conflict, which then had a negative impact on outcomes. Thus, task and process conflict were likely to result in dysfunctional relationship conflict. For instance, if boards were disagreeing about a task (e.g., where to hold their next championship) or how to complete a task (e.g., who will do what) this often lead to tension or friction among board members which resulted in negative impacts on both group and individual outcomes.

The results presented above provide insight into the nature of conflict in PSO boards, however there are a few limitations that should be noted. First, given the purpose and exploratory nature of the study the results were analyzed at the individual level, and thus conclusions regarding the nature of conflict within specific PSO boards cannot be made. Second, task, relationship, and process conflict were found to be highly related to one another. Although, multicollinearity statistics were used to demonstrate that three separate types of conflict were in fact represented in the data, the participants may have had trouble distinguishing between each conflict type. Therefore, it is important to gain a more comprehensive understanding of board member perceptions of conflict in this context. This could be accomplished through further research using qualitative methods (i.e., interviews and observations).

Policy Implications

The results demonstrate that conflict has a negative impact on decision quality, satisfaction, and commitment in this setting. It is recommended that policy makers create greater awareness of intragroup conflict in sport boards. Given the negative relationships seen here, strategies to educate board members on the nature and impact of conflict should be developed to improve PSO board capacity around identifying and managing conflict in a proactive and effective manner.

Next Steps

Preliminary results suggest that continued research is needed to understand the mechanisms that underlie the conflict process, for instance: how potential positive task conflicts lead to negative outcomes, what causes task and process conflict to lead to relationship conflict, and how conflict impacts board performance. Working with non-profit boards and policy makers to develop longitudinal examination of the conflict process may help identify some of the "triggers" to conflict and potentially improve the effectiveness of conflict management in this setting.

The results presented here have been accepted for publication in a top-tier sport management journal and have been presented at the 2008 North American and European sport management conferences. Since this survey study, a qualitative research project was completed that further explored the nature of conflict in PSO boards. These findings have been submitted to the 2009 North American Society for Sport Management (NASSM) student research paper competition and a working paper is currently in review for publication.

Further, the importance of connecting this research with the sport community is recognized. As such, a formal written report summarizing the results and subsequent implications for management has been submitted to

each PSO involved in the study. Moreover, continued networking with Sport Canada and the non-profit sport community has been anticipated through attendance and participation at subsequent SCRI conferences.

Key Stakeholders and Benefits
- Provincial sport organisations
- The Sport Alliance of Ontario
- The Ontario Government (and other provincial governments)
- Sport Canada
- National sport organisations

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Doctoral Stipend 2006

Children with ADHD and Physical Activity Behaviours: What Happens When the Village Turns its Back on You

Project Summary

The three main objectives for this research project were to: (a) describe the physical activity (PA) behaviours of children with attention-deficit hyperactivity disorder (ADHD), (b) explore the feelings and attitudes that children with ADHD and their parent(s) had about PA, and (c) generate a grounded theory of PA and children with ADHD. The conclusions of this research project include: (a) differing PA planning subtypes were observed for children with ADHD, a positive finding for future self-regulation strategies in PA and sports, (b) children with ADHD and their parents have social inclusion motives for PA participation, (c) the social exclusion of children with ADHD from many daily activities, and (d) an urgent need for structured education programs and specific PA and sport programs that include children with the non-visual disability of ADHD.

Research Methods

Central Research Question: This research project explored the PA experiences of children with ADHD to answer the following question: How do children with ADHD choose to get involved in physical activity?

Data Collection: There were three main procedures with this research project. First, each child with ADHD performed the *Test of Gross Motor Development-2* (*TGMD-2)* was used to assess locomotor and object control skills (Ulrich, 2000). The Movement Assessment Battery for Children-2 (Henderson et al. 2007) was used to assess balance skills and manual dexterity skills.

Second, each child recorded his/her daily PA for a two-week period on a recording sheets. These sheets documented PA that each child participated in. Each child was provided with a disposable camera to have an activity leader, friend or parent take pictures of their PA participation in various contexts. The daily recording sheets and pictures were collected by a research assistant. Approximately two weeks after all information was collected, the children were then asked place their PA photographs in a scrapbook. A research assistant interviewed each child while she or he created their PA scrapbook. Each scrapbook interview was videotaped.

Third, parents expressed their viewpoints from a current perspective. We conducted videotaped interviews with a parent(s) about their child's PA experiences. Parents may adopt an important part of children's PA involvement by assisting in the activity selection process. Parental views on their child's PA behaviours produced a substantial part of our understanding of the children's play behaviour. Child and parent data are being combined to develop a grounded theory of ADHD and PA participation. Videotaped interviews were transcribed verbatim for thematic analysis as part of a within-case analysis to learn as much as possible about each child's PA experience (Merriam, 1998).

Research Results

There were four main sets of findings which are limited in their generalizability because of the qualitative nature of the research. There are four manuscripts which emerged from this research project. First, we created a new qualitative research method in sport and exercise (Harvey, Wilkinson, Pressé, Grizenko & Joober, in press). A consecutive and concurrent scrapbook interview technique was compared with small groups of children with ADHD. The concurrent scrapbook interviewing approach was found to be a more effective interview strategy that was suggested to obtain complex, qualitative data from children with ADHD so we could hear PA stories from their own perspectives. This approach enabled (a) more vivid details and child speak, (b) an increase in depth of participant statements and meaning between and across themes, and (c) greater insight to be gained into day-to-day events and experiences which may influence PA participation.

Second, we have written a manuscript on the concurrent scrapbook interview approach with a group of 10 children with ADHD (Harvey et al., in review a). It is currently under peer-review at an international level physical education research journal. There were study findings that were similar to past research because children with ADHD: (a) demonstrated poor performance on the TGMD-2 and MABC-2 and TGMD-2 tests, (b) had pictures of friends, (c) were aware of their physical inabilities, (d) were on organized teams (i.e., cheerleading, gymnastics, etc.), (e) spoke about observational learning, and (f) viewed parent work schedule as a constraint to PA participation. There were also study findings that were different from past research because children with ADHD demonstrated: (a) performance anxiety, (b) good sporting values, (c) a superficial understanding of purpose for PA, and (d) social fragmentation.

Third, we have written a manuscript on 15 parent interviews of children with ADHD (Harvey et al., in review b). It is currently under peer-review at an international level physical activity research journal. This study is also original research that describes retrospective and current parent perspectives about their views of their children's PA experiences. The study findings demonstrate that the parents were: (a) intricately involved in the daily PA of their children, (b) aware of the movement problems of their children, (c) convinced that their children seldom organized PA, (d) unaware of their children's perceived ability to plan PA, (e) suggesting that school teachers were perceived as not aware of the implications of ADHD, (e) stating that the purpose of getting involved in PA was secondary to the activity itself (i.e., socialization, improved discipline Vs. playing hockey or practicing karate), and (f) aware of the social fragmentation issues raised by the children with ADHD.

Fourth, we are finalizing the grounded theory on ADHD and PA by collecting more interview data until the end of December, 2011 (currently sample is 23 pairs of participants). Our studies have indicated that social isolation is the major theme which emerged in our grounded theory. The essence of the PA stories emerging is a picture where children with ADHD may be excluded from school, the local community recreation center, sporting opportunities, physical education class, with social challenges surrounding some significant others (i.e., parents, teachers, coaches, peers, etc.) and substantial environmental barriers experienced (i.e., lack of transportation, limited amounts of time, etc.).

Policy Implications

The relevance of this research to enhanced sport participation in Canada is related to education programs and specific interventions focused on the inclusion of all people in sport participation at the national, provincial, and community levels. Quite frankly, at first, the study results were a bit surprising as perceptions about the involvement of many significant others (i.e., parents, teachers, etc.) seemed to reveal a multitude of reasons for sport participation. Upon reflection, the study results are not so surprising. Parents and people with

disabilities are susceptible to mass messages that our education and health systems as well as sport organizations send out (i.e., sports and PA build character, develop discipline, build health, etc.). However, the children and their parents fall between enormous cracks created by society and government (i.e., overlap between ministries of sport, health, and education). I predict this unfortunate relationship will continue in the future as our research funding and capacity to develop greater knowledge and intervention bases in this area will dry up, given the recent decision by SSHRC to be seemingly void of any sport research related to persons with disabilities as it may be deemed as health-related research (even in the context of the Sport Participation Research Initiative). Clearly, the concept of self-determination and people who are not elite athletes may well continue to be disregarded. For example, based on our current research findings, our scholarly group submitted a proposal to develop better understandings of self-determination and autonomy-supportive networks in sport participation for persons with mental health problems (MHP). We deemed sport participation as a tremendous vehicle to further our understanding of self-determination from an adult with MHP perspective by being encouraged to choose to become actively involved in their communities. We believed sport could be an answer for many people with MHP to improve their conceptualization of social functioning. In fact, at least 6 million Canadians per year experience MHP which may be positively impacted by community sport participation but this research was deemed ineligible by SSHRC and not even available for review by Sport Canada and the current initiative.

Next Steps

1. Are children with ADHD excluded from PA participation because they are being discriminated against?
2. How do children with poor movement skills gain access to PA and sport programs with no major supporting infrastructure?
3. How is the health and welfare of children with ADHD being compromised due to exclusionary PA and sport practices in schools and local communities? National and provincial funding opportunities?
4. Do the social isolation issues, related to a lack of PA and sport participation, lead children with ADHD to become involved in undesirable groups or to withdraw into their homes to become further isolated and predisposed to deeper mental health problems?
5. How will positive and cost-efficient PA programs be developed to lead to better outcome measures so children with ADHD have a better chance at becoming involved in their communities and successful, self-determining citizens?
6. How may university and national coaching programs develop sufficient expertise for physical education teachers and coaches to include persons with non-visual disabilities in their programs?

Key Stakeholders and Benefits

- Sport Canada
- Physical and Health Education – Canada
- Active Living Alliance
- National and Provincial Learning Disabilities Associations
- Provincial Ministries of Education and Health
- Sport Canada - Long Term Athlete Development (LTAD) program
- Children with Attention Deficit Disorders (CHADD)

HAYHURST, LINDSAY
University of British Columbia
Standard Research Grant 2011

Corporatizing Sport for Aboriginal Girls: Connecting Corporate Social Responsibility, the 'Girl Effect' and Aboriginal-focused Sport, Gender and Development Programs

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Project Summary

This study explored how urban Aboriginal young women understand and experience their participation in a sport for development (SFD) program administered by the Vancouver Aboriginal Friendship Society Centre (VAFCS); and investigated how corporate funding and involvement in the VAFCS SFD program impacted targeted beneficiaries.

The three specific objectives of the research were:
1. To determine the factors that enable and inhibit urban Aboriginal girls' participation in SFD programs in Canada.
2. To incorporate Aboriginal girls' perspectives on corporate involvement in funding, developing and implementing urban Aboriginal SFD programming.
3. To establish what a decolonized SFD program for urban Aboriginal girls might look like.

To pursue these objectives, semi-structured, in-depth interviews were conducted with employees from corporate sponsors (n=1), the young Aboriginal women participating in VAFCS's programs (n=11), and the relevant VAFCS staff members (n=5). Photovoice activities were also carried out with seven of the eleven young women interviewed. Interviews, sharing circles and photovoice activities revealed the benefits and challenges of SFD programming.

Taken together, the main factors that facilitated the participation of Aboriginal young women included: accessing activities that enhanced confidence, leadership opportunities and community support; locating basic needs through the program; finding employment (training) opportunities and increasing engagement with female Aboriginal (sport) role models. The factors inhibiting Aboriginal girls' participation in SFD programs at VAFCS related to intersecting gender inequalities, (neo)colonialism, and poverty.

Research methods

Research Process: Interviews, Photovoice and Sharing Circles

Initially, the suitability of the proposed research questions and approaches were discussed with, and altered by, an advisory council comprised of VAFCS representatives (described in further detail below). Following ethical approval from the University of Ottawa and VAFCS, research agreements were then developed and signed by the relevant parties and the research process commenced, with fieldwork occurring in Vancouver in July and October 2012.

Throughout this research, the researcher attempted to adhere to the principles of OCAP (Ownership, Control, Access and Possession) to the best of her abilities (see Schnarch, 2004). For example, following ethical approval from the University of Ottawa, an advisory council was formed with community members that were

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identified by VAFCS. This advisory council was crucial for periodically reviewing research processes (e.g., identifying appropriate cultural protocols for engaging with urban Indigenous young people).[2] However, due to time and financial constraints, it was challenging to adhere to OCAP on many levels and due to a variety of circumstances – a crucial issue that the researcher hopes to investigate further in collaboration with VAFCS.

Interviews
Semi-structured, in-depth interviews with employees from a corporate sponsor of the VAFCS program, the relevant NGO staff members, and with young women were conducted. Following the transcription of interviews, participants were emailed a copy of their interview for verification and feedback.

Photovoice Activities
Photovoice activities were carried out with the Aboriginal young women participants following their interviews to obtain their perspectives. Young women were asked to photograph objects that helped them convey what it is that they enjoyed/disliked/wanted to change about the SFD program at VAFCS. The sole stipulation set out by the researcher was that they could not photograph anything that would enable them, or others, to be identified. In keeping with the decolonizing and participatory nature of this study, this method was selected based on discussions with the Executive Director of VAFCS and the young women at VAFCS to gauge their interest.

Photovoice is recognized as a participatory action research method where people identify, represent, and augment their community through photography (Wang, Burris & Xiang, 1996). At the same time, it is also important to be reflexive when using this method by acknowledging the colonial tendencies of photography and its role in the colonial process as a tool for representing the 'Other' back to the colonizers (Gallagher & Kim, 2008). Photovoice involves providing each participant with a camera and taking photos. The goal is that the cameras will function as "recorders and potential catalysts for social action and change in their communities" (Lavallée, 2009, p. 30).

Sharing Circles
The young women who participated in interviews had the option of sharing their photos and drawings with other SFD program participants through a "sharing circle" (Lavallée, 2009, p. 27). Sharing circles are similar to focus groups, but are used for sharing all aspects of the individual, heart, mind, body, and spirit (Lavallée, 2009). Specifically, sharing circles are traditionally used as a "healing method" through which all participants and facilitators are viewed as equals and "information, spirituality, and emotionality are shared" (Lavallée, 2009, p. 29). The facilitator is given permission to report on the discussion, and the circle is supposed to be caring, respectful and compassionate.

In partnership with VAFCS recreation staff, sharing circles were conducted in November 2012, after interviews were completed with the young women. As a key enabler of the Because We're Girls group, the (former) VAFCS recreation supervisor disseminated information about the photo exchange and sharing circle discussion through the group's Facebook page, invited young women to participate, and scheduled the circle at a convenient time for the participants (see also Hayhurst, Giles & Radforth, under review). A total of seven young women participated in the sharing circle. To promote the exchange of ideas and foster a collaborative environment, it was agreed that the circle would not be digitally recorded and transcribed, nor would any formal notes taken. However, following the circle, it was decided that the best way to capture the exchange would be for the young women to create a group PowerPoint presentation that summarized the key issues discussed during the sharing circle.

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In short, the young women decided to use the format of the PowerPoint. After much discussion, they decided to share their collaborative PowerPoint with each other, the staff at the VAFCS, and on the Facebook page, which was a closed group for the girls in the program only.

Research results[3]

The findings of this study demonstrated that, from the perspectives of VAFCS staff members, the benefits of sport for development (SFD) programs targeting Aboriginal young women included: increased sense of community support and development (through their involvement in sport); development of confidence, respect and leadership skills; a boost in physical fitness levels; access to basic needs through program (food and water), exposure to employment (training) opportunities and increased engagement with female Aboriginal role models. At the same time, staff noted that the challenges of these programs related to intersecting gender inequalities, (neo)colonialism, and poverty.

From the standpoint of the young Aboriginal women, the program benefits were similar to those outlined above (by staff members). Specifically, challenges for these young women related to stereotyping, encountering racism and gender inequalities in day-to-day life (e.g., finding childcare) – and (at times) in the program – creating arduous circumstances for their involvement. The young women discussed how they found it difficult to purchase healthy food and found there was little time or opportunities to incorporate their culture and traditions (for example, smudging) into 'contemporary' recreational activities (e.g., basketball and soccer). Despite these obstacles, the young women used the recreation program as an opportunity to resist and confront perceptions about their bodies, sporting abilities, lifestyles and Aboriginal stereotypes.

In terms of the second objective, the majority of the young women interviewed (7 out of 11) were unaware of corporate involvement/funding of SFD programs, but felt that (for the most part) corporate interest would bring much-needed attention to the resources needed for recreation and sport opportunities for the VAFCS community. Those who were aware of corporate involvement (i.e., through, for example, grant provisions, sponsorship or donations-in-kind) felt that the private sector's creation of Aboriginal-focused sport apparel (e.g., Nike N7 products tailored to Aboriginal groups) were, at times, (mis)appropriating Aboriginal symbols such a the medicine wheel (that were placed on Aboriginal-focused apparel such as running shoes). Though VAFCS staff were grateful for the resources provided through the private sector, they were wary of the politics involved in applying for funding, the strict monitoring and evaluation mechanisms in place, the challenges invoked through the application process (although these challenges were not necessarily particular to private sector grant applications, but also government-funded applications), and the struggles involved in locating sustainable funding opportunities.

Results of the third objective – ways to create a decolonized SFD program for urban Aboriginal young women are discussed further below in the section on 'policy implications.'

Policy implications

Based on our findings, it is suggested that SFD initiatives that target urban Aboriginal young women in Canada need to better connect to local and global activist agendas to address the broader structural issues that continue to result in Aboriginal girls and young women being deemed as 'in need' of recreation and sport-focused (social) development initiatives in the first place. In other words, we suggest that an Aboriginal-led, activist approach to SFD programs and policy development for young women in Aboriginal communities that,

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for example, focuses on building confidence and leadership skills that are consistent with Aboriginal approaches to leadership and that emphasize uniting young Aboriginal women in fighting the colonial and capitalistic forces that have resulted in their marginalization may result in vast changes in the SFD landscape.

This relates to the third objective of this research, and the implications for policy: what would a decolonized approach to SFD programming for Aboriginal young women might look like in practice? Relatedly, if transnational corporations are indeed the "new colonial forces," what are the implications of, for example, the increasing private sector involvement of TNCs in funding, developing and executing SFD programs for Indigenous peoples in Canada (and abroad)? How does their involvement impact the possibilities for decolonizing SFD programs?

While many TNCs, and corporatized non-governmental organizations such as Right To Play, purport to work in "partnerships" with Indigenous peoples when it comes to SFD programs, it is often difficult to get beyond the mere rhetoric of partnerships and to address power imbalances between donors and recipients (Nicholls, Giles, & Sethna, 2010). As such, and in order to respond to the barriers that continue to hamper SFD efforts with Indigenous communities, it is important to ensure that SFD programs and policies are connected to local and global Indigenous-led (activist) movements that are grounded by self-determination, and that hold the potential to facilitate structural change (Hayhurst, Giles & Radforth, under review). Indeed, struggles for self-determination in response to the materialism of neoliberal power is a form of decolonizing SFD (see Darnell & Hayhurst, 2011). That is, decolonizing involves resistance to the ways in which neo-liberal mechanisms embedded in development '(re)colonize' marginalized groups via market forces and social hierarchies [(Wainwright, 2008) as cited in Darnell & Hayhurst, 2011]. At the same time, facilitating and sustaining this resistance is easier said than done, and we must be careful to ground these analyses in particular movements and struggles in specific locales, such as urban metropolises where many Aboriginal youth in Canada now reside.

Next steps

The findings of this study lend credence to the significance of Aboriginal young women's perspectives as active agents in SFD programs. The experiences of these young women, and those of VAFCS staff members, as they negotiate the structural constraints (e.g., poverty) and neocolonial relations in and through the SFD program explored here are important to consider for future programming, policy and practice. In broad terms, identifying, and further studying, concerns pertaining to gender inequalities, racism, and stereotyping experienced both in and outside of girl-focused Aboriginal SFD initiatives would also be a useful departure point for future research.

The bullet point list outlined below features key ideas discerned by Aboriginal young women and VAFCS to improve programs as discussed during interviews. These assertions were made in response to the question: if you could improve anything about the VAFCS program, what would you do?

- Increase support & teamwork (more time with other Aboriginal girls)
- Better childcare options (subsidized/free)
- More consistent/regular recreation programming for Aboriginal young women
- More family sport programs offered
- Increased structure
- More girl-only focused programs
- Focus on programs for specific age groups

- Provide clean water supply (not out of bathroom sink) and healthy snacks during sporting activities
- More organized outdoor activities

Alongside these substantive suggestions outlined above, more research is needed to better understand the policy implications of corporate-funded SFD programs that target Aboriginal young women in Canada, and the neoliberal, capitalistic tendencies of the funding structures that impact these same initiatives. Since Aboriginal communities and SFD programs such as the initiative for Aboriginal young women run by VAFCS often lack the resources required to provide sport, recreation (and SFD) opportunities, it seems they are left with few choices but to take offerings from the private sector, or to 'stretch' the funding they have from government or other sources (see Hayhurst & Giles, 2013). It may also be beneficial to examine how government-funding (or lack thereof) impacts the ways these interventions are taken up by staff and participants. However, the challenge (and irony) is that the neoliberal conditions that are necessary for the withdrawal of the welfare state, and that enable corporations to invest in SFD programs for Indigenous peoples, are the very conditions that (often) result in the difficulty that Aboriginal peoples would very likely experience in building their own programs (cf., Hayhurst, Giles & Wright, under review).

Thus, future research should examine the mechanisms through which Aboriginal people might be able to ensure they have the opportunity, and the right, to exercise self-governance when it comes to the "new" SFD programming model, where private sector involvement seems almost inevitable. It is also important to consider that, in some cases, private sector involvement may actually increase selfdetermination – that is, if Aboriginal groups have full ownership and control over resources use to support these programs. Specific questions to be tackled by future research may include:

1. Has the provision of funding by private sector to SFD programs with Aboriginal and marginalized communities in Canada influenced these communities' ability to address and negotiate issues concerning self-determination and sovereignty? How might Aboriginal young women be better positioned to negotiate and contribute to, self-determination and sovereignty through SFD?
2. Has the provision of SFD through partnerships with private sector resulted in the retreat of state-funded programs that would otherwise be used to meet the goals set out by SFD initiatives (e.g., promoting gender equality, staying in school, pre-employment training, and youth leadership initiatives)?

Notes
1. Parts of this report draw on the following two manuscripts that are under review (as of October 1, 2014):
   - Hayhurst, L.M.C., Giles, A.R., & Radforth, W. (Under review). "I want to come here to prove them wrong": Sport, Gender and Development programs for urban Indigenous young women. *Sport in Society.*
   - Hayhurst, L.M.C., Giles, A.R. & Wright, J. (Under review). The benefits and challenges of girlfocused Indigenous Sport for Development and Peace programs in Australia and Canada. In L.M.C. Hayhurst, T. Kay & M. Chawansky (Eds.), *Beyond Sport for Development and Peace: Transnational perspectives on theory, policy and practice.* London: Routledge.
2. Despite best efforts, it was often difficult to arrange for in-person meetings with all council members, therefore most communication was conducted over email.
3. If more space were permitted, this section would focus on the stories and perspectives of the VAFCS staff and young women interviewed; however, the format of this knowledge translation report does

not correspond to an Indigenous-focused, community-based resource that may be useful for sharing and disseminating knowledge gleaned from this research. Thus, and in line with these limitations, the voices and quotes from those interviewed in this study are not the focus of this section.

HOEBER, LARENA
University of Regina
A. Doherty, O. Hoeber, R. Wolfe
Standard Research Grant 2010

An investigation of innovation in community sport organizations

Project Summary

This research builds on a previous project exploring the incidence and nature of innovation in community sport organizations (CSOs). We uncovered that CSOs are turning to innovation, that is any organizational effort perceived as new by the organization, to meet member and societal demands, and to survive in a changing and challenging environment. With an increasing reliance on CSOs to deliver programs and services that help to increase the participation of Canadians, it is important to understand the pressures, challenges, and successes CSOs are experiencing with regard to innovating, given its direct connection with organizational efficiency and effectiveness.

Building on our previous investigation, the objectives of this research were: (1) to investigate the nature of radical vs. incremental innovations in CSOs (Study 1); (2) to examine board culture and club culture as determinants of innovation adoption (Study 2); (3) to study the innovation adoption process in CSOs from a longitudinal perspective.

We experienced difficulties recruiting participants for Study 2, thus conclusions are only presented for Study 1 and Study 3. Nonetheless, insight to the role of board and club culture in CSO innovation was generated in the other studies and thus objective 2 was at least partially met.

From Study 1, we determined that CSOs engage in radical innovation, and this is distinct from incremental innovation in terms of being (1) something that is brand new to the sport or to the club's community, (2) something that represents a substantial change to the club in terms of a departure from existing practice, and/or (3) something that has a wide and deep impact on the club. Radical innovation is also distinct from more incremental innovation in that it tends to focus on club growth and development, is led by an idea champion, and relies on a supportive board culture and financial resources to implement. Successful radical innovation may prompt a variety of further club opportunities.

From Study 3, we determined that CSOs may experience innovation in quite different ways, highlighting the potential complexity of the process. Different innovations, and different approaches to their adoption and implementation, can be successful in terms of achieving their intended objectives. However, unique aspects of the innovations also contribute to whether they are sustained or not.

Research Methods

Study 1: To understand the nature of radical vs. incremental innovations, semi-structured interviews were conducted with the Presidents of 16 CSOs representing 12 different sports in 10 Ontario communities. These CSOs engaged in both radical and incremental innovation.

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Study 2: To further examine board and club culture as determinants of the adoption of radical and incremental innovations, we planned to conduct focus groups with CSO board members. We were unsuccessful in coordinating a sufficient number of such groups, despite numerous attempts over a one-year recruitment period.

Study 3: Case studies of two CSOs (hockey, synchro) in Ontario were conducted, representing an 18-month period of innovation in those clubs. Data were collected through interviews with key stakeholders, document and social media analysis, and field observation at various stages in the innovation process. Each case represents a rich story of innovation.

Research Results

CSO presidents discussed 20 radical and 16 incremental innovations. Radical innovation was identified in this context as new to the sport or community, and/or having a substantial impact on how the club operates and what it offers. Examples included a new youth program, and partnering with another club or sport. Incremental innovations were identified as new but more of an 'add-on' or adaptation to existing practices, or as a common practice elsewhere that was adopted by the club. The main distinguishing features of radical and incremental innovations were the magnitude of change and potential risk involved. Radical innovations tended to be focused on club growth, while incremental changes focused on participant development. Radical innovations were driven by an idea champion who came from anywhere in the club, while incremental changes were largely prompted by the board. Volunteers were critical to the successful adoption of both types of innovation, but financial resources were also critical to more substantial radical innovations. Both types of innovation, but particularly radical innovation, led to some unexpected outcomes for the CSOs, including further club development or development opportunities.

The longitudinal case study investigation of innovation in CSOs revealed the different experiences of sustained and discontinued innovations. In both cases, what were considered radical innovations were implemented quite quickly (within weeks) although pressures for change had been experienced up to a year in advance. Idea champions led the innovations in both cases, although they were at different levels of their respective organizations. There was full support from all key stakeholders in the organizations, likely because of the extended pressure for change. This was a critical factor in successful innovation adoption. Factors that prompted and facilitated the innovations were both internal (participant demand, volunteer expertise and commitment to implement) and external (changing market of participants in the sport, reduced competitiveness) to the CSOs. There were different barriers to innovation in each CSO, with greater challenges experienced by the club that was not able to sustain its innovation. In one CSO, there was wide acceptance and successful implementation of the innovation from the outset. In the other CSO, the innovation was not continued primarily due to its reliance on a partnership between two clubs. Differing circumstances within the clubs led to the cancellation of the new program.

Policy Implications

The findings of the current research provide awareness into innovation in CSOs as an important mechanism for increasing their capacity to achieve their sport development goals. In response to various pressures, CSOs are moving beyond traditional ways of delivering sport, and adopting programs and practices that are new; whether they are incremental or more radical changes. The findings can inform sport policy and strategy at the local, provincial/territorial, and federal levels by providing insight into the strengths and challenges CSOs experience in the innovation process. Sport policy and strategy that

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are intended to guide various changes at the community sport level (e.g., gender equity, disability sport, LTAD, coaching development), should be informed by an understanding of the process of innovation at that level, as reported here.

Next Steps

1. The apparent distinction between radical and incremental innovation prompts further consideration of these types of innovation. Related research should investigate whether CSOs that engage in radical innovation vary by club size, mandate, history, type of sport, size of community, and so on. This will enhance our understanding of CSOs that commit to making more radical changes for sport development.

2. Insight into radical vs. incremental innovation highlights the importance of distinguishing these types of innovation – and how they are managed differently – when developing policy, strategy, and practice aimed at developing CSOs or aspects of community sport. What may seem straightforward or incremental to one party may be perceived to be radical by a CSO(s) with implications for its effective adoption.

3. The rich insight into the innovation process in CSOs provided by the two longitudinal, real-time case studies should be continued and expanded to a consideration of the role of external partners in this process (e.g., sponsors, provincial/territorial sport organizations). Community sport delivery is (ideally) a collaborative process among a variety of partners, and their respective roles in the innovation process warrants examination.

4. It can be challenging to conduct research with CSOs, which are predominantly, if not exclusively, run by volunteers. Engaging in research may be an additional burden to these already over-taxed individuals, even if they are very interested in being involved. It is important to be attuned to ensure the process is mutually beneficial. Collaborative research approaches should be considered.

Key Stakeholders and Benefits

- CSOs can benefit from an increased understanding of the nature and process of (especially radical) innovation. They should be aware of the factors involved in engaging in radical innovation (e.g., idea champion, supportive board, human and financial resources), that ideas may come from anywhere in (or beyond) the club, and that radical innovation may have a positive impact beyond its intended objectives.
- Provincial/territorial sport organizations can benefit from insight into the innovation process in CSOs, and acknowledge the challenges that clubs face when directed by P/TSOs to adopt an initiative that is new (and even radical) to the CSO.
- Provincial parks and recreation organizations, and other provincial/territorial organizations that have community sport within their mandate, would similarly benefit from the insight to innovation in CSOs.
- National sport and multi-sport organizations that have community sport within their purview, either directly (e.g., Canadian Sport for Life, Coaching Association of Canada), indirectly (sport governing bodies), or as policy leaders (e.g., Sport Canada), would also benefit from the insight into CSO innovation.

HOLT, NICHOLAS
University of Alberta
T. McHugh
Doctoral Stipend 2009

A Sport-based Critical Hours Program for Low-Income Youth

Project Summary
This program of research addressed three important issues faced by Canadian children; the problem of low physical activity, the need to increase sport participation, and the absence of programming during the 'critical hours' after-school period (see Active Health Kids Canada, 2012 Report Card for a review). It is particularly important to offer critical hours programming for children in low-income areas to provide safe places for them to develop skills, explore interests, and learn healthy living traits. Therefore, the overall purpose of this research was to develop, implement, and evaluate a sport-based critical hours program for children living in low-income areas of Edmonton, AB.

Research Methods
We conducted a 3 phase project. Based on a participatory action research (Park, 1993) approach, the first phase of the research involved developing an understanding of the context and building relationships with community partners. In the second phase a multi-sport program involving collaborations between the school board, schools, and provincial sport organizations was created and delivered to 37 children (from grades 2 and 3) at two schools in low-income areas. Semi-structured interviews were conducted with 28 program participants (i.e., children) and 19 stakeholders (i.e., adults) to evaluate program delivery and implementation.

In the third phase a revised program (now named TRY-Sport) was created and delivered to 35 children (from grades K-3) attending two schools in low-income areas (one school from phase 2 and one 'new' school). Following the program we interviewed 14 children to obtain their views about program content and skills they learned through participating in TRY-Sport.

Research Results
Qualitative analysis of data from phase 2 revealed five themes that depicted participants' views of the program: (1) "I Play Those Games Nowhere Else," (2) "Just General Life Skills," (3) "How We Fit in the Whole Picture," (4) "It's Not Always Financial," and (5) "Plan for it Long Term." Overall, findings showed that children had positive experiences, the program filled a void in their lives, and they learned some life skills. The adults' views supported some aspects of the delivery of the program and provided direction for future program development.

We revised the program based on our findings from phase 2. First, while collaborations with provincial sport organizations were valuable partnerships, we realized the need to create a more independent program that would still address a range of movement and sport skills without relying on provincial sport organizations to send staff to run program sessions. Second, we realized a need to more specifically target life skills in a consistent manner. Third, it was important the revised program required minimal equipment because schools

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did not have financial resources to buy/repair equipment. Finally, we built flexibility into the program so that it could fit with the requirements and constraints of different schools.

Hence, for the third and final phase of the project, we revised the program (and renamed it TRY-Sport). It was designed to teach fundamental movement skills and life skills through the sports of soccer, volleyball, and basketball in a manner consistent with the FUNdamentals stage of the Long Term Athlete Development/Canadian Sport 4 Life model. In addition, the program focused on teaching three life skills: Leadership, teamwork, and confidence.

Analysis of the children's interviews from phase 3 showed that in terms of program content the activities children reported they enjoyed the most were based on creating optimal challenges and 'adventures' which engaged their imaginations. Children also reported learning social and life skills (e.g., teamwork, sportspersonship, listening) along with a range of fundamental movement skills. These skills seemed to be specifically learned in the program and there was some evidence of transfer of these skills to other parts of the children's lives. Finally, the need to adapt program delivery within the context of the two different schools was confirmed as a strength of the approach. Thus, this study showed the importance of engaging children's imagination to deliver the TRY-Sport program and the need for a flexible approach.

Limitations of the research included the fact that the program was delivered to a relatively small number of schools/children and therefore the results likely generalize only to schools/children in similar circumstances to those we studied. We did not evaluate the effectiveness of the program in terms of its effects on sport participation or physical activity. Further research is needed to address these issues.

Policy Implications

The research showed that it was viable to provide high-quality critical hours programs to children who attend schools in low-income areas. These children face limited options during the critical hours period and have few opportunities to engage in organized sport activities. The critical hours period is an important opportunity to influence children's sport participation and levels of physical activity.

The main implications are as follows:

1) It was important to develop collaborations with organizations from multiple sectors. Such collaborations supported the creation and development of programs that address participants' needs. However, relying on these collaborations for program delivery was unsustainable. We showed that 'stand-alone' programs that are relevant to stakeholders' needs could be delivered with minimal staff/equipment and will therefore likely be more sustainable in the long-term.
2) TRY-Sport was shown to be viable approach that was positively received and appraised by children and adult stakeholders. It made a positive difference in the children's lives. Thus, the creation of such programs should be addressed by all levels of government.
3) Our research showed critical hours programs should be created and delivered in a flexible rather than standardized manner. A flexible approach that has certain core principles (i.e., fundamental movement skills and select life skills) and can be adapted to the circumstances and restraints faced in particular schools is required. There is no 'one size fits all' critical hours program, but a flexible approach based on core principles appears to represents a valuable and practical way forward.
4) Given that the federal government is exploring ways to promote sport and physical activity, and that the Children's Fitness Tax Credit program appears to benefit middle and higher income families

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(Spence, J. C., Holt, N. L., Dutove, J., & Carson, V. (2010). Uptake and effectiveness of the Children's Fitness Tax Credit in Canada: The rich get richer. BMC Public Health, 10, 356. doi:10.1186/1471-2458-10-356) the provision of direct funding to critical hours programs represents a policy option. This issue also applies to provincial governments that have introduced tax credit programs for children's sport/physical activity.

Next Steps

There is a need to evaluate the effectiveness and longer-term outcomes of the TRY-Sport program. A 'program manual' that includes the core principles of the TRY-Sport program will be created and disseminated. This will be useful for various organizations who wish to deliver critical hours programs.

Key Stakeholders and Benefits

- Provincial and National Sport Organizations
- Branches of provincial and federal governments responsible for sport/physical activity promotion.
- Physical and Health Education Canada
- Schools, school boards.
- Active Health Kids Canada

HORTON, SEAN
University of Windsor
Post-Doctoral Stipend 2007

Promoting Healthy Aging

Project summary

An area of increasing importance and urgency in Canadian society is the health of our senior citizens. Current research on seniors provides important evidence linking regular exercise to general health, yet according to the Canadian Community Health Survey, only a small minority of senior men and women have sufficient physical activity to maintain optimal health benefits. The problem appears to be one of action rather than one of knowledge. While 98% of people over the age of 50 are aware that physical activity is important to maintaining their health, only a minority of senior women and men get sufficient physical activity to maintain optimal health benefits. One potential barrier to seniors' participation in sport and physical activity is prevailing cultural attitudes and stereotypes, which in North America tend to be predominantly negative towards seniors. My interest in this study was in exploring attitudes towards both aging and physical activity that seniors hold in the hope of further elucidating this gap between knowledge and action. In addition, I examined seniors' notions of 'successful aging' and their role models of the aging process. While work on role models for young people is well established, very little research has examined the individuals that seniors look to as role models of their own aging.

Research methods

Forty-five adults 60 years of age and older were recruited for in-depth qualitative interviews. All of the interviews took place in a private room with one interviewer and lasted from 1-2 hours. All of the interviews were audio taped and subsequently transcribed verbatim.

An interview guide provided the basic themes to be investigated, although any new topics that emerged during the discussion were explored. While the exact sequence and wording of questions varied, questions were aimed at:
1. identifying stereotypes of aging that seniors themselves hold,
2. seniors' perceptions of ageism in society, and
3. seniors' conceptions of what it means to age successfully.

In addition, questions probed participants' exercise patterns and their attitudes towards physical activity. Related to this, participants were shown pictures of elite male and female athletes, all of whom were still active, training intensely, and over 75 years of age. Participants were told of their accomplishments and asked their opinions of both their athletic exploits and their exercise regime. Our objective was to gain further understanding and more in-depth knowledge of how participants reacted to an exercise 'role model'.

Research results

Previous researchers (i.e., Lockwood et al., 2005) have maintained that designing more effective health interventions for seniors revolves around gaining a greater understanding of how health-related exemplars (or 'role models') can motivate this population.

Our results provide support for these assertions, as they suggest that seniors often have someone in their lives who represents what it means to age successfully. Generally, this is an individual older than themselves, active, vigorous, and illustrative of the high quality of life that is possible into a very late age. Importantly, these individuals provide a direct contrast to the most negative stereotypes of aging. These individuals often served to motivate our participants to engage in various forms of exercise and physical activity. Importantly, notions of successful aging varied considerably amongst the participants. These differences related to physical health and well-being, but also social, psychological, and spiritual success, the definitions of which did not always conform to academic or biomedical descriptions of aging successfully.

While participants had distinct role models of successful aging, their reaction to the photos of elite older athletes was more equivocal, and depended in part on their current physical activity level. Those who were already active in their daily lives were more likely to see elite older athletes as an inspiration and as viable role models. Those who were less active, however, found these elite athletes less appealing as role models. While there were exceptions to this general trend (i.e., inactive seniors who found the elite senior athletes inspirational, and active seniors who did not) the general trend indicated that elite athletes may only provide inspiration for those who are already active. The implications of such findings are discussed below.

Key stakeholders and benefits

The results will be of potential value to policy makers in the development of social marketing initiatives that target specific audiences and will hopefully serve to encourage and enhance participation in sport/physical activity. More specifically, this may be relevant with the Division of Aging and Seniors within the Public Health Agency of Canada.

Seniors organizations promoting sport may also find these results of interest. For example, the International Masters Games Association, the Canadian Masters Athletic Association, along with provincial organizations (i.e., the Ontario Senior Games Association, Ontario Masters Athletics) all promote sports participation by seniors.

Finally, the Canadian Association for the Advancement of Women and Sport and Physical Activity (CAAWS) specifically targets women aged 55 and over for participation in sport and physical activity.

Policy implications

Policy implications of this work in the health and aging field include: (a) guiding the design of information for seniors about the various ways later life can be experienced and perceived; (b) informing health promotion practices for older people, and; (c) expanding the interpretation of the 'successful aging' concept to include a more expansive perspective.

Senior is obviously not a monolithic term. Participants who were asked to describe a 'typical senior' had widely varying descriptions, ranging from very positive to somewhat negative. Health promotion messages and/or interventions need to account for the complexity with which older people view successful aging and healthy living. Seniors will respond to promotional initiatives in multi-faceted ways. For example, while a number of seniors will find images of elite older athletes inspirational, others will find such images intimidating, which may turn them off exercise. Often seniors' reactions will be influenced by their own level of physical activity, and what they deem to be possible in later life.

This undoubtedly makes health interventions more challenging, as they need to account for significant diversity within the population. However, the more those messages are tailored to meet the needs of this diverse group, the more success such interventions are likely to have.

Next steps
One of the intriguing themes to emerge from the research was the variety of responses seniors provided to the notions of 'typical senior', 'successful aging' as well as their varied reactions to elite older athletes. My next phase is to recruit 3 distinct groups of seniors who vary in their levels of physical activity involvement (1-master's athletes, 2-active seniors, and 3-sedentary seniors) and to examine their role models of aging. Specifically, it will be important to investigate 3 areas
- the relevance of role models and the extent to which they vary with age and activity level.
- whether masters athletes can serve as viable role models to decrease barriers to participation in sport and physical activity.
- to what extent participants use predominantly prevention versus promotion orientations (i.e., upward or downward social comparisons) and how that may differ depending on age and activity level.

This last point is particularly relevant for those working in policy and health promotion, as understanding seniors' motivations for exercise is paramount to designing effective interventions. Preventing negative outcomes (i.e., a downward social comparison) may be equally as important/effective as pursuing positive outcomes (an upward social comparison).

HORTON, SEAN
University of Windsor
P. Weir, J. Baker, R. Dionigi
Standard Research Grant 2010

Promoting sports participation: Exploring physical activity patterns and role models of aging amongst older persons

Project Summary

Sport involvement in Canada drops precipitously as we age. Recent Canadian data indicate that participation rates are highest in young Canadians, with 54% between the ages of 15 and 19 taking part in sporting activity. By age 55, however, only 17% of individuals are engaging in sport (Statistics Canada, 2013). Participation rates in more general physical activity decline in a similar fashion. Considering the myriad of diverse benefits associated with participation in sport and physical activity, this rate of decline is of concern.

One barrier to seniors' participation in sport is prevailing cultural attitudes and stereotypes, which in North America tend to be predominantly negative towards seniors (Levy & Banaji, 2002). The prevalence of these negative stereotypes often work to prevent older adults from engaging in sport and physical activity (O'Brien Cousins, 2003). By challenging those negative stereotypes we may be able to encourage increased participation among the senior population. 'Role models' of aging have the potential to play an important part in this endeavour.

While there has been extensive research into role models for youth and young adults, there has been comparatively little attention paid to the value of role models for older adults. Levy and Banaji (2002) noted that exemplary individuals (i.e., role models) have the potential to change attitudes of group members themselves, as well as societal stereotypes of that group. Our research illustrates both the potential, but also the complexity of establishing appropriate role models for seniors' sport participation.

Research methods

The objectives of this project were to examine the importance of role models for older adults. In particular, we investigated three related areas: 1) the relevance of role models and the extent to which they vary with age and activity level, 2) whether masters athletes can serve as viable role models to decrease barriers to participation in sport and physical activity, and 3) to what extent participants use predominantly prevention versus promotion orientations (i.e., upward or downward social comparisons) and how that may differ depending on age and activity level.

Adults 60 years of age and older were recruited for in-depth qualitative interviews. All of the interviews took place in a private room with one interviewer and lasted from 1-2 hours. All interviews were audio taped and subsequently transcribed verbatim. An interview guide provided the basic themes to be investigated, although any new topics that emerged during the discussion were explored.

Questions probed participants' exercise patterns and their attitudes towards sport and physical activity. Related to this, participants were shown pictures of elite male and female athletes, all of whom were still active, training intensely, and over 75 years of age. Participants were told of their accomplishments and asked their opinions of both their athletic exploits and their exercise regime. Our objective was to gain further understanding and more in-depth knowledge of how participants reacted to an exercise 'role model'.

Research results

Previous researchers (i.e., Lockwood et al., 2005) have maintained that designing more effective interventions for seniors revolves around gaining a greater understanding of how health-related exemplars (or 'role models') can motivate this population.

Our results suggest that seniors often have someone in their lives who represents what it means to age successfully. Generally, this is an individual older than themselves, active, vigorous, and illustrative of the high quality of life that is possible into a very late age. Importantly, these individuals provide a direct contrast to the most negative stereotypes of aging.

While participants had distinct role models of successful aging, their reaction to the photos of elite older athletes was more equivocal, and depended in part on their current physical activity level. Those who were already active in their daily lives were more likely to see elite older athletes as an inspiration and as viable role models. Those who were less active, however, found these elite athletes less appealing as role models. While there were exceptions to this general trend (i.e., inactive seniors who found the elite senior athletes inspirational, and active seniors who did not) the general trend indicated that elite athletes may only provide inspiration for those who are already active.

Of interest is the fact that masters athletes often see themselves as role models, for those their own age and/or younger generations. At the same time, when discussing the lack of sport or exercise involvement of so many in their peer group, there is a moralizing component, in which a sedentary existence is denigrated to a certain extent.

Importantly, notions of 'successful aging' varied considerably amongst all the participants. These included physical health and well-being, but also social, psychological, and spiritual success, the definitions of which did not always conform to academic or biomedical descriptions of aging successfully. Seniors are not a monolithic group, and policymakers may need varying strategies to promote sport participation in this cohort.

Policy implications

Policy implications of this work in the sport and aging field include: (a) guiding the design of information for seniors about the various ways later life can be experienced and perceived, and (b) informing sport and health promotion practices for older people, *Senior* is not a monolithic term. Sport and more general health promotion messages and/or interventions need to account for the complexity with which older people view successful aging and healthy living. Seniors will respond to promotional initiatives in multi-faceted ways. For example, while a number of seniors will find images of elite older athletes inspirational, others will find such images intimidating, which may turn them off sport. Often seniors' reactions will be influenced by their own

level of physical activity, and what they deem to be possible in later life. This undoubtedly makes interventions more challenging, as they need to account for significant diversity within this particular cohort. However, the more those messages are tailored to meet the needs of this diverse group, the more success such interventions are likely to have.

Next steps

Our work on older athletes has found that participation in sport during later life can be simultaneously a sign of personal empowerment, a desperate resistance to aging, a challenge to stereotypes and a reproduction of dominant sport and aging discourses. Further research is needed to examine what sport means to older people who do not currently partake in it, despite being encouraged to by promotional messages. Our preliminary work on the opinions of older people who do not compete in sport has found mixed views on Master athletes and the value of sport.

While the biomedical focus of sport science and gerontology literatures will remain essential, much more research with a biographical and ethnographic dimension is needed in order to build a more complex picture of the role that sport participation plays in resisting and reinforcing cultural understandings of sport and aging. In this regard, listening to the voices of older people from a diverse range of contexts will be crucial.

Key stakeholders and benefits

The results will be of potential value to policy makers in the development of social marketing initiatives that target specific audiences and will hopefully serve to encourage and enhance participation in sport/physical activity. More specifically, this may be relevant with the Division of Aging and Seniors within the Public Health Agency of Canada.

Seniors organizations promoting sport may also find these results of interest. For example, the International Masters Games Association, the Canadian Masters Athletic Association, along with provincial organizations (i.e., the Ontario Senior Games Association, Ontario Masters Athletics) all promote sports participation by seniors.

Finally, the Canadian Association for the Advancement of Women and Sport and Physical Activity (CAAWS) specifically targets women aged 55 and over for participation in sport and physical activity.

JEFFERY-TOSONI, SARAH M.
York University
J. Baker, J. Fraser-Thomas
Doctoral Stipend 2010

Exploring Contemporary Issues in Canadian Youth Hockey: Experiences and Perspectives of Peewee Players and Elite Hockey Insiders

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Project Summary

Hockey has a profound impact on the values, attitudes, and behaviours of Canadians (Earle, 2002; Gruneau & Whitson, 1993; Nixon, 1976). Youth hockey in Canada has been the target of much recent criticism, with attention being called to an increasingly aggressive and violent atmosphere (e.g., Ackery, et al., 2012; Loughead & Leith, 2001; Therien, 2012). This research project aimed to gain greater understanding of two contemporary issues commonly associated with this aggression and violence: youth hockey parents, and the presence of body checking in the youth game. Interviews were conducted with forty peewee players (i.e., 11-12 years of age) over the course of a competitive season and ten elite hockey insiders (i.e., those with professional, major junior, or university level experience as either a player, coach, parent of elite player, official, or national media personality). Results indicate that elite insiders described concerning parent involvement including modelling poor and aggressive behaviour, having unrealistic expectations, putting pressure on their children to perform, over-stepping the boundaries of the coach, and living vicariously through their children. However, peewee players reported being generally satisfied with their parents' level and type of involvement. Both elite insiders and peewee players discussed the regular occurrence of negative parent behaviours at games (i.e., yelling at players and officials), and the negative impact of these behaviours. Further, peewee players reported enjoying the presence of body checking in their game, despite discussing feelings of both fear and safety on the ice, with the feelings of fear often attributed to size differences between players. Conflicting findings, recommendations and future directions are discussed.

Research Methods

Study 1

Participants included ten (8 male, 2 female) elite Canadian hockey insiders age 22-54, all of who emerged from the Canadian youth hockey system. Each participant was a current or former elite player, coach, official, parent of an elite player, or national hockey media personality. "Elite" was operationally defined as having experience at the professional (National Hockey League), major junior (Canadian Hockey League), or university level (National Collegiate Athletic Association (NCAA) Division I; USA, Canadian Interuniversity Sport (CIS); Canada); many participants had multiple roles (i.e., player, coach, parent). Each participant engaged in a 30-60 minute in-depth, semi-structured telephone interview focused on their perspectives of parent involvement in Canadian youth hockey. Each interview was audio-recorded, transcribed verbatim, and analysed using previously established guidelines (e.g., Tesch, 1990).

Study 2

Participants included 40 youth hockey players from nine competitive teams in three different hockey leagues in Southern Ontario, Canada. Participants were recruited from minor peewee (i.e., 11 years old; 11 players) and peewee teams (i.e., 12 years old; 29 players), with a mean age of 11.73 years. The competitive levels of

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teams ranged from BB to AAA (the highest competitive level). Each player participated in two 15-45 minute in-depth, semi-structured interviews; one at the beginning of the season, and one following the conclusion of the season. Interview questions focused on their parents' involvement in their hockey and behaviours at their hockey games, as well as their perceptions of body checking. Data were analyzed in the same way as discussed for Study 1.

Research Results
Peewee players reported generally positive parent involvement however, the elite insiders highlighted several issues that necessitate further attention, including parents having unrealistic expectations, putting pressure on their children to perform, over-stepping the role of the coach, and living vicariously through their children. Both peewee players and elite insiders reported that although cheering and positive comments are often heard at youth hockey games, negative parent spectator behaviours are commonplace. Peewee players suggested negative comments came primarily from the "other team's parents," with officials and physical players often being the target of these negative comments. Some participants spoke of being distracted, frustrated, and angered by negative parent comments during games, suggesting that negative comments hold more weight and are more likely to be heard, internalized, and remembered by youth players. With regard to body checking, many peewee players reported liking the presence of body checking in their game, however increased injuries and rough play since its introduction were discussed at length, as well as players feeling both fear and safety on the ice, with players most often attributing their feelings of fear to size differences. Players also reported that body checking was rarely taught as a specific skill; it was either included as part of other drills, or not taught at all. Results should be interpreted with caution in that the perspectives of other parties were not taken into consideration, and social presentation bias (Nederhof, 1985) may have influenced responses.

Policy Implications
With over 570,000 youth involved in hockey in Canada, a safe and enjoyable environment is of critical importance. The extensive discussion of negative parent behaviours at Canadian youth hockey games by both elite hockey insiders and peewee players point s to the need for effective parent education programs, with a particular focus on appropriate parent behaviour at games. While there has been extensive growth in such programs in recent years, it is essential that these programs are grounded in evidence-based research, and undergo rigorous evaluation to assure their effectiveness. Elite insiders suggested parent education programs be developed by a diverse team of experts, and be made standardized, while being audited/monitored. Further, they suggested programs focus on encouraging parents to have realistic expectations, keeping a healthy distance from their children's hockey, and demonstrating respect and caring at games. Further exploration of an anonymous reporting system may also be valuable in alerting league officials to particularly problematic parent issues, eventually contributing to a more positive parent culture in Canadian youth hockey. Findings also point to the important of a clear and strict national policy on discipline.

Recommendations for policy regarding body checking among young players continue to be challenging, given conflicting and contradictory findings within and between research studies. Most participants in this study expressed enjoying the presence of body checking in their game and feeling safe on the ice, yet many also reported experiencing fear. Given that peewee players often discussed fear in the context of size differences, findings suggest that matched physical size rather than matched chronological age may be a better framework for the inclusion of body checking. Findings also highlight the importance of mandatory inclusion

of an effective body checking curriculum for young players, given that many participants spoke of limited to no opportunity to correctly learn the skill of body checking.

Next Steps
This study has advanced our understanding of parent involvement, and the presence of body checking in youth hockey by taking into consideration perspectives of the youth players themselves, and allowing their collective voices to inform policy decisions. Future research should continue to examine player perspectives, and consider a large-scale case-study approach including players, parents and coaches, as well as observational data from games. Moreover, the longitudinal approach of the current study could be expanded to include more time points throughout the season, if only to validate the consistency of the responses given in the present study.

Researchers should also continue to examine minor hockey players' perceptions of body checking to further determine why players report seeing so much rough play and injury due to body checking, but also report enjoying it, and oftentimes, feeling safe on the ice. Researchers should also continue to examine the roles of parents, coaches, and officials in body checking.

Finally, future researchers may investigate gender differences in perceptions of parent involvement and body checking in Canadian youth hockey. Given that the present study had primarily male participants (i.e., 34 males, 6 females), it was difficult to discern any differences in perceptions between males and females, and future researchers should attempt to examine these lines of inquiry.

Key Stakeholders and Benefits
- Hockey Canada
- BC Hockey
- Hockey Alberta
- Saskatchewan Hockey Association
- Hockey Manitoba
- Hockey Northwestern Ontario
- Ontario Hockey Federation
- Ottawa District Hockey Association
- Hockey Québec
- Hockey New Brunswick
- Hockey PEI
- Hockey Nova Scotia
- Hockey Newfoundland and Labrador
- Hockey North

KOCH, JORDAN
University of Alberta
Doctoral Stipend 2010

The (Re)Making of the Hobbema Community Cadet Corps Program

Project Summary

In 2005, the Royal Canadian Mounted Police (RCMP) helped launch a unique afterschool program among the four Cree Nations of Maskwacis (formerly Hobbema), Alberta. The program, known as the Hobbema Community Cadet Corps Program (HCCCP), was widely celebrated among politicians, segments of the community, and especially in the mainstream media as an effective tool for 'gang prevention'; however, a closer look also revealed a more complex set of negotiations occurring at the local level. This multiyear, ethnographic case study drew from a series of open-ended interviews with Maskwacis parents, youths, sports administrators, band councillors, and other agents in the community to critically examine the stories behind the making of the HCCCP. The study's key objectives were twofold - to interrogate:

- The dominant (media-endorsed) stories surrounding Maskwacis, its youths, and the HCCCP.
- The range of experiences that accompanied the community's *(re)making* of the HCCCP.

Guided by Pierre Bourdieu's relational sociology, the study argued that, beyond a mere gang intervention program, the HCCCP also provided Maskwacis residents and other stakeholders with an important site, and discourse, through which to conceive, negotiate, and, at times, contest a variety of internally diverse and complicated agendas related to community, Cree identity, and the role(s) of sport in the *making* thereof.

Consequently, my conclusions suggest that researchers, sport programmers, funding agencies, and other stakeholder groups, would be well advised to engage this complexity in the earliest stages of their programming so as to minimize potential conflict as the program evolves. In addition, the study also found that the failure of funding agencies (government or other) to accommodate Maskwacis's complexity by providing a more robust, flexible, and long-term funding model proved detrimental to the HCCCP's development. Future models would, thus, benefit from adopting a more community-specific approach to sport financing. Paramount is that such an approach remains flexible, longer termed, and require far less paperwork so as to maximize the amount of time frontline workers (e.g., coaches) are able to spend with youths. This, in turn, will help sport to emulate the cohesive properties of Aboriginal culture that are so central to the functioning of our communities.

Research Methods

In total, the study combined six years of ethnographic fieldwork with 30 open-ended, semi-structured interviews with Maskwacis residents and other community stakeholders, including: youths, parents, the RCMP, community workers, teachers, and band councillors. This study was also framed in collaboration with the Samson Cree Nation's band council and residents among the four Cree Nation of Maskwacis, Alberta.

Cultural theory informed my interpretations of interview and other empirical data. Specifically, Pierre Bourdieu's main theoretical concepts - habitus, field, and capital – were used to interpret the broad, and more localized, sets of experiences that constituted the HCCCP as a genre of Maskwacis's physical culture. The

research also attempted to harmonize aspects of Bourdieu's framework with emergent trends in Indigenous Methodologies literature.

Research Results

The study discovered that, since its inception, the HCCCP has born the freight of an assortment of different, sometimes competing, meanings and social agendas. Many residents, for example, criticized the mainstream media's stake in the HCCCP and accused Edmonton-based journalists of foregrounding Maskwacis deviance at the expense of alternative social programming in the community. Other residents viewed the HCCCP as a re-inscription of colonial power, and alleged that the RCMP were taking advantage of their traditional 'warrior ethic' in order to promote a culturally foreign and statist agenda. Conversely, however, there were several parents that actively embraced the HCCCP as a celebration of Maskwacis's warrior spirit and as an extension of the community's proud military history. Beyond strategies for social change, therefore, or mere countermeasures to youth gang violence, the study found that the HCCCP also provided local residents, including youths, with a powerful vehicle through which to conceive, negotiate, and, at times, contest their ideas about what it means (and doesn't mean) to be Maskwacis in the new millennium. Consequently, my conclusions suggest that researchers, sport programmers, funding agencies, and other stakeholder groups, would be well advised to engage this complexity in the earliest stages of their programming so as to minimize potential conflict as the program evolves. The study further suggests that modest, long-term funding (as opposed to a major injection of limited-term financial support) would better support local stakeholders in this task, and also send a powerful message to the community's youths that their investment in sports and recreation is a worthwhile endeavour that won't be hamstrung by a lack of finances or fluctuating personnel.

The main limitations to this study included: race, class, gender, and cultural biases. The strategies that were employed to help mitigate these biases included my sustained investment in the community, my regular participation in Cree ceremonies, sports programs, and other social gatherings, and the partial grounding of this research within Indigenous Methodologies literature; however, such limitations inevitably remained within the study's framework.

Policy Implications

The study has several policy implications that are relevant to enhancing sport participation in Canada:

First, and most obviously, non-Aboriginal sport practitioners must directly engage the complex colonial histories in which we interact. This entails both: 1) learning the history upon which our privilege is based, and 2) actively engaging and listening to community members discuss how our identities refract within specific local contexts.

Second, policy makers should be cautious about how sports are publicly portrayed in (or about) Aboriginal communities. For example, representing sport as 'gang intervention' risks perpetuating stereotypes that indirectly hinder the development of alternative social programs in the community (e.g., only programs that embrace the stereotype of Aboriginal gang violence receive funding) and also undermines the range of alternative meanings and agendas ensconced upon that sport or physical activity.

Finally, the study found that one-size fits all funding models are potentially detrimental to the development of sport within marginalized communities. More specifically, my research has demonstrated the significance of building *sustainable* social relations within our (both Aboriginal and non-Aboriginal) communities. Indeed, if

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we begin with the assumption that *all* youths desire a measure of stability (especially those grappling with a complex colonial legacy in which family units, cultural traditions, and social cohesion were assaulted by government-led policy), we see how current (e.g., short term) funding models that are subject to the whims of policy makers and an increasingly-volatile Canadian economy disables peoples' ability to grow and sustain productive human relations. For example, frontline workers (e.g., coaches, administrators, parent volunteers) spend much of their time seeking out new pockets of funding and cycling through positions with only limited financial support. This effectively perpetuates the cycles of exploitation to which Aboriginal peoples have been disproportionately exposed over time and, thus, nourishes a sense of apathy and frustration among youths. Future models would benefit from adopting a more community-specific approach to sport financing. Paramount is that such an approach remains flexible, long-termed, and require far less paperwork so as to maximize the amount of time frontline workers are able to spend with youths.

Next Steps

My future plans for this research involve transforming its contents into an academic book.

My fieldwork encountered several small adjustments that could be made to current funding models that would help sport (and crime prevention) agencies to better support local programming. These adjustments will be identified and more fully unpacked in future analyses involving First Nations communities and other populations in Alberta.

My other future research plans involve seeking out projects and opportunities that help to enrich relations between the academy, other institutions (e.g., sport an recreation), and places/populations disproportionately strained by various socio-historic and economic-political processes.

Key Stakeholders and Benefits

1) Government and other agencies; e.g., Sport Canada, the National Crime Prevention Center, KidSport.
2) Coaches and community support workers.
3) Sport studies researchers.
4) The RCMP.

These groups would benefit from the stories that are described and unpacked in this research, especially the study's emphasis upon devoting long-term and sustainable funding and human capital to support local programs. Moreover, one of the study's most unique contributions is its offering of a reflexive analytic account of the embodied qualitative research process as mediated through a specific First Nations context. Using Bourdieu's 'reflexive' sociological tools, the researcher (a non-Aboriginal man) examined the multiple biases (e.g., personal, academic, and intellectual) that have informed this study's conduct. The strategies that were employed to help mitigate these biases were also discussed, which included the researcher's sustained investment in the community, regular attendance and participation at Cree ceremonies and other less formal social gatherings, and the partial grounding of this research within Indigenous Methodologies literature. Other researchers and sport practitioners would benefit from further engaging in such practices, and from continually reflecting upon the unique biases, limitations, and privileges that shape our research, sports programs, and community relationships.

KWAN, MATTHEW
University of Toronto
Doctoral Stipend 2007

Transitioning Students' Sport and Physical Activity Participation

Project Summary

The transition from late adolescence to young adulthood represents a time of profound changes, including a period for which substantial declines in physical activity levels occur. As the late adolescent population transitions into early adulthood, a number of trajectories are possible (e.g., entry to the workplace, armed forces), but a large proportion of young adults elect to pursue a higher education at college or university. Recently, research has begun to examine the patterns of physical activity among students as they transition from high school into university. Consistently, the studies have found participation in moderate-to-vigorous physical activity being significantly higher during students' last year at high school compared to during their first-year at university. Anecdotally, substantial decreases in organized sport has been a significant contributor to those overall declines in physical activity participation; however, changes in sport participation during the transition from high school to university had not been previously examined.

Research Methods

Participants were 162 first-year students that completed a questionnaire during their spring semester at university. The questionnaire included a global (general) measure of physical activity (Godin Leisure-Time Exercise Questionnaire; Godin & Sheppard, 1985), a detailed measure of sport and physical activity behaviours (Modifiable Activity Questionnaire for Adolescents; MAQ-A; Aaron et al., 1995), and semi-structured open-ended questions to identify the perceived barriers to sport participation during students' first-year at university.

Research Results

Consistent with previous research, the study found participation in both vigorous and moderate type physical activities decreasing from high school to university. Among the participants, 63% of the students exhibited declines in their overall physical activity, 22% of the students showed an increase in their physical activity, while 15% did not change.

Average engagement in strenuous/vigorous physical activities decreased from 3.64 times/week during high school to 2.35 times/week during university.

Average engagement in moderate physical activity decreased from 3.61 times/week during high school to 3.01 times/week during university.

Together, moderate-to-vigorous physical activity declined from 7.26 times/week during high school to 5.36 times/week in first-year university.

The primary purpose of this study was to further examine the role of sport participation. The results found an overall decline in their participation in organized sports, similar to the declines in overall physical activity levels.

On average, students reported participating in a sport activity on 14 days/month during high school; entering university, students reported engaging in sports on an average of 5 days/month.

In addition decreases in the frequency of sport participation, there were decreases in the duration of those sport activities. On average, students engaged in 77 minutes/session during high school, and only 39 minutes/session at university.

Decreases in sport participation were moderately related to decreases in strenuous/vigorous type physical activity; and weak-to-moderately related to the decreases in moderate type physical activity.

With the many health and social benefits associated with being physical activity and sport, research should strive to understand populations such as first-year students and the reasons behind their decline in both their sport and physical activity levels. Students identified a number of important barriers to their sport participation during their first-year at university.

- Time constraints
- Availability of sports
- Fatigue
- Alternative social activities
- Laziness

Policy Implications
The present findings demonstrate significant linkages between declines in sport participation to the overall declines in physical activity behaviours among young adults transitioning into university. It must be recognized that the transition into early adulthood is a period for which individuals disengage from sport participation, continuing to become less active advancing with age. Given the many benefits associated regular participation in sport and physical activity, this transitional period offers a critical point to intervene

Next Steps
This study was able to provide a snapshot into the sport participation of students transitioning from high school to university. While providing some insights to first-year students' participation in sport-specific activities, there is a need for further research. First, more efforts is required to develop the capacity for sport and physical activity surveillance among the collegiate population (i.e., tracking sport participation over time). Secondly, qualitative studies may be necessary to gain a more in-depth understanding behind the contexts associated with declines in sport participation. Lastly, future research needs to continue to understand the key changes occurring during this transition period, and to develop a sustainable intervention to help students maintain their engagement in sports through this life change.

Key Stakeholders and Benefits
Broadly, the findings from this study will be informative to organizations and ministries associated with sport and health promotion (e.g., Ontario Ministry of Health Promotion and Sport, Canadian School Sport

Federation). Furthermore, the findings could also be useful for physical activity educators – highlighting the needs for a greater emphasis on sustaining lifestyle sport and physical activities following high school graduation.

LEIPERT, BEVERLY

University of Western Ontario
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Doctoral Stipend 2007

Exploring Social Support, Sport Participation, and Rural Women's Health Using Photovoice

Project Summary
Research Objectives:
- To explore the roles that sport and recreation clubs play as community, social, and health places for rural women
- To understand how sport activities and meanings differ for women across diverse rural communities
- To utilize photovoice with rural women and document their perspectives about health within the context of curling

Conclusions: See Results

Research methods
Study participants used the photovoice method which includes picture taking with cameras, recording in log books, and group interviews. Participants first participated in a Research Orientation session, then took relevant photos and recorded in logbooks for two weeks, following which the log books were retrieved and the photos developed. A group interview was then conducted wherein each participant was provided with copies of her photos, and discussion of the photos ensued. Photo and interview data were analyzed by the research team and a photobook outlining the highlights of the project, using pictures and quotes from the interviews, was produced and sent to all participants and relevant sport organizations.

Women curlers were recruited from rural curling clubs in two communities in each of Ontario, Manitoba, and Nova Scotia, and from one curling club in the North West Territories (NWT). The communities had populations ranging from just under 800 to just over 4,000 residents. Each community was at least a 40 minute commute over isolated rural roads, or by plane, to the nearest urban center; five of the seven communities were more than an hour from the nearest city. Fifty-two women and girls, ranging in age from 12 to 75 years with an average age range of 50-60 years participated in the study.

Research results
Curling clubs are significant community places that are deeply valued by women and girls to:
- establish new (and maintain) longstanding friendships
- increase physical exercise
- develop and improve curling expertise;
- access opportunities for volunteering, mentoring, leadership and community engagement
- share practical, emotional, and affirmational support (e.g. team members frequently referred to as "curling family")

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Curling clubs enhance social relationships, community-building and inclusivity by accepting curlers of any ability (e.g., stick curling for seniors, Little Rocks programs for children, multi-generational teams).

Curling fosters community pride and resilience (e.g. through hosting events such as bonspiels and major competitions, which sustain faith in the importance and viability of small communities).

Curling clubs are struggling to survive in some rural communities; participants expressed concern about the lack of government support (local-level support in particular).

In spite of member commitment to keeping clubs viable (primarily through volunteering), external support is needed to ensure sustainability.

The photovoice method was very effective in helping participants to reveal and discuss perspectives and experiences about the meaning and significance of curling.

Major Conclusions

Curling clubs enhance and sustain physical, mental, and social wellbeing, and resiliency in the following ways:
- Building Social Connections - through social interactions which result in diverse friendships and relationships
- Facilitating Women's Health and Resiliency - Curling provides impetus and location to be active and involved in rural settings, which typically have few opportunities for interaction and involvement, and fosters confidence and leadership skills.
- Strengthening Rural Community Life - Rural curling clubs, as hubs of rural camaraderie and identity for all, open up new and exciting possibilities for curlers and communities. Women's involvement provides valued and visible opportunities to contribute to rural community life.
- Ensuring club sustainability - Participants commit substantial resources to the sustainability and enrichment of their curling club. Although these commitments sometimes exceed women's resources, they persist and look for ways to further advance curling in their communities.
- Limitation - This research, with its small sample of women and girls in three Canadian provinces and the NWT, indicates that more research is needed throughout the country to determine effects of and supports for curling for rural people and communities.

Policy implications

This study revealed the important role curling clubs play as a service to the community. This leads to the following policy implications:
- Fund the development of curling. Curling clubs are known sites for community activity and public engagement. Thus, they deserve the same level of financial support (federal, provincial, municipal) afforded to all other sports (e.g. hockey).
- Develop and enhance coaching and support for curling, especially for girls, in schools and rinks and provide resources for curling as part of school programs
- Better acknowledge, publicize, and celebrate the achievements of girls and women curlers locally, nationally, and internationally e.g. through increased media attention to women's curling internationally (e.g. the Olympics, other world competitions), nationally (e.g. CBC, TSN), and locally (e.g. newspapers, billboards).

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- Increase resources aimed at valuing and publicizing curling, similar to hockey, in small town Canada. This could be achieved through local community and school newspapers, greater support from local businesses, and the development of greater appreciation for the many contributions of the sport to personal and community wellbeing.
- Support further research on ways to enhance curling participation for youth and men as well as women in rural settings (e.g. enrich research funding from Sport Canada and SSHRC)

Next steps
- Several vital questions arose from this research:
- How does curling support rural people and communities?
- What is the significance of curling for rural community sustainability, resilience, and capacity-building?
- How can we enhance wellbeing and quality of life for individuals and communities through sport and recreation?
- How can curling be supported and enhanced within the changing contexts of rural life?
- How do changing economics, demographics, and environmental conditions affect curling and curling participation, and vice versa?
- How do sports such as curling support the wellbeing of rural women, men, and children?
- What are the needs of these groups regarding participation in sport?
- Building on this research, how can curling be enhanced in other rural communities throughout Canada?

Key stakeholders and benefits
- Canadian Curling Association; All provincial and regional curling associations; The Curling News; The World Curling Federation; Federation of Canadian Municipalities
- Ministries of Health – appreciate why and how to support sport/curling participation in rural settings.
- Rural curling clubs across Canada - would benefit from study suggestions for ways to address issues such as financial support for clubs and ways to strengthen curling participation, which would facilitate the sustainability and thriving of rural clubs.
- Media – national and local media (newspapers, television, radio) should be made more aware of these types of studies and their findings. Dr. Leipert gave over 25 interviews about this research with diverse international, national, and regional media (TV, radio, newspapers). More such profiling would raise the profile, interest, knowledge, and participation in sports in general and curling in particular.
- Sport Canada – research support that Sport Canada provides is vital and requires enrichment and sustainability so that more information can be obtained regarding the significance of curling for rural Canada and ways to enhance curling participation.

MASON, COURTNEY
University of Ottawa
Post-Doctoral Stipend 2011

Barriers to Participation in Physical Activity for Shibogama First Nations

Project Summary

This research examined the barriers to participation in sport and physical activity for Shibogama First Nations communities in northwestern Ontario. Aboriginal peoples face significant barriers to participation in physical activity in comparison to Euro-Canadians or other minority populations. This collaborative research project qualitatively investigated how sport and physical activity are connected to both broader cultural practices and Aboriginal holistic perspectives of health in two remote First Nations (Wawakapewin and Kasabonika Lake). This research focused on land-based physical practices associated with food harvesting (hunting, fishing and gathering).

Key questions included: What barriers to being physically active exist; and What are the the exercise, dietary and cultural implications of participating in land-based practices for these First Nations?

Research Methods

Several forms of qualitative methods contributed to this study. Participant observation was required to understand the experiences based around participation. This included actively participating in physical cultural practices related to food harvesting. I directly engaged with community members to help understand the role these physical practices play in their quotidian lives. While hunting and fishing remain male-oriented activities in these communities, this study also aimed to appreciate female perspectives and roles in these processes by investigating food gathering and distribution procedures. To understand the complexities of northern First Nations' physical practices, it was necessary to gain intimate knowledge of the cultural contexts of participation. I researched these activities by participating in these physical cultural practices. The intention was to comprehend the complete process of what is involved in food harvesting activities. The fieldwork was coordinated around hunting, fishing and gathering seasons.

Conducting semi-structured and unstructured interviews was a critical component of this study. With the assistance of community officials, community leaders, coordinators, elders, and local participants were interviewed. Semi-structured and unstructured interviews with thirty community members form the basis of primary information collected. In two months of fieldwork in these communities, I also contributed to several programs designed to enhance food security and improve access to physcial activity. Due to the nature of this research, it was imperative to foster a research process that was collaborative in orientation and held First Nations' perspectives at its core throughout the entirety of the project.

Research Results

Findings suggest that despite the significant barriers that these communities encounter to participate in physical practices associated with food harvesting, land-based practices can support community-driven

initiatives to increase physical activity as a strategy to prevent chronic disease and foster cultural continuities. This research unravels some of the complexities surrounding participation in physical activity and explores how it is linked to broader conceptions of health for rural First Nations.

Policy Implications
This study reveals that researchers and policy makers alike should consider land-based physical practices as a key aspect of Northern Aboriginal peoples' physical activity.

Support of land-based initiatives has great potential for fostering cultural continuities, encouraging physically active lifestyles and lowering levels of chronic disease. As a result, instead of or in conjunction with investing in Euro-Canadian sporting practices in Northern communities, support for land-based initiatives offer significant cultural, economic and health advantages to the communities and broader Canadian society.

Next Steps
While it is critical to have an extensive knowledge base about how barriers to participation in physical activity impact Aboriginal peoples, future research should also consider the ways in which sport and physical activity specifically enable Aboriginal communities and participants. This includes the potential benefits that participation may have for Aboriginal individuals and communities across the country. A key question could be: How does participation in physical actually impact the health of Aboriginal youth who engage in these programs and what are the long-term cultural consequences of their participation. Another key area of research could be comparing the impacts of different oriented activity programs in Aboriginal communities, specifically Euro-Canadian sport and Aboriginal physical and cultural practices associated with food harvesting/procurement. A key question could be: What are the cultural benefits and risks of engaging in physical practices related to food harvesting for remote First Nations in comparison to common Euro-Canadian sport initiatives in place in Northern communities? Issues concerning the health of Aboriginal peoples have been identified as a critical national concern, as Aboriginal health standards fall abysmally below national averages. For millennia, cultural practices that constitute forms of physical activity have been grounded in the daily lives of Aboriginal communities.

Along with identifying the limiting and enabling aspects of participation in sport and physical activity, this research could help local First Nations and rural Aboriginal Canadians across the country find significant ways to engage in physical activity and process the cultural and physical benefits involved with their own experiences of participation.

Key Stake Holders
Health Canada, Sport Canada, PHAC, CDPAC, CIHR, government and university researchers, Aboriginal leaders and communities.

LOCKWOOD, KELLY
Brock University
G. Jackson
STANDARD RESEARCH GRANT-RT Stipend 2006

Infrastructure & Expertise: A Model to Investigate Effective Training through Long-term Athlete Development

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Project Summary

A Hockey Intervention Program (HIP) was established as an innovative vehicle to evaluate the infrastructure-athlete relationship for training athletes in the sport of ice hockey. This research examined both system level and athlete level factors that influence stakeholders' decisions to access and/or integrate infrastructure into athlete development and how innovative infrastructure can best provide effective support for athlete development throughout the stages of Long Term Athlete Development (LTAD). The HIP coupled facility time (hard infrastructure) in the form of a sport specific training device (skate treadmill) emphasizing fundamental skill development and expertise (soft infrastructure) in the form of highly qualified and specialized trainers. Outcomes of the research strongly supported the value of sport specific infrastructure programs, such as HIP, which focused upon fundamental skill acquisition and development at all stages of LTAD. Simply stated, fundamental skills, such as skating, are rudimentary to the sport and the mechanics can and should be introduced, taught, trained and mastered at all levels of player development.

Research Methods

This study employed a mixed-method research design to examine the impact of the HIP according to two perspectives. First, system-level qualitative data regarding when, how and why sport infrastructure is most effective in supporting athlete development was gathered from four hockey sub-system stakeholders – parents, coaches, minor hockey leaders, and hockey talent scouts/agents. These groups have vested interests in athlete development and as such, make decisions that directly influence the type of facilities and expertise an athlete utilizes. Open-ended surveys and interviews provided data on stakeholder attitudes about the role of both hard and soft infrastructure in supporting athlete development.

Second, athlete-level quantitative data was gathered to examine how the HIP contributes to athlete development and sport specific performance. Physiological, biomechanical and on-ice performance measures were tracked pre and post a 12-week HIP training intervention per year for two years. Biomechanical measures assessed change in mechanical skill acquisition and refinement of technique, physiological measures assessed change in fitness level, and sport-specific performance measures assessed the transference of dry-land training to on-ice performance.

These data – stakeholder attitudes and performance measures – were analyzed and interpreted both independently and compiled in order to determine how stakeholders access infrastructure in ways that provide the greatest amount of support for athlete development. All data was collected on a yearly (cross-sectional) and ongoing (longitudinal over two years) basis to track system and athlete changes. This approach and timeline also facilitated the development of practical recommendations as outlined below.

Research Results

System level qualitative data was collected from 160 stakeholders; 120 parents and 40 decision makers that act on behalf of a minor hockey player. One parent for each athlete was surveyed with the exception of those 20 athletes in the "Active for Life" stage of LTAD; as adults making their own decisions, these athletes were surveyed directly. The remaining stakeholder groups included a random distribution of coaches, league administrators, scouts and agents. System level qualitative results emphasized support for three themes: the reasons for accessing sport specific infrastructure, the timing of 'first access' of sport specific infrastructure, and the quality or 'perceived impact' of facility time and expertise associated with sport specific infrastructure exposure.

Athlete level quantitative data was collected from an athlete sample of 140 hockey players; 20 athletes for each of seven stages of the LTAD model. Analysis revealed three themes consistently across all stages of LTAD: significant pre-post differences in mechanical literacy; confidence; and physical literacy gained as a result of exposure to HIP.

Combining and interpreting both qualitative and quantitative findings has provided a framework to assess the sport infrastructure-athlete connection. The greatest influence in understanding sport specific infrastructure and expertise occurred in Year 1 of the HIP when the novelty and impact of the program was high. Participants and stakeholders recognized the benefits of HIP early in an athlete's development and the influence of an integrated approach to mechanical and physical literacy seen consistently throughout the stages of LTAD. While this study focused specifically on ice hockey, research outcomes strongly support the value of sport specific infrastructure programs which emphasize the acquisition and development of fundamental skills, such as skating mechanics, as a part of athlete development at all stages.

Policy Implications

Where enhancing sport participation is concerned, this research project has three major implications:

1) Alternative infrastructure (e.g. Skate treadmill training) is as an effective way to teach, learn and train "FUNdamentals"
   The Canadian Sport Centres have called skating one of the "FUNdamentals" of LTAD in on-ice sports.[1] As noted above, most ice hockey stakeholders believe that even young children, given quality instruction, can acquire confidence and learn proper skating mechanics and technique on the skate treadmill.

2) Skate treadmill training as an alternative to scarce and expensive ice time
   Several interviewees noted that ice and ice time are scarce commodities in many communities. One of the advantages of the HIP is that it is the only off-ice mode of training that allows actual skating, thus circumventing the need for ice and ice time. Additionally, skate treadmills are considerably less expensive to build and maintain than ice surfaces, and take up far less space. As a result, skate treadmill training can be an attractive solution to issues associated with access to ice.

3) The need for accreditation/certification of instructors
   One of, if not the, major benefit of the HIP noted by stakeholders was the skating-related knowledge and expertise of HIP instructors – knowledge and expertise that is necessary to benefit from the training of what Hockey Canada calls the most important skill in ice hockey[2]. Related to this, several stakeholders mentioned the range of instructor quality associated with the "plethora" of commercial hockey training resources that exist today. Many suggested a need to accredit or certify instructors so

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that all stakeholders can have confidence in, and benefit from, available coaching and instruction. Both the Ontario Minor Hockey Association[3] and Hockey Canada[4] emphasize the need for certification and continuing education of coaches.

Next Steps

Results of this study support the development of fundamental movement patterns or mechanics of motion beyond the Active Start and FUNdamentals stages. Mechanical literacy has the potential to significantly enhance sport performance at all stages of development if integrated appropriately. It is recommended that a model of mechanical literacy be built and superimposed on the current model of physical literacy throughout all stages of LTAD.

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LU, CHUNLEI
Brock University
M. McGinn, J. Sylvestre
Standard Research Grant 2006

Chinese-Canadians' Perspectives on Health & Sport Participation

Project Summary

The main objective of the project was to investigate Chinese-Canadians' perspectives about health and sport practice.

Overall, participants reported both positive and negative changes in their perspectives and practices related to health and sport participation after immigrating to Canada. They experienced both cultural conflicts and integration. Multiple factors influenced their sport participation. For many, their sport practice seemed to be influenced by Chinese cultural values. Culturally appropriate policies and programs are critical to increase sport participation for this largest visible minority group in Canada.

Research Methods

The study involved qualitative interviews and quantitative questions from 100 first-generation Chinese immigrants, aged 25 or above, residing in one of four urban centres: Toronto, Vancouver, Halifax, or St. Catharines. A mixed sampling strategy combined purposive sampling, snowball sampling in Chinese-Canadian communities, and open calls.

Research Results

Participants generally perceived sport as a component of a healthy lifestyle and a means to maintain and enhance health.

These Chinese-Canadians experienced mixed changes over the course of immigration: many reported increases in sports and physical activity (e.g., because they had more time and resources) while others reported decreases (e.g., because they lacked friends and access to preferred activities).

Factors that contributed to positive changes in sports and physical activity included: encouragement from friends, colleagues, and media; available resources (e.g., facilities, equipment, natural environment); affordable costs; easy access; enhanced awareness about health; and more spare time in comparison to China.

Common sports practices included ping pong, badminton, tennis, basketball, soccer, golf, swimming, and cycling. It seemed that ping pong was the preferred ball game, but participants regretted that it was not better respected in Canada.

Most participants recommended newcomers engage in sports and physical activities to attain benefits in terms of physical health, as well as mental health (e.g., getting out of the house, making friends, releasing

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stress), integration into society, and meaningful leisure. They also encouraged newcomers to take advantage of community resources (e.g., free or low cost programs, facilities) and natural environments (e.g., parks, wilderness) in Canada. Other suggestions for newcomers included trying to do fun and suitable (e.g., age or ability appropriate) sports and physical activity, do sports and physical activity with friends or in groups, and adopt Canadian sports (e.g., skating, skiing, hunting) while maintaining Chinese preferred ones (e.g., taijiquan, ping pong).

The sources of information about sport and physical activity included (in decreasing order of importance): (a) media (e.g., magazine, books, TV, internet); (b) friends, relatives, schoolmates, and colleagues; (c) medical professionals; (d) environment such as surroundings, community centres, and general society; (e) school education; and (f) family, including parents and siblings.

There seemed to be cultural differences and conflicts between Chinese-Canadians and mainstream sports and physical activity. For example, participants tended to adopt traditional Chinese philosophies or values, such as *following nature* (顺其自然), yin-yang harmony (阴阳调和), and *golden mean* (中庸之道). Associated cultural understandings about health, sport, and the meaning of life led these individuals toward soft and mild-moderate sports (see those commonly practiced sports above), rather than strenuous, extreme, or adventurous activities (e.g., hockey, triathlon, skiing, sailing, or mountain climbing). They thought the goal of sports and physical activity should emphasize being healthy, not necessarily being strong.

Many Chinese-Canadians are not aware of sports programs and resources available in communities, or provided by government agencies or services.

Limitations:
The results are specific to Chinese-Canadians and may not generalize to other ethnocultural groups.

Sport participation was just one emphasis within a larger study; other results relate to physical activity, fitness, lifestyle, and health.

Policy Implications
Policy-makers should be aware that current sport policies are primarily based on Western cultural values (e.g., the more, the better; competitiveness) that may not be shared by all ethnocultural communities. Culturally appropriate sport participation policies should be developed to serve the diverse needs within Canada's multicultural society.

There is a need to develop sport programs and facilities (e.g., table tennis, badminton) in response to culturally appropriate sport participation. Culturally appropriate sport and recreation facilities and park design should consider growing needs among major minority groups.

Sport organizations at all government levels for sports such as badminton and table tennis should target the Chinese-Canadian community to provide a variety of opportunities for their participation in favoured sports. Other sport organizations such as boccia, bowling, curling, judo, karate, taekwondo as well as disabilities sports (e.g., goalball, wheelchair basketball) should make themselves visible and promote their sport programs in Chinese-Canadian communities because these sports are well aligned with Chinese cultural values.

Media, medical professionals, and community centres, as important factors for Chinese-Canadian sport participation, should make efforts to encourage Chinese-Canadians to participate in sports for health and leisure. Language-specific information (e.g., online sources, brochures, pamphlets) should be available for major minority groups to promote programs and services for sport participation.

Next Steps

There are still some unanswered and new questions regarding Chinese-Canadians' sport participation:

- The present project identified some increases and some decreases in sport participation among Chinese-Canadians: who are those that reported increases or decreases in sport participation, and what factors contributed to these changes?
- What are the differences in sport participation before and after 10 years of immigration among Chinese-Canadians? (Note: Ten years is considered a milestone in research on immigrant health.)
- What about sport participation for second-generation Chinese-Canadians? Are second-generation Chinese-Canadians more integrated into mainstream sport participation patterns as a result of increased acculturation compared to first-generation Chinese-Canadians?
- What are the specific barriers or challenges to Chinese-Canadians' sport participation? How can these barriers or challenges be addressed in order to increase their sport participation?
- Does the framework developed in the present project (e.g., changes and causes of changes in sport participation after immigration, factors and sources of sport participation) apply to sport participation for other ethnocultural groups? What strategies help to increase sport participation for other top immigrant groups in Canada (e.g., Indians, Filipinos)?
- How does sport participation help immigrants' acculturation and integration in Canada?

Key Stakeholders and Benefits

The following sectors, organizations, or groups may benefit from the findings:

- Sport Canada
- Ontario Ministry of Health Promotion & Sport
- Sport associations at all levels (national, provincial, municipal): boccia, bowling, curling, judo, karate, taekwondo, disability sports (goalball, wheelchair basketball).
- General media
- Medical professional groups
- Community centres

The benefits from the findings for the sectors or groups listed above will help develop more culturally appropriate sport policies and programs. Further, they can target and serve Chinese communities—the largest visible minority in Canada, especially in the two urban centres, Toronto and Vancouver. Eventually more Chinese-Canadians will be attracted by and get involved in those programs that fit their needs.

MAIR, HEATHER
University of Waterloo
Standard Research Grant 2006

Curling and Community in Rural Canada

Project Summary
The main objective of this research was to understand the role of curling clubs in rural Canadian life. It aimed to deepen and broaden our understanding of the role of leisure and sport settings in community development by studying the rural curling club. Specifically, it sought to: (1) explore the functions of these clubs as sport and community places over time; (2) examine the roles the clubs play in rural life and assess the challenges and opportunities they face; (3) observe and document the club year-round as well as community-based activities in the facility; (4) understand how these functions and meanings differ across communities and the country; (5) determine how rural curling clubs are community spaces to be understood within the broader contexts of rural and social change; (6) develop and refine new research approaches designed to best capture the complex interactions in these sport settings.

Thus far, it can be concluded that curling clubs are central places in small communities and have some combination of the following six characteristics:
- Sources of regular physical activity and life-long social connections
- Part of community identity
- Sites of pride, history, commitment and ownership
- Founded upon volunteerism
- Platforms for valued family time and activity
- A gathering place' for the community

Research Methods
Because these are small clubs and are located in very small communities, an ethnographic approach was undertaken. The researcher travelled to two clubs in each of the ten provinces (with an additional two clubs in Northern Ontario) and spent a bonspiel (generally a multi-day, multi-team tournament) weekend at the clubs. Graduate students were often present and part of the research team. Where possible, the researcher also travelled to the clubs during the summer (off-season) months to meet with key players (e.g. clubs presidents, board members, etc.) and to get a sense of what role the club plays in the community when curling is not taking place. During the winter, the research team spent entire weekends in the club, taking part in social events and aiming to have as many meaningful, informal conversations with participants as possible. In all, it can be estimated that a total of approximately 600 hours were spent in the clubs over the course of the research (average time in the clubs was about 30 hours). In addition to conversations, the research team carefully observed the behaviors and activities of the curlers. Notes from conversations and observations were recorded and were later analyzed. Photos and later video recordings were also made on site and proved to be very helpful sources of information during data analysis.

Research Results

Specifically, the findings can be grouped as answers to four main questions: Why do people try curling; why do they join (and remain club members); what challenges do the clubs face; and how are clubs attempting to meet these challenges?

It is clear the primary factor influencing an individual's decision to join a curling club is a social connection. Indeed, nearly all participants listed family, friends and co-workers as primary influences. Other reasons cited by participants included: school and youth involvement; change in family status that provoked a desire for a new activity (e.g., kids leaving home, spousal death or divorce, moving to a new community); and a desire for winter-months physical activity.

Curlers join and remain members of clubs because of the following benefits: Contributes to their health and well-being; allows them to enjoy regular physical activity at varying levels of experience and ability; provides volunteer and leadership opportunities; fosters a sense of ownership in the club; and allows for community engagement.

Challenged facing clubs relate primarily to economic issues, in particular, a lack of stable economic and volunteer burn-out. Other challenges included: the effects of a lack of diversity within the sport; a growing divide between elite/professional and amateur curling (what is referred to as competitive vs. social curlers); and the resulting tendency for sport organizations (including the Canadian Curling Association) to provide uneven support for clubs (high performance camps vs. grants for small repairs and upgrades).

Many clubs are working hard to address these challenges with innovative programs and strategies, including: maintaining affordability; identifying as a 'life-long sport' (e.g., from 'Little Rocks' for youth to Masters Curling); developing coaching and leadership capacity; responding to modern participant needs with flexible memberships and league play; promoting the social benefits of club membership; and updating the club's former image (closed, elite, white, male-dominated spaces) to socially diverse, community places.

A serious limitation was the researcher's lack of French-speaking abilities, which meant the clubs visited in Quebec were generally bilingual and not solely Francophone. Further, due to cancellations, two clubs identified for research and visited in the off-season ceased to be available for research during the winter term.

Policy Implications

In general, local curling clubs have been highlighted as sites of important physical activity with tremendous potential for social benefits. To achieve the benefits, clubs need stable and dependable investment and access to resources to help them continue to build capacity and maintain infrastructure. A successful and thriving curling club is one at the centre of both sport and community life. As such, the following should be supported and resourced: Youth Development; family-friendly infrastructure and programming; and capacity to understand and meet the needs of the modern adult participant, seniors and people with challenges and non-traditional curlers.

There are three steps sport policy makers can take to support curling clubs: 1) Support curling with the same level of financial (federal, provincial, municipal) afforded to other sports (e.g. hockey); 2) Increase exposure to curling by implementing programs in schools across Canada; and 3) Provide development funds to national or provincial curling organizations and to local clubs.

Next Steps

All research opens new doors of inquiry and this project has been no exception. One of the outcomes of this project is the development of a project focussing on the challenges of diversity and access facing urban clubs. The study focused deliberately on small communities because it was thought that the role of the club in the community may be more easily visible on a smaller scale. However, there is certainly room to look at bigger clubs in larger communities. Other questions that stem from this project include: What is the state of urban curling clubs and what challenges are facing them; What is the image of curling in the minds of new Canadians and how can we increase its appeal; How can national sport organizations communicate more effectively with, and respond to the needs of, their grassroots members; How can those concerned with sport development and participation balance the needs of high-level/elite sport development with those of everyday Canadians; How are (particularly winter) sport clubs working to meet environmental challenges with facilities such as hockey and curling rinks?

Key Stakeholders and Benefits

Canadian Curling Association; All provincial and regional curling associations; The Curling News; The World Curling Federation; Federation of Canadian Municipalities.

MILLINGTON, BRAD
University of Toronto
Post-Doctoral Stipend 2011

Aging in the Information Age: An Ethnographic study of Video Gaming in Canadian Retirement Centres

Project Summary

This research explored the use of sport-based video games (or 'exergames') in activity programs for older persons. In recent years, games like 'Wii Bowling' for the Nintendo Wii gaming system have become popular in seniors' centres in Canada, among other countries. The objectives for this research were as follows:

1. To examine ways in which older persons engage with 'exergames' in seniors' centres.
2. To identify the perceived benefits and drawbacks of 'exergaming' according to both older persons and staff members employed at seniors' centres.
3. To inform debates in academic literature on how and why people utilize devices like the Nintendo Wii in a time of: a) proliferating technologies (i.e., the 'information age'); and b) changing demographic trends (i.e., 'population aging').
4. To communicate study results with seniors' communities (e.g., participating retirement centres).

The main conclusions arising from this research are as follows:

1. That sport-themed video games like Wii Bowling are generally viewed as beneficial, mainly in that they call to mind 'real' forms of sport participation (e.g., 'real' bowling) and are potentially conducive to social engagement and (moderate) physical activity.
2. That these same technologies also bring challenges for seniors. First, since games like Wii Bowling are 'simulation' games (i.e., bowling movements are physically acted out) they raise health and safety concerns (e.g., over falling, injury). Second, the interactive nature of these technologies is unique compared to 'older' media; challenges and at times frustration arise in developing 'new media literacies' – which is to say in learning how to make sense of on screen messages and properly handle media hardware at the same time.
3. The presence of 'exergames' in particular, and the growing presence of technologies in seniors' centres in general, creates challenges for staff members as well. This is true mainly in that staff members need to develop new media literacies of their own in order to teach/oversee gaming activities.

Research methods

The research methods employed in this study including the following:

1. Participant observation at three retirement centres employing 'exergames' as part of their activity programming in eastern Ontario. This involved recording field notes on: the settings in which exergaming took place; the types of games that were played; the number of participants involved; and the interactions between participants, between participants and gaming systems, and between participants and seniors' centre staff.
2. Semi-structured interviews with seniors (n=8) involved in 'exergaming' and with staff members (n=9) devising/overseeing such activities (a fourth seniors' centre was involved at this stage). Interviews with

both groups included questions on (among other things): 'exergame' experiences; views on the benefits and drawbacks of (for example) Wii Bowling; and the ways these activities fit in to activity/social programming in general.

3. Analyses of relevant materials produced by or pertaining to the participating seniors' centres (e.g., websites, videos, activity schedules).

Research results

As suggested above, the findings from this research can be organized into three general themes:

- Theme 1: Social/Physical Engagement
  Physical activity in general was valued at the participating seniors' centres – e.g., for its potential health benefits and for its ability to bring residents together. Likewise, technologies in general were said to be increasingly prominent in seniors' centres, due in part to a 'new generation of seniors' that are technologically curious and that have used technologies in their past work/leisure experiences. 'Exergaming' takes place at the intersection of these trends: games like Wii Bowling were viewed as tools that can potentially promote social and physical engagement among older persons. This is likely the reason sport-based video games have grown popular in seniors' communities in recent years; one staff member said that she does not know of a seniors' centre that does not use the Wii.

- Theme 2: Challenges for Seniors
  At the same time, using these new technologies does not come without challenges. Given that 'exergames' generally involve sport simulations (e.g., bowling activities are fully acted out), they create health and safety concerns – e.g., pertaining to falling while playing. Furthermore, though seniors may be familiar with technologies in general, the interactive nature of exergames in particular is quite unique. The need to (for example) follow directions on screen while manipulating media hardware and acting out a sporting manoeuvre all at the same time at times proved difficult. In other words, new media bring the challenge for older persons of developing 'new media literacies'.

- Theme 3: Challenges for Staff
  Finally, staff too needed to be versed in using new technologies. This was said to be a challenge at times in that staff members sometimes lack experience using gaming systems like the Wii or in that there can be limited time for training around this issue. Some participants suggested that 'new media literacies' among staff is and will continue to be a general concern for seniors' centres as technologies become ever more prominent in retirement settings.

The main limitation related to these results is the size of the study sample. Future research might extend the methodological protocol used here to other seniors' centres/retirement communities, or might employ methods that allow for a wider pool of participants. This research also did not elicit views from seniors choosing not to engage with 'exergames' – a potential matter for future research also.

Policy implications

At a time when governments at various levels are concerned with promoting 'active aging' (e.g., see the 'Seniors Strategy' outlined in the report for the Ontario government entitled 'Living Longer, Living Well') and when organizations/institutions such as seniors' centres are devising activity programs aimed at keeping seniors active as well, this research provides initial indication that sport- and exercise-themed technologies are often viewed as tools for promoting social engagement and (moderate) physical activity.

That said, 'exergames' bring challenges as well, both in that they give rise to some of the same health/safety concerns that 'real' sports do and in that they require unique media literacies, as described above. Staff members partaking in this research were asked for their recommendations regarding technology-based activity programming for older persons. Recommendations relevant to these challenges included: the need for patience and personalized instruction in developing media skills (or 'literacies') among older persons; the need to ensure that those leading activity programs have the time/training to use 'exergames' themselves; and the need to avoid negative stereotypes pertaining to later life (e.g., that older persons are inherently disinterested in technologies). In considering these implications, the above noted limitations to this research should be kept in mind.

Next steps

Possible next steps to follow from this research include:

- Expansion of this research to include the perspectives/experiences of a greater number of participants.
- Research focused mainly on the views of older persons choosing not to use sport- and fitness-themed technologies.
- Further consideration of how experiences of sport/fitness and (new) media are shaped by contextual circumstances – for example, the experiences of older persons in public vs. private retirement centres/communities.

Key stakeholders and benefits

Potential interested parties include:

- CARP (formerly the Canadian Association of Retired Persons)
- Active Living Coalition for Older Adults (ALCOA)
- Ontario Ministry of Tourism, Culture and Sport
- Ontario Seniors' Secretariat

MOCK, STEVEN E.

University of Waterloo
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Standard Research Grant 2011

The Role of LGBT-focused Sport Group Involvement in Reducing Minority Stress

Project Summary

OBJECTIVES

Sexual minority identity (e.g., gay, lesbian, bisexual, trans; LGBT) is largely stigmatized and stigmatization has been linked to detrimental mental and physical health outcomes. Sexual minority individuals are often motivated to conceal their identities to protect themselves from rejection but this concealment comes with the costs of anxiety about disclosure and preoccupation with concealment.

Contact with others who share a concealable stigma enhances psychological well-being and such contact builds a sense of belonging to the stigmatized group, enhances identity acceptance, and leads to greater identity disclosure.

For sexual minorities, LGBT-focused sport groups offer a social context with the potential to create many of these benefits. However, little research has been done to examine the consequences of LGBT-focused sport group involvement for enhancing individual and collective identity, and for enhancing identity disclosure among sexual minority adults. In this study we examine the association of involvement in LGBT-focused sport groups with diverse potential social, sport-related, and identity benefits for sexual minority adults.

CONCLUSIONS

Drawing from analyses conducted for conference presentations, undergraduate and graduate theses, and research manuscripts the following conclusions can be drawn:

- Cross-sectional analyses show that LGBT-focused sport group involvement increases likelihood of identity disclosure by increasing a sense of belonging to the LGBT community and reducing negative self-perceptions related to sexual orientation (i.e., internalized homophobia)
- Longitudinal analyses show that having social and identity needs met in the sport group enhances participants' commitment to the sport
- Longitudinal analyses show that having identity needs met in the sport group enhances "coming out" in everyday life

Research Methods

Participants were recruited from sexual minority-focuses sport groups in a large Canadian city. These groups represented a variety of individual and team sports (e.g., softball/baseball; curling; soccer; volleyball; bowling; water polo; basketball; ice hockey; rugby; tennis; running). After providing an email address, participants were sent an individualized link to an online survey. In total, 320 participants took part at baseline and 224 of the baseline participants took part in the follow-up survey.

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Broadly, the survey at both time points assessed demographic characteristics, degree of involvement in the sport group, affiliation with the group and the broader LGBT community, management of sexual minority identity in everyday life, and measures of well-being.

Sample Characteristics: Average Age: 37 (SD = 9.91, min = 20, max = 68); Sex: 60% male, 37% female, 0.6% trans, 1.6% diverse response (e.g., genderqueer, not defined); Sexual Orientation Identity: regardless of sex, 62% gay, 27% lesbian, 2% bisexual, remainder unlabeled, other. Average time in first listed sport group: 7 yrs (SD = 5.67, min = 1, max = 26); Frequency of participation: Attend practice: once/week or more ⬚ over 60%; Attend sport group social outings: once/month or more ⬚ over 60%; Volunteer for sport group: any degree ⬚ 24%.

Research Results

Drawing on the diverse forms of information available with the cross-sectional and longitudinal survey data, the following conclusions can be drawn:

- With preliminary analyses of baseline data, LGBT-focused sport group involvement, in particular, the degree to which the sport group is a source of friendship and social support, was linked to greater identity disclosure. With mediation analyses, this was explained by enhanced sense of belonging to the LGBT-community and reduced internalized homophobia
- In analyses of longitudinal data, the more the sport group was a source of social bonding and affirmative identity expression, the more committed participants were to the group (e.g., higher ratings of value, enjoyment, and investment in the sport group).
- In further longitudinal analyses, greater identity affirmation in the sport group led to increased sexual minority identity disclosure in everyday life (i.e., "coming out).
- The strengths of this research include the longitudinal nature of the data which allows tests of causation. In terms of limitations, there may be selection biases and no claim can be made that participants represent all sexual minorities in Canada (e.g., it is unknown if sport group participation would necessarily be helpful for all sexual minorities).

Policy Implications

The research findings show that involvement in LGBT-focused sport groups are an important resource to help overcome the negative consequences of stigmatization. As such, policies that support or enhance development of LGBT-focused sport would be most relevant (e.g., access to municipal/community facilities for LGBT-focused sport, encouraging development of such groups at local and regional levels).

Next Steps

There are several unanswered and new questions raised by research e.g.:

- Would those with other stigmatized identities benefit from identity-focused sport?
- How does this research contribute to a larger discussion of integration in sport? (e.g., is integration/inclusion necessarily beneficial? If so, for whom?).
- This research was carried out in a large city with a high-profile LGBT community. What are the experiences of those who take part in LGBT-focused sport in smaller towns or rural areas with less LGBT visibility?

Key Stakeholders and Benefits

- Local and regional LGBT-focused sport organizations
- Other municipal and regional sport organizations

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Standard Research Grant 2006

Adolescent Leisure Opportunities in a Changing Community

Project Summary

The context of leisure is especially amenable to fostering the acquisition of developmental assets and the development of. However, the issue of access to developmentally significant opportunities becomes problematized as inner-city areas are transformed by the process of gentrification, which may disrupt existing usage patterns and which alters the dynamics of supply and demand at the community level. It is not clear to what extent community "revitalization" projects are considered improvements by all members of the community, and there is scant research about the impact of the process on pre-existing residents, specifically their leisure behaviour. Additionally, youth perspectives are seldom sought by researchers examining gentrification, although appealing to such perspectives has been advocated for social research, particularly research with policy implications. The objectives of this research are to examine the extent and distribution of socioeconomic changes within a gentrifying community and to elicit the views of youth pertaining to their perceptions, experiences and use of the community leisure infrastructure.

Research Methods

The first step in this research has been to assess the degree and distribution of gentrification within the community of Little Burgundy, an approximately one square kilometre area of Montreal, Quebec. Whereas Little Burgundy has been identified as prototypical of gentrification, there has been scant attention paid to intra-community changes resulting from the gentrification process. Data from the Canadian Census were used in order to paint a socio-economic profile of the community and to examine differences as may be evident between the four census tracts of which Little Burgundy is comprised.

The second step in the research process involved semi-structured interviews conducted with over four-dozen adolescents residing in the community. Interviews covered adolescents' perceptions of the community and their use of community leisure resources, daily time-use, leisure companions, and impressions about community change. Interviews were recorded, conducted in either English or French, and their duration ranged from 20 to 90 minutes. Data coding procedures were used to derive a wide variety of descriptive categories as well as broad themes which best captured the experiences and meaning of the community, its leisure resources, and its development over time for these adolescents.

Research Results

Initial analyses sought to examine the socio-demographic evolution of Little Burgundy over the quarter century between the 1981 and the 2006 Canadian Census. Of particular interest were changes in population, household income, linguistic make-up, and the proportion of youth under 20 residing in each of the four census tracts within Little Burgundy (67, 68, 77, and 78). Demographic changes have been previously reported but, in short, community change along a number of dimensions has not been uniformly distributed across

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Little Burgundy. Indeed, from the relatively similar tract profiles in 1981 there have developed two areas of marked contrast, represented by tracts 68 and 78, and another two tracts that have developed between these extremes. While tract 78 has seen an influx of wealthy residents to occupy converted and built accommodations, tract 68 is distinctly more impoverished, ethnically and linguistically diverse, and has far greater proportion of youth in the area than in all other tracts.

Given the elevated proportion of youth and the concentration of disadvantage in tract 68, it is here that community leisure provisions would seem of greatest need and also of greatest potential benefit. The perceptions of youth from tract 68, and their use of community resources, are highlighted below.

Youth within this area were generally quite positive about Little Burgundy overall as well as the community leisure affordances: *It's a nice neighbourhood. Like, the people are nice, people are friendly, you have the basketball court right there. You can just come outside and walk around a chill. So, it's a good area*. That said, youth seldom indicated use of any of the leisure resources in Little Burgundy that were beyond tract 68 and, in certain cases, indicated that such areas were largely ignored. Of paramount importance to these youth was the park located within this tract, one of the two main parks in Little Burgundy: *It is very attractive for the youth and the community. A lot of kids go there because it is… the closest place to the centre of the community and that's where we get together—everybody coming and going because it is, like, in the middle*. Although most frequently mentioned as a favourite place, the park had its detractors, as well: *The thing is that a lot of teens go there that have a bad influence, so… It is mostly between four and five [o-clock] that they start to come… after those times… when I go the park I am scared because you never know what can happen*.

Youth from this area also mentioned their reliance upon not-for-profit organizations in order to occupy their free-time and also serve their leisure needs. Indeed, such community organizations were reported as "favorite" places by a substantial proportion of tract 68 youth. Of significance, as well, were that such community agencies provided financial support to youth with limited means in order to participate in leisure activities: *They helped me out this year to pay my fees for basketball. People are nice here; I like to spend my time with the advisors and people*.

The youth in the area certainly noted the economic changes in Little Burgundy that have left tract 68 largely unaffected—both in terms of income growth and also infrastructural improvements: *All the stuff that is coming in, all the condos and everyone is pushing people out of Burgundy… like, most of the people here, most are on welfare, so they can't really pay what they have to pay*. Some expressed concern that resources that they valued may also be affected: *They may destroy some places and build other things. Maybe they might do that. Or here [community youth-serving organization], for example, maybe they might break it down to build condos or something… I don't think they should do that because it is a place that you like to go*.

Within the context of a Little Burgundy that has seen drastic though unequally distributed economic and social change over the 25 years examined here, adolescents within the most impoverished and socially troubled area of the neighbourhood respond relatively favorably to their environment. Perhaps they have developed resilience in the face of adversity due to supportive adult networks and opportunities for the constructive use of time, and some teens in this study have alluded as much. However, with the prospect of further gentrification to come, it is essential that "low-income residents have a say in their neighbourhood's future" (Formoso, Weber & Atkins, 2010, p 399) and no constituency needs a voice more that tract 68 adolescents.

Policy Implications

The findings suggest the crucial importance played by the developed sports and leisure infrastructure for positive adolescent development. However, the findings also suggest that gentrification does not benefit all youth residents equally due to the asymmetrical patterns of economic and social development. It is, thus, imperative to consider the needs of all residents when considering infrastructure renewal and development, program offerings, and community access to resources. It is also important to seek from youth information about the range of barriers and constraints that may limit their participation in developmentally-appropriate leisure in the community.

Next Steps

The findings reported here suggest many research questions and fruitful avenues for research engagement. Examples include an in-depth analysis of leisure policy as it pertains to youth engagement at the community level; for instance, what policies serve to encourage or inhibit youth use of community spaces and places? Similarly, systematically assessing the needs of all community adolescents with respect to leisure programs, facilities, and green spaces may help disclose differing patterns of use across segments of the youth population of relevance to leisure planning and policy. Lastly, an assessment of the degree of coordination between the private, not-for-profit, and public sectors would facilitate the equitable development and distribution of leisure goods in areas undergoing gentrification.

Key Stakeholders and Benefits
- Ministère de l'Éducation, du Loisir et du Sport du Québec
- UQTR - L'Observatoire québécois du loisir
- Sport et Loisir de l'Île de Montréal
- Association québécoise des professionnels en loisirs

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Doctoral Stipend 2013

Understanding Deselection in Competitive Female Youth Sport

Project Summary

Deselection (or being "cut") is the elimination of an athlete from a competitive sport team based on the decisions of a coach. Given the competitive sport structure in Canada, it is inevitable that many athletes will be deselected every year. However, little is known about how coaches deal with deselection process, and how athletes and their parents cope with being cut. The overall purpose of this research was to gain a better understanding of deselection in competitive female youth sport, specifically at the provincial level. This purpose was achieved by conducting three related studies, each focused on a different aspect of deselection. The first study examined coaches' decision-making within the deselection process. The second study examined how athletes and their parents communally coped with deselection. The third study explored positive growth following deselection. Overall, this project identified strategies used by coaches to carry-out the deselection process, and identified ways in which athletes and their parents coped with deselection, including some coping strategies that contributed to positive growth. By generating more knowledge about how coaches, athletes, and parents manage and cope with deselection, we may be able to help reduce the potential harms associated with this extremely challenging feature of youth sport. These findings provide empirical research to better inform deselection practices in youth sport in Canada.

Research methods

This research used a qualitative research approach. In Study 1, interpretive description (Thorne, 2008) was used to examine coaches' decision-making within the deselection process. Individual semi-structured interviews were conducted with 22 head coaches (16 male, 6 female, M age = 41.9 years, SD = 11.6 years, range = 26-71 years) of female adolescent provincial level soccer (n=5), basketball (n=6), volleyball (n=6), and ice hockey (n=5) teams. A member-checking email protocol was completed by 19 coaches. In Study 2, the descriptive phenomenological approach (Giorgi, 2009) was used to explore how athletes and their parents coped with deselection from provincial sport teams. Fourteen female adolescent athletes (M age = 15.0 years; SD = 1.4) and 14 of their parents (5 fathers, 9 mothers; M age = 45.2 years; SD = 5.4) participated in individual semi-structured interviews. Participants were deselected from provincial soccer (n=4), basketball (n=5), volleyball (n=2), and ice hockey (n=3) teams. A member-checking email protocol was completed by 22 participants (11 athlete-parent dyads). In Study 3, interpretative phenomenological analysis (Smith et al., 2009) was used to examine female athletes' experiences of growth following deselection. Data was collected through two individual semi-structured interviews with each participant; a main interview and a member-checking interview. Participants were 18 females (Mage = 22.73 years, SD = 1.35) who had competed in competitive youth sport as adolescents and were deselected from a provincial soccer (n=9), ice hockey (n=5), or volleyball (n=1) team between the ages of 14 and 18 years.

Research results

In Study 1, results revealed deselection was a process that involved four phases: pre try-out meeting, evaluation and decision-making, communication of deselection, and post deselection reflections. During the pre-tryout meeting coaches explained logistics, selection criteria, and expectations for athletes and parents. The evaluation and decision-making phase included coaches evaluating players, documenting their decisions, and dealing with certainty and uncertainty. When faced with uncertainty coaches relied on intuition. Communication of deselection involved informing players of their decision, providing feedback, and dealing with parents. During post-deselection reflection coaches reflected on the procedures they used throughout the deselection process and the consequences of their decisions for on-going athlete development. By establishing distinct phases of the deselection process we were able to isolate specific details of coaches' responsibilities, concerns, and decisions at different times.

In Study 2, the results showed that participants consistently appraised deselection from a shared perspective (i.e., athletes and parents viewed deselection as 'our problem') and the responsibility for coping with deselection changed as time progressed. Initially, parents protected their daughters from the negative emotions arising from deselection (an 'our problem, my responsibility' orientation). Athletes and parents then engaged in cooperative actions (rationalization and positive reframing to manage their reactions to the stressor (an 'our problem, our responsibility' orientation). Finally, athletes and parents engaged in individual coping strategies. Athletes and parents engaged in a broader social network, while athletes also focused on their club team and increased their training efforts. This reflected an 'our problem, my responsibility' orientation but with athletes taking more responsibility for coping.

In Study 3, results highlighted some of the potential long-term implications of deselection in youth sport. Deselection was remembered as a negative and often devastating experience that caused participants to question their ability and identity as an athlete. However, positive growth occurred for athletes through experiencing humility, re-establishing sport as their main priority, social support, gaining perspective, and being generally optimistic about future sport opportunities. Through these processes athletes developed compassion for others, gained motivation and perseverance, and learned how to cope with setbacks in other aspects of their lives.

A limitation of the research was the sample sizes. While appropriate given the purpose of this research, they were small and relatively homogenous. As a consequence, the results do not readily generalize to other youth sport populations (e.g., males, athletes at different levels of competition, or younger athletes). All interviews were retrospective, and it may be possible to gain more precise information about the deselection process and processes of coping and growth by using longitudinal research designs (e.g., multiple interviews). Lastly, self-selection bias may be present in Study 2 and 3 because participants were asked to contact the lead researcher. It is possible that only those who thought they had coped with deselection or experienced positive growth volunteered to participate.

Policy implications

This research on deselection in youth sport has several implications for youth sport participation and policy in Canada.

1. A highly structured deselection process is useful for coaches. It is important to hold pre try-out meetings with parents and athletes to explain selection criteria and expectations. Coaches should involve additional coaches as evaluators in order to provide a sense of fairness but also provide support for coaches' decisions.

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2. Coaches are encouraged to communicate deselection decisions in private face-to-face settings and provide feedback to athletes. Given the emotional state of many athletes following deselection, providing written feedback to athletes is recommended.
3. Sport organizations may want to consider having procedures in place to protect coaches when it comes to parent interactions to deal with parents once deselection has been communicated.
4. Parents play a critical role in helping their children cope with deselection. Sport organizations and coaches could consider educating parents about the role they can play in supporting their children following deselection. This would be an important shift in the way deselection is approached by sport organizations/coaches because previous research shows they are most concerned about dealing with parents' complaints (which coaches themselves report as a stressor) rather than explaining ways in which parents can help their children cope.
5. During pre-try-out meetings, coaches could explain that parents can play a crucial role in supporting their children post-deselection, and suggest coping strategies for parents (e.g., console first, communicate, positive reframing, engage a broader social network) and athletes (e.g., club team focus, increased effort) that may lead to positive growth over time.
6. Deselection is an important area of training for coaches because it is something they have to go through each and every season, and when done poorly, can have negative consequences for athletes and even deter them from continued sport participation.. Given that athlete development and continued participation is the focus in youth sport, there are deselection strategies coaches can use that actually contribute to athlete development, but only if coaches are educated on how to implement them appropriately. Deselection is also a stressful experience for coaches, so proper training can alleviate some of the stress associated with this often disagreeable process.

Next steps

Future research should evaluate the effectiveness of different types of deselection protocols (e.g., those used by different sports) and athlete, parent, and coach outcomes in order to establish 'best practices' for deselection in youth sport. Specifically, research that would lead to tangible knowledge products created for coach education in Canada would help ensure coaches are trained in carrying out deselection. There is also a potential for developing a deselection protocol for coaches that could be implemented across Canada.

Key stakeholders and benefits
- Provincial and National Sport Organizations
- Coaching Association of Canada
- Provincial Coaching Associations
- Canadian Sport Psychology Association
- Coach and Parent education programs
- Youth Sport Academies
- PYDsportNET

O'REILLY, NORM

Syracuse University
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Standard Research Grant 2006

Urban Youth Engagement in Sport: Process, Access and Participation

Project Summary

This research examines participation and engagement with sport among Canadian urban youth and the resulting impact on athlete development, sport organizations, businesses, sponsors and Canadian society. Particular emphasis is put on the city of Toronto and pool and rink sports. There are four research questions:

- In what ways and how deeply are young urban Canadians engaged in sport?
- What is the engagement process?
- What capacity exists to facilitate, support and enhance engagement?
- What roles, responsibilities and benefits accrue to business, government and non-profit organizations?

Research Methods

This project involved an extensive array of secondary research efforts and primary data collection protocols. Secondary research included a literature review and cohort analysis of Canadian Youth 1992 to 2005 using the Statistics Canada General Social Surveys (1992, 1998 and 2005). Approximately 10,000 respondents completed the sport and physical activity module of the GSS.

Primary Research included two netnographies (written accounts of online cyberculture, informed by the methods of cultural anthropology) of a number of online forums to better understand and identify the important factors driving or inhibiting youth sport participation.

Water sports facilities and arenas in Toronto, Montreal and Sudbury were observed to determine the daily and regular user habits of young people. The researchers concentrated on participant ethnicity, socioeconomic level, mode of transportation to the site, family involvement, types of activities and activity level. Interviews focused on youth athletes, non-athletes and youth in schools.

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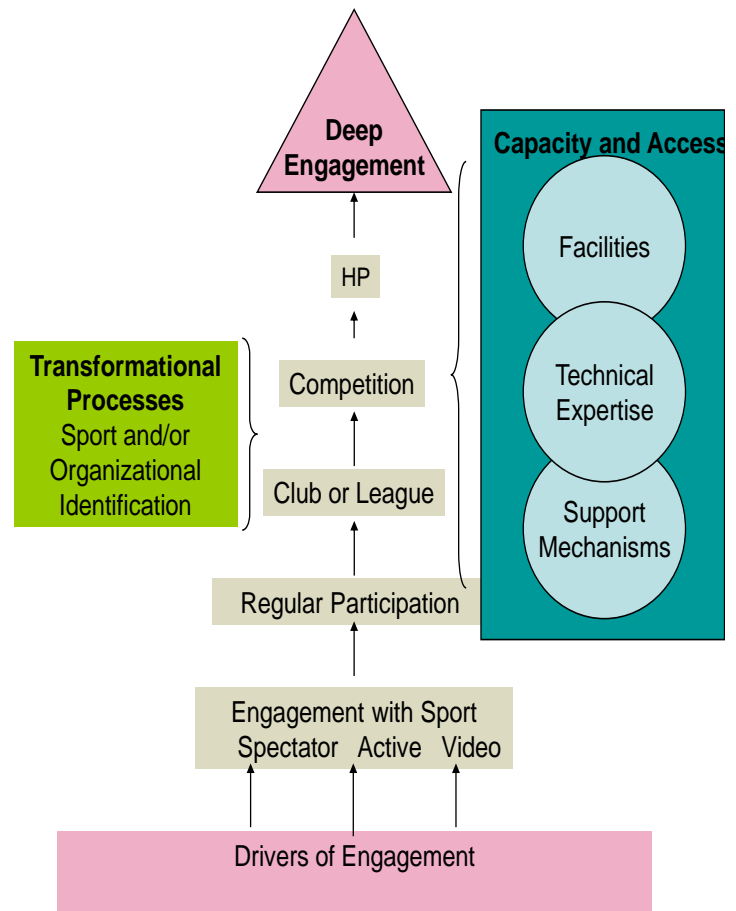
Experimental intervention included three surveys and one intervention with 123 students from Grades 4 to 8 attending three public primary schools in Sudbury, as well as their parents. Students were divided into three groups: active household, moderately active household and inactive household based on a first survey. A second survey focused on youth attitudes and behaviour in relation to physical activity. Following the second survey, the youth were randomly divided up into two groups: one group received an information kit on physical activity and the other, an information kit on diet. A third survey, identical to the second, was distributed after the intervention to determine if there had been a change in the level of engagement and attitude toward physical activity and/or in the level of family support.

The questionnaire for a large sample survey ("National Survey of Urban Canadian Youth" (n=3003)) of youth in Toronto, Vancouver and Montreal was built from all previous studies and literature.

A still ongoing spatial analysis of sport facility infrastructure in the city of Toronto will layer the location of facilities, clubs and other important infrastructure in relation to various demographic factors, as well as the results of the other methods, to provide a geospatial assessment of Greater Toronto.

Research Results

The literature review and cohort analysis revealed that urban youth sport participation was determined by six underlying factors: household context, parental education, community context, social/gender, self-perceptions, and competing behaviours. All these drivers discriminate between adolescents who do and adolescents who do not participate in sport. Notably, the cohort analysis also found that the younger generations are decreasing their participation rates at higher levels than other cohorts.

The interviews, netnography and experimental intervention allowed for deeper understanding of these factors at many levels. For example, youth interviews highlighted eight drivers of sport participation: (i) parental/siblings influence, (ii) coaches, (iii) socio-economic status of the family, (iv) technical skills, (v) geographical context, (vi) personal attributes (identity aspect) and skills (perception of strengths vs. weaknesses), (vii) friends, and (viii) school as an initiator into sport (but also an obstacle to great engagement). Notably, gender and ethnicity did not appear to be as important as previously thought (literature). The interviews further made three important comments vis-à-vis the process and strength of engagement: First, the processes of youth sport participation depend on the interaction with youth's social surroundings. Second, the strength of youth engagement in sport is influenced by the level of competition and degree of family involvement. Third, parental involvement may be the most important of all drivers. Importantly, the interviews revealed that youth participate in sport via one of three processes: social (family, friends), institutional (school, club), identity (self-perceptions, ego, etc.). There is a difference between these processes for youth who are doing sport for recreation and those who are high-performance athletes.

The netnography highlighted that youth lacking a supportive environment are most in need of policy support vs. those in middle-class, two parent families. In addition, analysis using GSS data related to 'household context' reinforced this driver as a critical – if not the most important - element in adolescent sport participation. Households of intact families, with higher than average
incomes, in which several household members participate in sport, define an ideal that is not available to all adolescents.

Early analysis of the large sample survey suggests that those in need of support in sport participation are those who do not match the drivers of sport participation noted earlier. Indeed, the profile of the current

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sport participant suggests that effort should be expanded to target and encourage adolescent females, over the age of 17, from Central Canada, living with less-educated parents, in a lower income, non-in-tact family, with a father born in Canada and without other household members who participate, coach and attend amateur sporting events.

Policy Implications

This research brings forward a number of important recommendations to governments at the level of policy and the level of programs. The most important policy recommendation, clearly, is the need to develop policies that target the portion of the Canadian population who requires support. The middle-income family, with two parents living at home, and a decent income does not need help. Their kids are largely active. It is in fact the single mother or the widower, living in a condo, with limited income that really needs the support. Their kids are largely not active. This is emphasized by the cohort analysis which found that youth sport participation declined at a significantly higher rate for households with incomes of less than $40,000 per year versus those households in the $100,000 per year category. The income divide clearly indicates the need for fiscal (government) support of lower- and middle-class income earners' children's participation. Government-sponsored spaces at different recreational and competitive levels in organized sport for these families' youth may have a greater impact.

Next Steps

Two important steps remain in the analysis of all this data: geospatial analysis of facilities and further data analysis of the large sample survey.

Key Stakeholders and Benefits

There is a need for policy makers and investors in grassroots sport to target resources at participants not in 'supportive' environments and/or 'ideal' households. These organizations include governments, foundations, sponsors, COC, and NSOs.

Organizations interested in increasing participation rates should act to overcome structural challenges to capitalizing on the large potential pools of participants.

Health promoters should take note that younger generation sport participation rates are decreasing rapidly. Policy should focus on developing active lifestyles among young adults by targeting key messages at schools, teachers and school boards. There is also a need to link sport development objectives to healthy living messages targeting girls.

Finally, there is a need to consider youth culture/subcultures (i.e. social networking and competing screen interests) in program planning for adolescents.

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Doctoral Stipend 2010

Getting the Ball Rolling: Sport and Leisure Time Physical Activity Promotion Among Individuals with Acquired Physical Disabilities

Project Summary

Despite the physical and psychosocial benefits on engaging in sport as a form of leisure time physical activity (LTPA), only 3% of individuals with acquired physical disabilities participate in sport. This project was composed of four studies that the theoretical and contextual factors that influence sport participation in this population. The first study investigated the possible use of a specific behaviour theory, the Health Action Process Approach, and athletic identity, the extent to which people see themselves as athletes, to explain participation in sport. The second study explored how athletic identity could be built or lost after acquiring a physical disability. The third study explored influence of the perceived self and peers had on the participation in general leisure time physical activity after acquiring a spinal cord injury. The final study explored the way peer athletes with spinal cord injury responded to individuals who did not think of disability in the same manner. As a whole, this project enables a more nuanced understanding of the theoretical and contextual determinants of sport among individuals with acquired physical disabilities. This is necessary to better inform and identify opportunities for interventions that increase sport participation among this population.

Research methods

This project used both quantitative and qualitative research methods to address the research questions. In the first study, a cohort 201 individuals with acquired physical disabilities completed questionnaires to assess the Health Action Process Approach constructs and athletic identity. Sport participation was measured two weeks later using the LTPAQ-SCI. The model was tested using a statistical technique called Structural Equation Modeling. In the second study, eleven participants from the cohort participated in semi-structured interviews, informed by identity theory. Data were analysed using a qualitative method called narrative analysis. In the third study, fourteen participants completed semi-structured life story interviews. Interview data were analysed using narrative analysis. The final study used four vignettes, based on real individuals with spinal cord injury, to elicit peer athletes with SCIs' responses to people who may not see sport or disability in a similar manner. The responses to the vignettes were analysed using a narrative analysis.

Research results

In study one, higher instrumental (i.e., perceived health benefits of sport) and affective (i.e., perceived enjoyment) outcome expectancies, lower negative outcome expectancies (i.e., perceptions of negative outcomes like pain and injury), and higher athletic identity were significant predictors of intentions to participate in sport. Greater intentions were related to more plans to participate in sport, in turn, greater planning was related to greater confidence to overcome barriers to sport. Participants with greater confidence to overcome barriers accrued more minutes of sport participation two weeks later. In study two, three distinct perspectives on athletic identity emerged: *non-athlete*, *athlete as a future self*, and the *present self as athlete*. The *non-athlete* narrative focused on physical changes in the body and experienced difficulties

with disability and athletic identities that could not co-exist; more time was spent ruminating on past selves and lost possibilities for the future self as athlete. The other two narratives primarily focused on present sport behaviour and goals. Athletic identity was influenced directly by sport participation rather than loss of physical function; among those who returned to sport, peer athletes supported identity by encouraging new comers to play and by sharing sport experiences. In study 3, perceptions of disabilities were associated with different motivations and types of physical activity. Individuals who desired to walk in the future were drawn to functional types of physical activity based on the desire to maintain the body for a cure. In contrast, individuals who saw their spinal cord injuries as a challenge to be overcome were drawn to a variety of physical activity options, including sport and outdoor activities. In study 4, peer athlete mentors responded to the least hesitant sport vignettes by drawing on mentee narratives rather than privileging their own view of disability and sport. As such, peer athlete mentors provided individualized sport recommendations rather than a generic list of options for individuals. For the most resistant vignette, peer athlete mentors expressed one of two responses: one that challenged the mentees' disability narrative and one that allowed mentees to express their own story of disability.

Policy implications
Messages and sport programs should target Health Action Process Approach constructs to increase both motivation to try sport, as well as enhance sport participation, among individuals with acquired disabilities like spinal cord injury. In particular, messages and programs for non-sport participants should focus on enhancing perceptions of the outcomes of sport, such as it being enjoyable and beneficial for health, and increasing confidence in the ability to do sport-related tasks.

Perceptions of the self as an athlete and disability are influential on people's openness to sport after a spinal cord injury. Peer athlete mentors seem to be able to provide information that aligns with these perceptions. Consultation with peer athlete mentors may help shape and form sport promotion messages that are sensitive to these different perceptions of disability.

Next steps
Test the effectiveness of sport promotion messages based on the Health Action Process Approach.
Incorporate elements of the Health Action Process Approach into current sport programs and test effectiveness.

Explore current peer mentorship programs to identify peers' informational training needs and support.

Key stakeholders and benefits
- Canadian Wheelchair Sport Association
- Canadian Paralympic Committee
- Active Living Alliance

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Standard Research Grant 2011

Retaining Experience Coaches

Project Summary
Understanding the factors that influence coach transitions is pertinent. Six themes were identified: 1) interpersonal considerations, 2) work demands, 3) career concerns, 4) positive coaching experiences, 5) seeking opportunities to be more successful and 6) leaving a negative or challenging work environment.
Findings highlight the importance of practitioners and sports organizations providing support to enable coaches to advance their career and also provide better support and strategies to optimize coaches' working environment.

Research methods
Two studies were conducted.

Study One
Participants
Participants were purposefully sampled. In total, 21 coaches (six female and 15 male) from six provinces and various sports participated. Seven of the coaches were current or former full-time coaches, nine of the coaches worked at universities, and five coaches were volunteers. Coaches had between five and 30 years of experience.

Data Collection
Data were collected through semi-structured interviews. The interview guide was developed based on previous literature examining coaching stress and burnout.

Study Two
Participants
In total, 14 coaches from a variety of sports were purposefully sampled based on three criteria: (a) they were current or former full-time coaches; (b) they had experienced at least one transition in their coaching career, and; (c) worked with athletes at a provincial or national level.

Data collection
The interview guide was developed based on the findings of study one and previously reviewed work-environment and coaching literature.

Research results

Interpersonal Considerations

Relationships with supervisor and colleagues: Coaches explained that the extent to which they felt supported and appreciated by their supervisors and colleagues influenced the extent to which they chose to stay in or leave a position.

Relationships with athletes and parents: The quality of relationships with athletes and parents was identified as particularly important in influencing whether coaches remained. Positive relationships between coaches and athletes would encourage coaches to remain in a position.

Work Demands

Workload: Coaches spent considerable time discussing their workload, and for some, this discussion was focused on a perception that their workload was too large.

Work type: Coaches described two types of tasks in their jobs: performance enhancement tasks (e.g., coaching at competitions, delivering training sessions) and administrative tasks (e.g., organizing transport, fundraising). It appeared that the amount of time coaches had to commit to administrative tasks would encourage them to leave a job.

Balancing family and coaching commitments: Coaches described challenges with balancing the commitments of their family and their coaching job. If this balance became too difficult to maintain, it could result in leaving a position.

Career Concerns

Job security: Job security which resulted from having an extended contract or being employed by an organization would be a reason for moving jobs. In contrast, a lack of job security was seen to influence the commitment coaches could make to athletes, negatively influence the quality of their coaching and was subsequently a reason coaches' might look for different positions.

Compensation: Coaches indicated that they did not perceive they received sufficient compensation (either in terms of their salary or benefits) for the job they did.

Opportunities for career advancement: Coaches indicated they had left or were likely to leave a position when there were opportunities for career advancement, including having opportunities to work with higher-level athletes (e.g., provincial or national level athletes) or in more prestigious positions (e.g., working for sports organizations or at national training centers).

Positive Coaching Experiences

Enjoying the process of coaching: A number of coaches talked about the enjoyment they experienced coaching in their current position. When coaches experienced such enjoyment from their work, even if other factors might be challenging, coaches indicated they were unlikely to look for another position.

Achieving success in a position: Enjoyment of the coaching process was often related to the success in their position. Coaches defined success differently, but often included seeing athletes develop or creating a winning program.

Limitations
Some limitations to consider include the single point-of-contact interviews with participants, the retrospective nature of data collection, and the arguably small number of transitions coaches had experienced (many had only experienced one major transition).

Given the limitations in the current study, future research could consider a larger sample and a longitudinal approach to data collection, which considers coaches' experiences before, during, and after transitions.

Policy implications
Coach retention depends upon many factors that have been identified in previous research and reinforced through our studies. In general terms, the work environment of an employee has been found to be linked to job satisfaction, and job satisfaction is linked to retention. The coaches that are the focus of our research are coaches that depend on coaching for their livelihoods.

Our findings can support policy development at a few levels. At the federal level, coaches that are hired by the national sport organizations (NSOs) need to be supported in positive work environments. Coaches with NSOs influence both athletes and other coaches throughout the system and it is important to retain such coaches. Also at the federal level, the Coaching Association of Canada through its NCCP need to include modules on the work environment of coaches to ensure that coaches are as prepared as possible to deal with the challenges of a sport environment. Currently there is a major gap in the NCCP educational content in this area.
The findings from our research also inform a graduate course in the Masters in Coaching program at the University of Alberta. The graduates of this program have been employed at universities and colleges across Canada and have an opportunity to pass on to other coaches the information they receive in their graduate course. At the very least, those graduates are far more aware at the time they accept future employment of how to monitor and manage their work environment.

Finally, three peer-reviewed journal articles and one textbook chapter are now in print.

Next steps
While we are confident that our research findings reinforced the critical importance of the work environment in job satisfaction for coaches, we have yet to identify which factors are the most important. However, employers and coach educators should be aware that:
- Opportunities for career progression are important to coaches and the employer can certainly build that into their management system.
- Workload does not seem to be a major influence on job satisfaction, but the type of work does matter. Coaches like to coach.
- Supportive interpersonal relationships are very important to coaches. However, strain in personal relationships is probably a larger factor for coaches than for many professions due to the long hours, the weekend work, and the emphasis on winning.

Key stakeholders and benefits
- Coaches Association of Canada would benefit from incorporating into their advanced coach education a course to assist coaches in understanding and managing their work environment.

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- All employers of coaches, such as national and provincial sport organizations, and clubs could ensure their employees have the skills to manage coaches effectively.
- Universities and colleges with coach education programs should ensure they incorporate management content in their coach education courses.

REHMAN, LAURENE

Dalhousie University
C. Shields, M. Bruner, M. Keats, S. Balish
Standard Research Grant 2011

Successful Experiences for Overweight Children in Sport (SOS)

Project Summary

A three year mixed methods research project was conducted to understand successful experiences of sport, including the possible role of body weight. A secondary goal of the study was to explore how coaches, parents and peers influence the psychosocial outcomes of youth involved in sport. Parents, coaches and youth, between the ages of 10 and 14 years were recruited from a variety of community- based recreational facilities and locations throughout Halifax Regional Municipality, Wolfville, Nova Scotia, and North Bay, Ontario.

Methodological tools for the study included: surveys for coaches, parents and children, and in-depth semi-structured interviews for coaches and parents of children involved in sport and/or after school programs. In all, 442 completed surveys (201 parents, 201 youth and 40 coaches) have been collected and 11 semi-structured parent interviews have been completed and analyzed. Of note, due to the challenge of finding and recruiting overweight athletes, results more generally reflect young athletes of normal or healthy bodyweight.

Overall, both quantitative and qualitative results converged on social processes as the main driver of positive experiences in sport. Specifically, quantitative and qualitative results suggested (1) how a child perceives how others view his/her own self-efficacy likely may actually impact his/her self-efficacy, (2) that a child's social identity is associated with positive experiences in sport, (3) that there is a lack of spontaneity in youth sport, (4) that several challenges exist facing the recruitment and training of developmentally appropriate youth sport coaches, and (5) young athletes perceive hypothetical overweight teammates as having less self-confidence, and (6) coaches perceive mastery experiences—rather than teasing—as the primary driver of decreased self-confidence among overweight athletes.

Research methods

This project consisted of a dual-phase, mixed-methods design. To understand the context of sport experiences for young athletes, phase I involved collecting separate survey data from three different populations: (1) children participating in sport, (2) parents/guardians of children (ages 10-14) participating in sport, and (3) coaches/leaders of sports /programs. To gain a more in-depth understanding of the sport experiences of children of varying body weights, phase II involved qualitative data collection via semi-structured interviews with parents and coaches recruited in Phase I of the research.

Research results

Quantitative results
My Parents Think I Can Play…Kind of: Relationships Between Rise, Self-Efficacy and Parent Other-Efficacy within Youth Sport

Relation-inferred self-efficacy (RISE) beliefs (appraisals of how another views one's competence) are thought to be important in relationships where there is a power differential (e.g., coach-athlete, parent-child). Children in this study reported high RISE (parents: M=8.29) and high self-efficacy (M=8.25) while parents reported comparatively lower other-efficacy (M=7.83, p<.001). Both parent and coach referenced RISE beliefs were positively associated with children's self-efficacy and sport satisfaction and higher self-efficacy was associated with greater satisfaction (p's<.001). Regression analyses revealed RISE (parents) and RISE (coach) to be significant predictors of self-efficacy accounting for 54% and 9% of the overall variance respectively. Further, family support (B=.39) and parents' other-efficacy (B=.18) were significant predictors of RISE (R2adj=.20). This data provides an initial demonstration of these theorized relationships within youth sport, and also serves to highlight the importance of communicating confidence in child-athletes' abilities.

Social Identity and Positive Youth Development in Recreational Sport
The identities that youth form through their membership in sport teams (i.e., social identities) have been found to influence teammate behaviour and team performance. A regression analysis was performed separately for four positive youth development (PYD) outcomes (personal and social skills, goal setting, initiative, negative experiences) with the three dimensions of social identity entered as predictors. Regression analyses revealed that ingroup ties (B=.14, B=.11) and ingroup affect (B=.13, B=.08) were positively associated with enhanced personal and social skills (R2adj=.31) and goal setting (R2adj=.16). Further ingroupties (B=.11) significantly predicted initiative (R2adj=.17), while cognitive centrality (B=.08) and ingroup affect (B=-.20) were associated with negative experiences (R2adj=.08). The findings extend previous research highlighting the benefits of social identity on teammate behaviour and team performance, demonstrating how social identity may contribute to PYD through sport.

Qualitative Findings
Is it the End of Spontaneity? Exploring Supports and Challenges to Providing Successful Experiences for Overweight Children in Sport
Although previous research has explored the reasons why children may drop-out of sport, such reasons have not been fully explored among youth still engaged in sport. In this project, parents identified both positive experiences as well as challenges to their youth's participation. Positive experiences related to the formation of team identity and learning to be a good teammate, the benefits of wider social networks, skill building, self-esteem and confidence building, and the benefits of staying active. Challenges related to the structure and lack of spontaneity and aspects of play associated with participation in structured sport/recreation. More research is needed to critically explore the pressures extending to recreational level sport for youth if the positive elements are to be maintained and experienced.

Mixed-Method Findings
Why Are Overweight Youth Underrepresented in Sport? A Mixed-Methods Inquiry of Coaches' and Peers' Perspectives
While the importance of overweight athletes' self-perceptions is well established, it is less clear how these self-perceptions are constructed. Through qualitative analysis, a narrative emerged centered on the importance of self-perceptions and mastery experiences within the context of team sport. Quantitative findings revealed that children do perceive overweight athletes differently from tall athletes, and that decreased self-confidence is an important contributor to this difference. Together, these findings support the idea that overweight youth, just like all other youth, are concerned with performance experiences, and that the interdependent nature of team sport may intensify this concern and the associated negative experiences.

Policy implications

Coach training may need to focus more on the social nature of sport and how specific social processes are associated with important outcomes, such as successful experiences in sport. This study suggests that perhaps social identity, relation-inferred self-efficacy, and genuine mastery experiences (e.g., performance failures) are variables that need to be understood.

Specifically, it may be beneficial to train coaches regarding how to ensure overweight athletes experience personal success without the child feeling targeted or ostracized in any way.

Our qualitative findings suggest that spontaneous youth sport is a meaningful form of sport but is in serious decline. Policies that promote spontaneous or low organized sport may be important. Also, the need to continue to emphasize and support principles related to fair play was identified as critical to promoting positive experiences.

Improved methods of recruiting youth coaches that possess developmentally appropriate skills may be necessary. Our qualitative findings suggest that parents, coaches and sport clubs all recognize the need for properly trained coaches but also that such coaches are lacking.

NOTE: Given that our study was correlational, causation cannot be interpreted within the results. Thus, we can only suggest possible policy implications, and cannot predict the outcome of these proposed changes with any degree of certainty. Nonetheless, our group is hosting a workshop with Sport Nova Scotia in the coming months to discuss possible applications that arise from our findings, including how these results can inform provincial sport organizations.

Next steps

The difficulties we faced in recruiting overweight athletes seemed to stem from their absence in youth sport programs. This (non) finding may suggest that overweight athletes are not participating in sporting programs as frequently as healthy weight athletes, or are dropping out at ages younger than 11-12 years old. Future research may need to investigate the role of parents of overweight youth, or focus on studying overweight athletes sports at very early ages.

To further examine if mastery experiences are the primary driver of overweight youth dropping out of sport.

More experimental and longitudinal work is needed to test those mechanisms that facilitate successful experiences in sport. These mechanisms include how social identity is related to positive youth development and how relation-inferred self-efficacy beliefs influence individual's self-efficacy.

To further examine the implicit biases that may plague overweight athletes' experiences.

To better understand what is needed to support fair play in youth sport, especially competitive sport.

To explore what factors contribute to positive youth experiences among older youth that will support life-long participation.

Key stakeholders and benefits
- Coaches
- Parents
- Athletes
- Youth sport clubs
- Coaching Canada

RIVARD, LYSANNE
McGill University
Post-Doctoral Stipend 2011

Rwandan girls' perspectives on their lived experiences of physical education and sport: Challenges and solutions to sport participation

Project Summary
The objectives of this research were to:
1) Document Rwandan secondary schoolgirls' perspectives on their lived experiences of physical education and sport in school in order to identify girls' challenges and solutions to sport participation.
2) Integrate girls' perspectives and feedback directly into the decision-making processes that shape physical education and sport programming and policy by bridging the gap between students and decision-makers in a practical, accessible, and inexpensive manner.

Though this research took place in Rwanda, the tools developed to gather girls' perspectives and feedback and to integrate them into decision-making processes are relevant and can easily be adapted to a Canadian context in order to contribute to a better understanding of physical education and sport participation.

The main conclusions of the research tie into global trends in physical education and sport participation for girls:
1) Rwandan girls face gendered difficulties with the sport-based physical education curriculum that caters to the majority of boys' prior knowledge of and familiarity with sport rules and skills, as well as their level of fitness.
2) The role and benefits of physical education and sport are misunderstood and undervalued in Rwandan society and schools.

Research methods
To document girls' perspectives, I adapted the visual participatory method Photovoice to work with 196 schoolgirls 11-to-18 years of age in five urban secondary schools. Working in small groups (3 to 6 girls) in a classroom setting (total of 15 to 30 students), the participants took photographs in answer to the following three questions:
1) What do girls like about physical activity and sport in school?
2) What difficulties do girls face when doing physical activity and sport in school that boys do not face?
3) What can be done to improve girls' experiences of physical activity and sport in school?

The photographs were printed onsite using a battery-operated photo-printer. The girls made photo-posters with their photographs and a written response explaining their ideas. They then shared and discussed their photo-posters with their classmates.

Then, I compiled girls' responses to identify key recurring ideas and produced photo-reports using a PowerPoint presentation format. Each slide was composed of the question asked (title), girls' responses (sub-

title), and a variety of girls' photographs illustrating their ideas. A total of 6 different photo-reports were produced: one for each specific school and one with the combination of the five schools' top responses.

The photo-report was color-printed and served as an interview and visual research dissemination tool with the girls' physical education teachers (5), gender and physical education experts (4), and three ministry representatives: Education, Sports and Culture, and Gender and Family Promotion. Throughout the interviews, the decision-makers looked at girls' photographs and discussed their issues of concern. They kept the photo-reports to share and further discuss with their colleagues and superiors.

Research results

Findings indicate that girls are interested by and want to increase their participation in physical activity but face gendered difficulties with the current sport-based physical education programming catered to boys' interests in and prior knowledge of team sports (soccer, basketball, volleyball, rugby), as well as their level of fitness. Instead, the majority of girls are interested in a variety of non sport-based physical activities that are adapted to their level of fitness and that do not compromise their femininity in the Rwandan socio-cultural context, such as aerobics and jogging.

At the same time, the decision-makers highlight the lack of understanding of the role of physical education and sport in Rwandan schools and society as an ongoing challenge for programming across the country and discuss efforts implemented to transition the programming from an elite sport model to "sport for all" activities accessible and beneficial to all students.

Although reaching out to three levels of decision-makers with a simple visual tool is an important contribution of this research project, the missing link is the dissemination of the final photo-report to each of the participating schools. Due to logistical complications, I was not able to go back to each school and further discuss with the girls how the decision-makers had reacted to their feedback and the difficulties they faced as sport program experts and policy-makers.

Policy implications

In order to help improve programming and sport participation, this research developed an accessible, inexpensive, and practical process and tool (photo-report) to gather sport participants' feedback and concerns and to communicate their ideas directly to sport program implementers (physical education teachers), developers (experts), and policy-makers (ministries). months to discuss possible applications that arise from our findings, including how these results can inform provincial sport organizations.

Next steps

The research provides a tool to integrate participant feedback into programming and policy development and implementation. By creating a platform from which participants can express themselves, a variety of issues can surface. Though some issues may be more practical or technical, political or contentious issues can also arise. Opening a dialogue between various stakeholders offers an opportunity to collectively discuss and address participants' concerns.

Key stakeholders and benefits

The method developed to gather and disseminate participant feedback directly to key decision-makers can be adapted and implemented by any organization or group that seeks to better understand how participants are experiencing programming and to discuss their suggestions for improvement. The simple and open-ended questions provide an opportunity for participants to bring forward issues of concern and/or priorities that may not be obvious to decision-makers who develop and implement programming. The photo-report containing key priorities brought forward by participants and photographic evidence of participants' ideas can easily be shared with a variety of stakeholders, such as parents, athletes, coaches, heads of associations and organizations, etc., in order to open up a dialogue between sport participants and the people who shape their experiences of and participation in sport.

SAFAI, PARISSA
York University
Standard Research Grant 2006

The Social Determinants of Athletes' Health: Understanding the Relationship Between Health and High Performance Sport

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Project Summary

Researchers are beginning to pay greater attention to the connections and contradictions between sport, health and healthcare. Despite the conventional wisdom that greater participation in sport and physical activity enhances health and the quality of life, more and more evidence points to the ways in which sport participation is not always healthful or beneficial. Nowhere is this more evident than for athletes participating in high performance sport. The ideology of excellence within elite sport demands the professionalized and scientifically calculated pursuit of the linear record on the world sporting stage which in turn demands, on the part of the athlete, the development of levels of disregard for the body in the pursuit of sporting excellence. Although our understanding of athletes' immersion in sport's "culture of risk" is growing – a culture that sees the unquestioned acceptance, production and reproduction of health-compromising norms (e.g., pain/injury tolerance, dangerous dieting practices or the use of performance-enhancing drugs), there has been a relative absence of research exploring other social, economic and political determinants of athletes' health and wellbeing.

There is extensive national and international research documenting the ways in which social determinants of health (SDOH) influence the health of individuals and communities and are directly related to the ways in which resources are organized and distributed among the members of a society. SDOH impact and influence participation in sport and physical activity and, in turn, are impacted and influenced by, in varying degrees, participation in sport and physical activity. This study is interested in examining the material conditions of athletes' lives, as structured by the Canadian sport system and Canadian sport policy, and the ways in which those material conditions frame and impact their health and wellbeing. In other words, the structure of the Canadian sport system, as guided by sport policy, frames the production of high performance and the health-compromising realities for sport participants.

This project investigated the social determinants of high performance athletes' health in Canada and the material conditions that contribute to or detract from athletes' health and wellbeing. The foci of the project included: 1) exploring athletes' lived experiences with their health and wellbeing in relation to the material conditions of their lives; 2) studying the incidence of compromised health among athletes, particularly those participating in representative high performance sport; 3) constructing and administering a quantitative bilingual survey questionnaire on the social determinants of athletes' health; and 4) developing a framework of the social determinants of health (SDOH) for athletes at the pan-Canadian level.

At a theoretical level, the first objective of this project was to critically analyze and bring into focus the ways in which the material conditions of being an athlete, particularly in high performance sport, influence one's health and wellbeing. The second objective was to identify the ways in which the high performance sport system and, by implication, the state structure mediates the material conditions of athletes' lives and protects or endangers their health and wellbeing. Finally, we endeavoured to situate athletes' health and wellbeing

within broader discussions of athletes' lived experiences, and contribute to a growing body of knowledge that theorizes and contextualizes the relationship between sport and health in Canada.

Research Methods

This three-year project employed both qualitative and quantitative research methods. Qualitatively, the project involved in-depth, semi-structured interviews with athletes. The qualitative portion of the project also includes some documentary research on relevant federal and provincial/territorial sport policies in relation to the material conditions of athletes' lives. For the quantitative aspect, the key activity was the development and administration of a bilingual survey questionnaire on the social determinants of athletes' health. The bilingual survey questionnaire was distributed cross-country to athletes registered with provincial and national sport organizations.

Research Results

Results from the qualitative and quantitative portions of the study indicate a number of key themes: that health is a relative concept among athletes and their parents; that many athletes rely, often heavily, on others for material support; and that there remain barriers to participation in high performance sport particularly with regard to socioeconomic status. Contextually, a number of social forces within and outside of high performance sport work to perpetuate the inaccessibility of sport for all including: the whittling of public budgets for sport/recreation facilities, programs and services; the continued focus on downstream, rather than upstream, determinants of health; and the sustained and, in fact, heightened emphasis on performance over health within the high performance sport system as Canada participated in the 2008 Beijing and 2010 Vancouver Olympic Games and prepares for other major international games (e.g., 2012 London Olympics). Limitations with this study focus predominantly on the survey questionnaire and its relative low return rate.

Policy Implications

High performance athletes comprise a unique community within Canada given the work that they do – the term 'work' is underscored here not only in reference to the actual extensive time, costs and labour athletes invest in the pursuit of sporting success. This project contributes to our understanding the social determinants of athletes' health and in understanding the ways in which the Canadian sport system, including Canadian sport policy, frames the material conditions of athletes' lives. Information on the social determinants of athletes' health has policy implications for sport participation as results indicate that: 1) socio-economic barriers continue to prevent access to full participation for some athletes, even in spite of sport-specific policies and programs to mediate the influence of income; and 2) socio-economic stresses negatively impact the health and well-being of some athletes as well as members of their support systems (i.e., their parents, spouses or families).

Next Steps

At this point in time, data continues to come in from the quantitative survey however next steps include the refinement of the survey tool and another attempt at distribution cross-country. Thematically, it will be important to map the results from high performance athletes to changes in sport programming at community levels as community sport is often the first point in the Canadian sport system in which high performance

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athletes are introduced to their activity, exposed to the development system and begin to interact with others (coaches, teammates, competitors).

SHANNON, CHARLENE
University of New Brunswick
Standard Research Grant 2006

Understanding Parents' Experiences in Facilitating Physically Active Leisure for their Children who are Overweight or Obese

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Project Summary

Parents are key influencers of their children's leisure behaviours. They identify and create opportunities for their child's continued participation in leisure activities including sport. There are a number of factors that affect a parent's ability to support his/her child's participation in leisure activities. Given increasing concerns about childhood obesity and the importance of involving overweight/obese children in physical activity, three objectives guided this study:

- To identify the leisure behaviour patterns of overweight and obese children aged 5 to 16 and their parents;
- To explore parents' experiences with facilitating and supporting their child's participation in physically active leisure;
- To determine whether and in what ways participation in parent leisure education sessions influences parents' ability to facilitate or support their child's engagement in physically active leisure.

The study demonstrated that parents' personal limitations, lack of knowledge about available recreation and sport opportunities, and lack of awareness about their children's leisure interests make it difficult to support their child's ongoing participation in sport and physical activity. Children's negative experiences with sport and active leisure pursuits can also be a strong influence. However, leisure education can help parents by providing them with opportunities to: acquire knowledge about available recreation and sport resources; discover their children's interests; and develop strategies for overcoming various challenges in creating and supporting sport and active leisure opportunities.

Research Methods

Data collection involved parents who had a child who was overweight or obese participating in the University of New Brunswick's Paediatric Lifestyle Management Program (LMP). The Paediatric LMP was a 10-week program that provided education and guidance in the area of health, nutrition, and leisure and physical activity through 3 group sessions and 7 weekly, one-on-one individualized sessions with a paediatric nurse, dietician, and leisure educator. Twenty-five parents (19 mothers, 6 fathers) ranging in age from 32 to 49 participated in the study.

Prior to beginning the program, face-to-face, semi-structured interviews were conducted with one parent from each family that focused on 1) the leisure behaviour patterns of the parent, 2) family leisure patterns, and 3) the leisure interests, behaviours, and experiences of the child who was overweight or obese. Each parent attended between 4 and 7 individualized leisure education sessions lasting 20 to 30 minutes that focused on discussing aspects of the child's leisure (e.g., knowledge about leisure, leisure interests, and barriers to participation) and their roles as facilitators of their child's leisure. All parents were provided with a leisure interest inventory (listing 50 leisure and sport activities) to review with their child in an effort to

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determine previously unidentified interests. Finally, parents participated in a semi-structured, face-to-face interview the week after they had completed the program. Questions were related to changes that had been made to their own and their children's leisure behaviors as a result of their participation in the education sessions and to their perceived value.

Research Results

At the time they began the Paediatric LMP, children were engaged primarily in sedentary pursuits. In addition, children were not always moving while participating in a sport activity (e.g., serving as the goal keeper in soccer).

Only five of the 25 parents in the study were regularly physically active (3 times per week) at the time they began the LMP. Parents who were not active indicated lack of time and lack of energy as key reasons for their sedentary lifestyles. Mothers appeared to be less active than fathers. Ten parents, all of whom were overweight or obese themselves, identified weight-related health issues (e.g., back or knee problems, joint pain, diabetes) as limiting their ability to be physically active with their child.

Parents' own limitations (e.g., time, ability to pay, energy, skill, unpredictable work schedule, geographical distance from a community and health) affected their ability to engage in active leisure with their children. Parents also had difficulty overcoming children's negative experiences in recreation and sport programs (bullying, exclusion, and inability to keep pace with the other children) that affected the child's desire to continue participation in organized activities.

All parents reported that the leisure education component of the LMP was valuable. Parents indicated that it made them more aware of their children's time use and ways to redirect from sedentary to more active (or developmentally beneficial) pursuits. They also acquired knowledge about active leisure opportunities available within their community and become more aware of activities that interested their children. Most parents reported an increased awareness of their influence on their child's leisure behaviours and the importance of being a good role model. Some parents were confident they had discovered or developed strategies for overcoming some of the barriers they had faced in engaging their child in active leisure (e.g., had developed time management skills; were now aware of free or low-cost programs). Many parents identified making greater efforts to engage in physically active family leisure. At the end of the program, most parents had either enrolled or planned to enroll their child in an active leisure recreation or sport program. In most cases, limits on the amount of screen time children were allowed each day had been put in place.

Policy Implications

Policy aimed at enhancing children's sport participation may require more consideration of parents' role as the facilitators of children's sport participation. Initiatives that provide opportunities for children to "drop-in" and receive instruction may support parents who want to gauge interest or are not able to commit to a regularly scheduled program. Partner initiatives such as KidSport are critical to reaching those children who most need sport and whose family may not have the financial means. The impact of negative first experiences on continued participation suggests the importance of including, as part of the training of recreation and sport leaders, ways of welcoming, encouraging, and supporting first-time participants. Specific efforts by youth-serving organizations to create safe and supportive environments that lessen incidences of bullying and peer harassment may be an important step to ensuring children's continued participation.

Next Steps

Future research should address the long-term impact of leisure education sessions; overweight and obese children's first-hand perceptions of their experiences with participation in sport and active recreation; and the role of youth serving recreation and sport organizations in protecting children from exclusion and victimization and their management of bullying incidents when they occur

Key Stakeholders and Benefits

The following organizations may be interested in the findings:

- Government of New Brunswick Department of Wellness, Culture, and Sport
- Recreation New Brunswick (and other provincial recreation organization)
- Sport NB (and other provincial sport bodies)
- City of Fredericton – Community Services (Recreation Division)
- Town of Oromocto – Leisure Services and Tourism
- Village of New Maryland – Recreation and Leisure Services
- Fredericton YM-YWCA

1. An increased focus on understanding the psychosocial experiences of parents of youth with MI;
2. The inclusion of parents of youth with MI in the development of interventions for parental support;
3. A focus on understanding parental support for both girls and boys with MI;
4. Increased examination of how parental support for youth with MI changes throughout the lifespan;
5. An examination of how various impairments may influence parental support.

Study 2
The results of this study indicated that the two groups of parents (i.e., those whose children did and did not participate in sport) differed across a number of areas, including their perceptions of the benefits and risks of sport participation, their intentions to support their child's sport participation, and the barriers and facilitators they faced.

Research Conclusions
The findings of this research provide a better understanding of parental support behaviours for youth with MI, as well as the potential determinants of these behaviours. This knowledge can be used to inform the development of resources and interventions aimed at increasing parental support for the sport participation of youth with MI.

Policy Implications
The results of this research have the potential to inform policies and programs aimed at increasing sport participation for youth with MI. In particular, these findings highlight the importance of providing parents with the resources and support they need to facilitate their child's sport participation.

(1) Build knowledge of outcome expectations (i.e. parental views on the outcomes of involving their children in sport). Better understanding is required on potential negative outcome expectations, how outcome expectations impact other determinants of parental support for sport participation, and how outcome expectations develop.

(2) Examine determinants of sport initiation from the perspective of parents, in particular parents' confidence in their ability to involve their children in sport.

(3) Conduct research on parental planning of sport participation. Parents of youth with physical impairments potentially face additional stressors and barriers to involving a child in sport. Planning could, therefore, be of great benefit and should be explored as a potential facilitator to improve sport involvement.

(4) Determine how to maintain sport participation, and build knowledge of determinants of parental behaviours influencing long-term sport involvement.

Develop interventions to support parents of youth with physical impairments.

Study 2

The findings of the second study demonstrate the utility of the Health Action Process Approach (HAPA) for understanding the views of parents of athletes and parents of non-athletes towards supporting sport participation for youth with MI. There were key similarities and differences between the HAPA constructs that demonstrate future areas for research and potential methods of targeting parents of non-athletes. Results demonstrated that compared to parents of youth with MI who don't participate in sport, parents of youth with MI who do participate in sport: (1) do not view sport as risky or dangerous; (2) plan for sports (e.g., scheduling, equipment); (3) see parental commitment to sport as important to their child's present and ongoing sport participation; and (4) use social networks for support and to find sport opportunities.

Both groups of parents also identified a number of barriers and facilitators to involving their children in sport. These included: (1) program availability (i.e. Few programs are available or programs don't stay open long. This is a particular issue for those living in rural or small communities.); (2) parents don't like the type of programs available (i.e. they want MI specific programs rather than having their children in programs with youth with other types of impairments such as intellectual impairments); and (3) the cost of adapted programs or adapted equipment (i.e. participation was facilitated when parents received funding or were provided with equipment.)

Another important result was the indication that parents relied on their medical support team (i.e. doctors, physiotherapists, support staff, etc.) for social support and information on sport programs.

This study had a number of strengths including interviewing parents of athletes and non-athletes, as well as parents of youth with a range of MIs. There are, however, some limitations. Two key limitations are: (1) we could not control the results for MI severity; and (2) all but two parents interviewed were mothers, which could potentially impact the findings.

Policy Implications

Future research is necessary before moving towards policy development. However, the findings of the second study allow for some suggestions to be made for sport organizations or practitioners aiming to improve participation for youth with MI:

(1) Place an emphasis on developing programs that youth with MI enjoy and want to continue attending.

(2) Create programs that are specifically for youth with MI so that parents and youth have options beyond integrated programs.

(3) When determining the location and cost of the program, think about how families can best be accommodated. Provide facilities that accommodate the health needs of the youth (e.g. space with enough room for parents to help them transfer or change equipment or clothing, take medication, etc.). When considering the location, think about accessibility concerns (e.g. how far is parking, are there easy access elevators, etc.)

Build resources for parents to access information. For example, encourage medical professionals to promote sport to parents. Develop and support parent networks to spread knowledge and information on programs.

Next Steps
New questions raised by this research relate to determinants of support for which both groups of parents had similar views. For example, both groups of parents from Study 2 had similar concerns regarding barriers to supporting their child with MI's sport. Future research needs to determine why parents of athletes, despite voicing these barriers, overcame them and involved their child in sport, while parents of non-athletes did not. Economic issues are raised in the way that parents of youth with MI may be better supported in overcoming a main concern: financial barriers to participation. Parents must consider a number of costs including additional fees for support staff hired either by the program or parents, equipment with proper adaptations, and accessible transportation.

Key Stakeholders and Benefits
Organizations that can benefit from these findings include the Canadian Paralympic Committee, and any sport governing body with programming for people with a physical disability (e.g. Swimming Canada, Hockey Canada, etc.)

STRACHAN, LEISHA
University of Manitoba
Post-Doctoral Stipend 2008

Examining Positive Youth Development in Elite Sport Contexts Using Photo Elicitation

Project Summary
Previous research in the field of positive youth development has highlighted the importance of extracurricular activities, such as sport, in developing healthy youth (Larson, 2000, Petitpas et al., 2005). Further, the National Research Council Institute of Medicine (NRCIM, 2002) have suggested eight setting features that are critical to the growth of positive young people: physical and psychological safety, appropriate structure, supportive relationships, opportunities to belong, positive social norms, support of efficacy and mattering, opportunities for skill building, and integration of family, school, and community efforts. The presence of these setting features has not yet been examined extensively within youth sport contexts (Perkins & Noam, 2007). Recent research with elite youth sport coaches found the presence and delivery of the setting features within elite sport contexts (Strachan, Côté, & Deakin, 2011). With increasing elite sport participation by children and youth, it is critical that elite sport contexts be explored through examining athlete perceptions to ensure the best possible program delivery. Results point to the 7th setting feature, opportunities for skill building, as a meaningful feature of elite sport contexts. Other highlighted features include physical safety as well as appropriate structure.

Research Methods
Twelve athletes (Mage = 11) were recruited from swimming and gymnastics. These athletes were all invested in their respective sports spending at least 10 hours per week in practice. A photo elicitation methodology was used; this methodology involves individuals taking photographs within a specific context in order to explore the environment in greater depth (Morrow, 2001; Power, 2003). Each athlete participated in three or four separate sessions which have proved to be appropriate with children and youth (Cook & Hess, 2007). The sessions include an explanation of the methodology, taking pictures during a practice, selecting pictures, and speaking to the researcher about their experiences by explaining the photographs taken. The final session was audio recorded and transcribed verbatim for analysis.

Research Results
Athletes described features related to Opportunities for Skill Building as the most meaningful part of their elite sport experience. Interestingly, skill building encompassed a broad range of activities: skill development, cognitive development, and psychological skills development.

Physical Safety and Appropriate Structure were also important to these athletes as they wanted to feel safe in their sport experience and have an understanding that proper progressions were being taught and delivered.

Positive Social Norms and Support of Efficacy and Mattering were often mentioned by these athletes as they understood that they were developing positive values in sport. In addition, recognition was mentioned by several athletes as important in their experience and this was extremely valued.

The support and encouragement of friends as well as having supportive coaches were not mentioned quite as much but were also very valued by these athletes.

Opportunities to Belong and Integration of Family, School, and Community were the least reported by these athletes.

Policy Implications

The first goal of the Canada-Manitoba Sport Development document is to increase the level and range of participation in sport within Manitoba's remote, isolated and inner urban communities, and especially among Manitoba's Aboriginal and new immigrant populations. While special populations have not yet been addressed through this research, results can have an impact on the level and range of sport participation among youth.

Participation in elite youth sport brings about many challenges, particularly with issues of dropout and burnout. A greater focus on the tenets of positive youth development in this context can help to encourage talented athletes to persist in sport while gaining positive experiences within a more deliberate context.

Next Steps

The next steps of this research include examining more of the context in elite youth sport, particularly parents/guardians and their contribution to positive development. More links are needed examining family structure (i.e., siblings), school involvement, and community links within elite youth sport. Further, more diverse populations are important to consider through this research including Aboriginal and New Immigrant youth, athletes with physical disability, and athletes with intellectual disability.

Key Stakeholders and Benefits

The key stakeholders in this research include:
- The Coaching Association of Canada
- Sport Canada – LTAD
- Swimming Canada/Swim Manitoba
- Gymnastics Canada/Manitoba Gymnastics Association

STRACHAN, LEISHA

University of Manitoba
D. MacDonald, J. Cote
Standard Research Grant 2011

Using technology to design and delivery positive youth sport programs

Project Summary

The purpose of this study was to use technology to teach and promote the research within the field of positive youth development (PYD). Coaches are very influential in the lives of youth and, although coaches recognize the value of personal development, many are unsure of how to teach this within the context of sport programs. Project SCORE! (Sport COnnect and REspect) was developed as a tool for coaches to use to integrate the research from PYD into sport (www.projectscore.ca). The program is focused around the growth of the 4 C's – competence, confidence, character, and connection. Ten simple lessons were developed for coaches to follow. Research has found that Project SCORE! was successful in enhancing youth experiences in sport and was also valuable for coaches. Although some edits are still necessary to the website itself, the resource is very promising for use with coaches across Canada and as an example of how to teach sport in a more meaningful way for youth of all competitive levels.

Research Methods

This project was delivered in different phases. In Phase 1, the website, Project SCORE!, was created (www.projectscore.ca). This creation was completely original and included the development of the logo, text for the site, lessons, additional resources, and the SCORE! tracker (a tool to track completed lessons). This phase also included the attainment of ethical approval for the project. Next, Phase 2 was the pilot phase of the site. Four coaches, who work with youth athletes (i.e., 12-16 years old) in a variety of sports completed Project SCORE! and provided feedback through semi-structured interviews. The feedback given led to Phase 3 which included edits of the site (i.e., the creation and insertion of short YouTube videos related to the lessons) as well as recruitment for the larger quantitative phase of the study. Phase 4 consisted of the research phase. In this phase, two different studies were completed. In one study, coaches were recruited to complete the lessons and the youth athletes' experiences were measured before and after the program. In total, 48 athletes completed the Youth Experiences Survey for Sport (YES-S; MacDonald et al., 2012). These results showed positive changes in personal and social skills, goal setting, and initiative for the youth athletes. Exit interviews were also done with coaches about their experiences with the program and, generally, the experiences were positive. Coaches report witnessing positive changes in their athletes and also experienced their own personal growth. On the other side, the coaches were apprehensive about taking time in practice to complete the lessons. The second study was conducted with summer sport camp leaders (N = 13) and they did some of the lessons from Project SCORE! over the course of a week long camp with youth sport participants. The same questionnaire and protocol was followed for this study. Although the only significance this time was a small increase in initiative, the sport leaders reported seeing positive changes in the participants and also reported personal growth. The final phase of the project was an evaluation of the program. Coaches in two locations (Winnipeg and Charlottetown) participated in a think aloud protocol to evaluate the site and its various components. This protocol leads the coaches through the website and gathers their thoughts as they are navigating. There were a few comments about some content that can be

edited so that it is more user-friendly including decreasing the amount of additional resources and maybe even decreasing the number of lessons. Overall, coaches did enjoy the program and noted many strengths (i.e., the necessity of the program for increasing positive outcomes for youth).

Research Results

The key finding for this project is that, through the use of Project SCORE!, youth experiences in sport can be enhanced. The use of this online resource provides a vehicle for deliberate positive youth development delivery within the context of sport. The program trains coaches about how to provide positive youth sport programming which is key to increasing enjoyment.

A secondary finding is that coaches have experienced their own personal growth through Project SCORE!. By delivering the program, coaches have had the chance to refine skills that they had been using and/or learn new ways to deliver their programs. This has helped to increase the confidence of coaches and, in some cases, served to reinforce existing behaviors.

In terms of limitations, it was a challenge to retain all the coaches that began the program. Specifically, although the program is designed to be simple, some coaches were overwhelmed with other aspects of coaching to devote time to completing the program. By including an evaluative piece to this project, refinements are being made to the program to help coaches deliver the lessons with even more ease.

Project SCORE! has the potential to be a cornerstone resource for coaching education. The use of technology (i.e., website) allows the program to be portable and accessible for coaches in all parts of Canada. This type of reach is what is needed to help enhance youth sport for all young people and assist coaches in delivering meaningful and positive sport experiences.

Policy Implications

The Canadian Sport Policy has been an instrumental tool is shaping the direction of sport delivery in Canada. Education is a key part of the policy and a key objective is the provision of 'values-based play and sport among children and youth'.

In order for this to be successful, leaders (i.e., coaches, sport camp instructors) need to be taught how to integrate teaching personal development and sport in programs. The delivery needs to be deliberate. We all have to remember that 'skills are taught, not caught'. If we want children and youth to develop positively, we need to consider all aspects of development. Sport leaders at all levels, need to be trained and have applied experience teaching PYD through sport.

Project SCORE! helps to create a more integrated view of sport development with the knowledge that properly trained adults are the key to reaching the objectives outlined in the Canadian Sport Policy for youth in Canada.

Next Steps

The first 'next steps' is considering how to make Project SCORE! even more user-friendly for coaches. The goal is to make the program more accessible to coaches in all parts of Canada. We are a part of a SSHRC

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Partnership grant, led by Dr. Nick Holt, that is working to promote the research related to PYD and sport across Canada. This is a great opportunity for Project SCORE! to gain more visibility and use with coaches as it is a free resource.

Another idea for Project SCORE! is to extend the site to accommodate a Parent Lounge which would be similar to the Coaches Locker Room currently on the site. This will be an evidence-based guide for parents with practical and applied lessons for them to use and integrate into their child's youth sport experience. It would compliment Project SCORE! and be a great way for parent committees/board to learn more about positive youth development through sport and how to implement various ideas.

Key Stakeholders and Benefits
- Coaching Association of Canada
- Provincial Coaching and Sport organizations
- Sport Matters
- True Sport
- Sport schools in Canada

SULLIVAN, PHILIP
Brock University
N. Holt, G. Bloom
Standard Research Grant 2007

The Effect of Coaching in Youth Sport in Canada

Project Summary

This project was designed to examine the impact of coaching on athlete outcomes in youth sport. The research focused on both the perceptions and behaviors of the coach, and assessed sporting and non-sporting (i.e., positive youth development) outcomes of the athletes. To maximize the applicability of results to the Canadian sporting culture, efforts were made to collect data within the three different youth sport streams determined by the Coaching Association of Canada – competitive, community and instructional sports.

Research Methods

A sample of 352 athletes and their coaches (N = 47) participated in this study. Coaches completed the Coaching Efficacy Scale (CES) and Revised Leadership Scale for Sports (RLSS). Athletes completed the Coaching Behavior Scale for Sports (CBS-S) and Youth Experiences Survey (YES). The CES measures confidence coaches have in four interrelated areas – motivation, strategy, teaching technique, and character building. The RLSS measures the frequency of four different coaching behaviors – training and instruction, positive feedback, social support, and situational consideration; and two different decision making styles – autocratic and democratic.

All scales are answered on via close ended Likert-type questions. The CES and RLSS have been supported with respect to their validity, reliability, and psychometric properties. One of the objectives of the research was to validate the YES and CBS-S.

Research Results

The YES and CBS-S were both analyzed for psychometric properties (e.g., internal reliability, factor structure). In both cases and reduced version of the scale was validated.

It was found that there is a significant relationship between coaches self perceptions (i.e., coaching efficacy) and their behaviors (e.g., training and instruction and positive feedback). Further, there were significant relationships between coaches efficacy and their perceptions of their own behavior and athlete assessments of coaching behavior. Finally, preliminary analyses showed that positive youth development might be an outcome of coaching in youth sport.

Policy Implications

These findings may be applicable to coaching education material that is distributed by the National Coaching Certification Program.

Key Stakeholders and Benefits
- Coaching Association of Canada
- National Coaching Certification Program

TAKS, MARIJKE
University of Windsor
L. Misener, L. Chalip, B.C. Green
Standard Research Grant 2010

Leveraging Sport Events for Sport Development

Project Summary

It is often claimed that sport events can stimulate interest and consequent participation in sport. The data on this matter are inconclusive. It is known, however, that sport participation is not being raised merely by the fact that an event is being hosted, but rather on the ways that an event is used to render desired effects (i.e., event leveraging). The purpose of this research project was to examine how medium sized sport events can be used to stimulate sport participation in host communities. Using a three-phased study, findings show that: (a) sport events are unlikely in-and-of themselves to generate increases in sport participation; (b) there are nonetheless opportunities to use events to generate sport participation if the requisite strategies and tactics are put into place; (c) sport organizations at the local level lack the necessary skills and resources to take advantage of a locally hosted event to build participation in their sport; (d) local sport organizations have a set of standard operating procedures for recruitment and retention which tend to support a status quo; and (e) an event can catalyze the interest of local sport organization administrators in the possibilities for a better effort at building their sport.

Research methods

In phase one (the evaluation phase), leveraging tactics and outcomes were examined for two past events: the 2005 Pan-American Junior Athletic Championships (Windsor, ON), and the 2005 Canadian National Figure Skating Championships (London, ON). Document and media-analysis, as well as retrospective interviews (n=21 and n=14 respectively) with key stakeholders (i.e., local organizing committee, local sport organization, facility managers, athletes) were conducted six years after the events.

For phase two (the planning phase), a task force was created to consider the challenges and prospects for leveraging sport events for sport development. The panel of experts was comprised of 12 practitioners and academics from a variety of organizations that would (or could) be involved in (and benefit from) leveraging sport events for participation (e.g., sports policy, event management, facility management, coaching, tourism, marketing, education, and community development). Brainstorming and nominal group techniques were used to collect the data, which resulted in a model for leveraging sport events to build sport participation.

For phase 3 (the implementation phase), an international youth sport event (2013 International Children's Games) was selected as the event to be leveraged, and athletics and gymnastics were selected as the two sports to be stimulated. The first step consisted of a one-day workshop six months prior to the event to scope, discuss and develop an action plan for leveraging. The next steps evaluated processes and outcomes through: participant observation and casual meetings during the event, a post-event workshop one month after the event, and reflective interviews (n=9) one year after the event.

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Research results

Evaluation phase (Phase 1):
Key stakeholders of sport events support the idea that increasing sport participation through events is a worthwhile endeavour. There was an overarching assumption that the events in and of themselves, through the process of "creating awareness", are sufficient to engender participation outcomes. However, participation effects in the absence of leveraging are negligible. We found no evidence for defined strategic intentions or plans to leverage events to foster sport participation; the leverage occurrences were more happenstance. In the case of the 2005 Pan American Junior Athletic Championships, a coaching clinic and a new facility were two intended tactics expected to intentionally trigger increases in sport participation. The 2005 Canadian National Figure Skating Championships implemented an educational program through schools and organized demonstrations during event breaks. Flyers were handed out on site for both events. No partnerships were activated to serve sport development. Despite the general belief that it would be a good idea to increase the number of new participants, the focus for any sport development efforts or ideas was clearly on individuals already in the system rather than any attempts to get new participants into the sport.

Planning phase (Phase 2):
The model for event leveraging consists of three elements: (a) the context (culture; opinions and attitudes; systems and structures), (b) three types of organizations with a stake in the leveraging process (event, sport, and non-sport entities), and (c) resources needed (human, physical, and knowledge). The centre of the model reflects the core of the leveraging effort: the sport participation goals. Each of the factors in the model can enhance or hinder levering strategies and tactics. Sport events can be leveraged to enhance sport participation if the necessary alliances among sport organizations, event organizers and non-sport stakeholders are forged to integrate each event into the marketing mix of sport organizations. Potential barriers need to be addressed (e.g., the lack of available capacity to absorb new participants; crowding out of local participation by the event; the disincentives resulting from elite performances that seem outside the reach of aspiring participants).

Implementation phase (Phase 3):
The sport communities (i.e., athletics and gymnastics) were unable to implement the solid ideas and initiatives that had been developed in the 6 months leading up to the event. Only some isolated tactics were implemented (e.g., handing out posters and flyers in schools prior to the event; flyers during the events). Challenges to implement the developed strategies and tactics seem to be a lack of human resources (in the case of athletics), and a lack of "community" to enable collaborative actions among a variety of clubs (in the case of gymnastics). One year after the event, stakeholders revealed some evidence of an "inspiration effect"; for those already involved in the sport, competing in an international context at this level and age was very attractive and rather unique. However, there is no evidence of increased participation in either sport. Without evidence of tangible outcomes, the key stakeholders displayed no efforts to sustain any positive impacts. As was the case in phase 1, they feel that lessons can be learned from the leveraging unsuccessful effort. However, what is being done to retain and capitalize on what was learned is unclear at this stage.

Policy implications
Formulation and implementation of strategies and tactics, and measurements need to be put into place well in advance of an event. This will enable the efficacy of strategies and tactics to be benchmarked and assessed. This responsibility needs to be assigned to a clearly identified entity. These requirements can be added to the

policies for hosting sport events, be it at the federal level (e.g., Federal Policy for hosting International Sport Events), the provincial or the local levels (for smaller sized events).

Next steps

The findings of this study suggest that sport organizations' capacity to market themselves to participants is a prerequisite for effective leverage of events to build participation, and that capacity building must take place well in advance of an event so that the necessary skills and resources are adequately established. Future research should examine how local sport organizations can build that capacity, and to what degree adding an event into a well-developed marketing strategy will benefit local sport organizations in building participation in their sport.

Key stakeholders and benefits

Club administrators can use events to motivate, to reconsider and possibly further develop their capacity to build their sport. This study informs sport policymakers and sport event organizers about the means to build sport participation by using medium sized sport events to stimulate participation.

Further Readings

- Taks, M., Misener, L., Chalip, L., & Green B. C. (2013). Leveraging sport events for participation. Canadian Journal for Social Research (Recent research on sport in Canada), 3(1), 12-23.
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- Green, B.C., Chalip, L., Taks, M., & Misener, L. (In revision). Creating Sport Participation From Sport Events: Making It Happen. Leisure Studies.
- Misener, L., Taks, M., Chalip, L., & Green, C. (Under review). The elusive 'trickle down effect' of sport events: Assumptions and missed opportunities. Managing Leisure.

TAMIM, HALA
York University
C. Ardern, P. Ritvo, P. Weir, H. Baker
Standard Research Grant 2008

Tai Chi (TC) for Older Adults: Improving Physical and Psychological Health and Identifying and Overcoming Cultural/Ethnic Barriers to Participation

Project Summary

Tai Chi (TC), a traditional Chinese exercise, has been shown to have several health benefits. In general, TC is a widely practiced, well received exercise in large populations in China. Such generally positive attitudes towards the exercise result from a long history of practice in Chinese culture. The current literature has identified some factors affecting its use by older Chinese adults but it is still unclear, however, whether these factors are applicable to or consistent across the different ethnicities that characterize Ontario's population. The objectives of the study were to examine and assess the factors influencing multi-ethnic Canadian older adults living in low income neighborhoods in terms of enrolment and adherence to a four months locally offered TC program, and to examine the program's effects on cardio-respiratory fitness and mental health. Results of this study showed that women were more socially motivated to both recruit and participate, whereas men were more focused on initiating physical activity to obtain the subsequent health benefits. The TC program was well attended by the participants who had multiple chronic conditions ranging from metabolic to orthopedic. Even within a group of participants with a range of functional abilities, participants were able to fully engage in and maintain TC practice for the duration of the study. Adherence to the program did not differ between Canadians of Chinese and non-Chinese origin. Furthermore, results of the present study showed that the program was effective in improving physical and mental health.

Research Methods

The study targeted community dwelling older adults in two locations in the Greater Toronto Area of Ontario, Canada; Jane and Finch as well as Dundas and Spadina. These two locations were chosen for their diverse ethnic make-up and their low socio economic status (SES). Eligibility for participation was limited to being 50 years of age and older, residing in the above-mentioned locations and with the medical capability to be involved in an exercise program. Two focus groups (male/female) were initially conducted to identify barriers and promoters to participation in the community based TC program. Information obtained from participants of these focus groups helped identify poster placement in strategic areas in the neighborhoods to actively recruit participants. Participants were exposed to 16 consecutive weeks of TC offered free of charge. The TC program consisted of an average of 6 TC classes given throughout the week where participants were advised to attend two classes per week. Classes took place at a Toronto Community Housing building and local community centers in each area. A professional TC master facilitated the classes. Each class was 60 minutes long and consisted of 15 minutes of Qigong followed by 45 minutes of Yang style TC. Attendance of study participants was collected throughout study period. Socio-demographic, lifestyle and health related characteristics were collected at baseline. Measures of physical, mental and perceived stress were collected at baseline and at end of study and were compared to assess effectiveness of TC program.

Research Results

A total of 210 participants were recruited for the present study. The mean age at enrolment was 68 and the majority of the participants (80%) were females. The majority had less than primary education (45%) and had an annual income less than $14,000 (64%). The country of origin of participants included China (35%), South America (26%), Europe (16%), Caribbean (6%), Canada (6%), South Asia (5%) and other. The proportion of participants who reported having arthritis, hypertension, diabetes and depression were 48.6%, 50%, 21.4%, 14.8%, respectively. A total of 18 participants (9%) were using walking provision devices at baseline.

Over the duration of the program, 34% attended < 8 TC classes, 21% attended 8-16 TC classes, 15% attended 16-24 TC classes and 31% attended > 24 TC classes. The average weekly attendance for the overall sample was 1 session per week, with no difference observed in the overall average weekly attendance for the Chinese versus non-Chinese groups. Of the 210 overall sample recruited, 27% did not complete the study and hence were lost to follow-up. Reasons for loss to follow-up included health reasons not related to the TC program, leaving the country to visit family, not being available for post TC program data collection and unknown reasons. Not completing the study was not related to any of the socio-demographic characteristics. Results showed that the 16 week program was effective at improving strength, endurance and flexibility as well as mental health and stress perception. These findings are of particular importance since improvements were in the context of real world settings based within lower income communities.

The limitations of the study relate to self-reporting bias and the uncontrolled intervention design such as changes in daily and seasonal physical activities as well as changes in dietary patterns and lifestyle factors.

Policy Implications

It has been assumed that individuals are more likely to adopt and maintain physically active lifestyles if they are able to perform activities that are culturally affiliated with their own. Research concerning TC in Canada is still in its infancy with respect to its potential uptake. For example, some individuals may view the activity as too "foreign". Such ethno-cultural barriers might seriously reduce TC acceptance. Yet, it is apparent from our study that TC is an optimal mode of physical activity for a culturally diverse group of older adults. Furthermore, results of the present study demonstrate that even with an average weekly attendance of one session of TC per week, significant physical, mental and stress changes can occur. This has significant implications for public health strategies targeting physical inactivity among older adults, as even a modest level of TC activity may contribute to meaningful improvements in health, and can be performed by ambulatory participants at any level of skill. It is an activity that can be incorporated into community programs, senior center activities or senior nursing homes to promote the wellbeing of community dwelling elders. The requirements of TC do not involve expensive equipment and are limited to a good TC master and an available space where the exercise can take place. This relatively inexpensive program could be widely implemented across our aging population and has the potential for considerable public health improvement and potential cost savings to the health care system.

Next Steps

Based on the data collected, the team is currently working on addressing the following research questions; 1) assessing the barriers and promoters for sustained participation in TC, 2) assessing if physical and mental health improvements due to the TC program is different for older adults of Chinese versus non-Chinese origin.

Potential important future studies would include; 1) assessing sustainability of participation in TC exercise over longer duration (greater than 4 months), 2) assessing cost effectiveness of TC programs.

Key Stakeholders and Benefits
- Coalition for Active Living Canada
- Active Living Coalition for Older Adults
- Public Health Agency of Canada
- Health Canada, Healthy Living
- Seniors Association Canada

The benefits are to encourage participation in a safe, low impact, physical activity.

TAMMINEN, KATHERINE
University of Alberta
Doctorate 2008

Understanding and Coping Among Adolescent Athletes

Project Summary

Research Objectives: Participation in youth sport is associated with a variety of positive developmental outcomes among adolescents, however studies of recreational and competitive youth sport contexts have revealed stressors which include not having fun, an overemphasis on winning, conflicts with coaches or opponents, or parental pressures to succeed (Anshel & Delaney, 2001; Goyen & Anshel, 1998; Sirard, Pfeiffer, & Pate, 2006). Researchers speculate that failing to cope with these stressors may lead to burnout and eventually sport withdrawal (Petlichkoff, 1992; Smith, 1986). Thus, by understanding how youth deal with potential stressors, coping may play an important role in improving athletes' experiences in sport and maintaining sport participation rates.

Conclusions: Results from study 1 suggest that the development of coping among adolescent athletes is malleable and is influenced by the athlete's social network and prior coping experiences. Social networks including athletes' parents, coaches, and teammates should be developed by focusing on communication and positive social interactions. By developing social networks and coping skills, youth may maintain sport participation throughout adolescence.

Results from study 2 suggest that learning to cope was an experiential process for adolescent athletes, implying that athletes must gain personal experience in dealing with stressors in order to learn how to cope. Athletes learned about coping by being exposed to multiple situations in their sport and by reflecting on their stressors and coping efforts. Parents and coaches helped athletes learn to cope by creating a trusting environment which facilitated the learning process, and by using specific strategies for assisting athletes in learning about coping. Strategies included questioning and reminding, sharing experiences, providing perspective, and dosing stress experiences to help athletes learn to cope. Parents also initiated informal conversations about coping, while coaches used direct instruction and created opportunities to learn about coping

The results of this research have been published in peer-reviewed journals:
- Tamminen, K. A., & Holt, N. L. (in press). A grounded theory of adolescent athletes' learning to cope and the role of parents and coaches. *Psychology of Sport and Exercise.* doi: 10.1016/j.psychsport.2011.07.006
- Tamminen, K.A., & Holt, N. L. (2010). A meta-study of qualitative research examining stressor appraisals and coping among adolescents in sport. *Journal of Sports Sciences, 28,* 1563-1580. doi: 10.1080/02640414.2010.512642

Research Methods

Study 1: The purpose of this study was to create an integrated conceptual perspective and to establish 'what is known' about youth sport stress and coping. A qualitative meta-study was conducted of youth sport coping

research from 1970-2009. Twelve sport psychology journals were manually searched and six online databases were searched electronically. Weekly automatic database searches were also conducted. Based on inclusion criteria, 17 articles and 3 dissertations were retained. Analyses produced the following themes: contextual and dynamic stressor appraisals, dynamic coping efforts, development of coping, and social networks as assets and liabilities.

Study 2: The purpose of this study was to develop a grounded theory of adolescent athletes' process of learning to cope and the role of parents and coaches within this process. The key research question was "how do coaches and parents influence the development of coping in sport?" Interviews were conducted with 17 athletes (8 females, 9 males, *M* age = 15.6 years) 10 parents (8 mothers, 2 fathers), and 7 male coaches. Interviews were analysed using grounded theory methodology (Corbin & Strauss, 2008). Analyses produced the main category of learning about coping, as well as three categories concerning the role of parents and coaches: creating context, strategies for assistance, and balancing acts. Learning about coping was an experiential process for adolescent athletes, suggesting that athletes must gain personal experience in dealing with stressors in order to learn how to cope.

Research Results

1. Athletes' social networks are complex and intricately tied to the appraisal of stressors and the ways in which they cope with stressors. Parents and coaches may serve as assets to helping athletes learn to cope with stressors in sport, however they may also be liabilities in learning about coping (i.e., athletes may perceive parents and coaches as stressors and not as sources of support). Positive interactions with coaches and parents may improve or facilitate athletes' coping.

2. Most previous studies have concluded with applied implications that involve helping adolescent athletes build a repertoire of coping resources and/or selecting the coping strategies that are 'tried and true.' The current research *also* highlights the importance of delivering interventions that focus on athletes' social networks which were found to be both assets and liabilities. Thus, interventions that also target coaches, parents, and even team/peer interactions may be useful for improving adolescents' coping in sport. This issue does not appear to have been widely considered in the literature to date.

3. Learning about coping occurred through an experiential process where athletes needed direct exposure to stressors to try out coping strategies (see Figure 1). This was facilitated by exposure to different situations, and by having appropriate social support networks in place to assist athletes' coping. Thus, being exposed to various situations in sport with supportive parents and coaches surrounding the athlete may contribute to the development of coping strategies. The current research confirms the idea that athletes benefit from instruction.

4. Regarding coping; however these findings emphasize the importance of providing athletes with opportunities to try out coping strategies in competitive situations.

5. Parents and coaches reported that they attempted to create a context for learning about coping by listening and by monitoring their own reactions when discussing stressors with their child. The context created by parents appeared to influence the extent to which athletes sought assistance from their parents when facing stressors. Family contexts appear to influence the development of adaptive and maladaptive coping among adolescents (Grant et al., 2006; Kliewer, et al., 1996; Lafferty & Dorrell, 2006), and researchers have suggested that coping intervention programs need to address parenting and communication within family environments (e.g., Blount, Davis, Powers, & Roberts, 1991); the current findings support this proposition.

Policy Implications

Exposure to multiple experiences in sport should be supported by information and education regarding the importance of social support in athletes' coping. Parents and coaches should not be left out of interventions, since they are integral parts of athletes' social networks. Education should be provided to parents and coaches regarding stressors and coping among athletes including information regarding potential stressors for athletes, ways of coping with stressors, and adaptive and maladaptive ways of coping. There should be an emphasis on improving communication between athletes and their coaches and parents, with an emphasis on positive social interactions to facilitate the development of coping. Sharing experiences, questioning and reminding athletes about possible ways of coping, providing perspective, and providing opportunities to learn about coping all appear to be practical ways to help athletes learn to cope with stressors in sport. By helping athletes learn to cope adaptively with stressors in sport, they may improve the quality of their sport experiences, thereby reducing burnout and withdrawal. These suggestions are relevant for the Canadian Sport for Life goal of enhanced sport participation and improving the quality of sport for young athletes.

Next Steps

Athletes' perceptions of stressors and use of coping strategies changes with development (Reeves, et al., 2009), and parents and coaches may help athletes learn to cope in qualitatively different ways across stages of development (Skinner & Zimmer-Gembeck, 2009). Future research may investigate the ways in which parents and coaches contribute to athletes' learning to cope at different developmental stages. Understanding how parents and coaches help athletes learn to cope at different stages may help to develop developmentally appropriate interventions for parents, coaches, and athletes.

While it is important for athletes to experience potentially stressful situations to develop new coping abilities, parents and coaches must also determine the relative ability of the athlete to cope with stressors. Parents and coaches may adjust their protective practices as athletes develop a repertoire of coping skills. This represents an interesting area of study regarding parent-athlete relationships and the ways in which parents negotiate risks involved in allowing their child to engage in potentially stressful competitive contexts. The question is 'how do parents negotiate their child's involvement in competitive sport?' Future research may include the examination of parental and coach socialization or modeling of coping responses in sport.

Key Stakeholders and Benefits

There appears to be scope for education programs to be distributed through the Coaching Association of Canada, and also through national sport governing bodies to direct information at parents of young athletes.
- Coaching Association of Canada (enhancing supportive coaching environments)
- Sport Canada (encouraging multiple sport experiences for young athletes)
- National & Provincial Sport Organizations
- Academic & coach education programs
- Parents of athletes

Figure 1. A grounded theory of adolescent athletes' learning about coping and the role of parents and coaches.
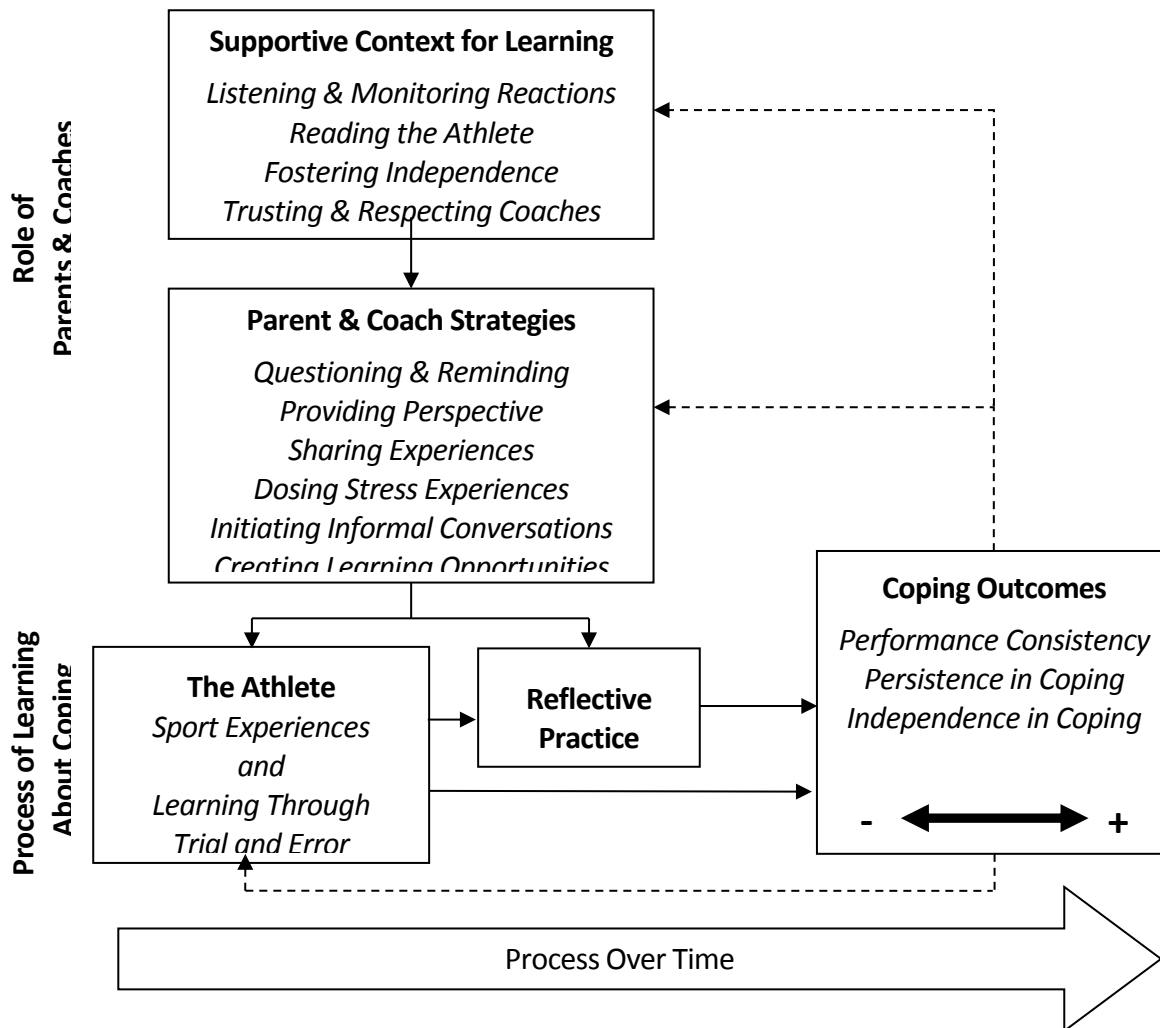
TRUDEAU, FRANÇOIS
Université du Québec à Trois-Rivieres
L. Laurencelle, R. Larouche, R. Shephard
2009

Factors in Adopting Long-term Athlete Development

Project Summary

Purpose: Several studies have reported an age-related decline of physical activity (PA). We examined the impact of four transitional periods—adolescence, the beginning of post-secondary education, entry into the labour market, and parenthood—on the PA of participants in the Trois-Rivières quasi-experimental study. The objective of this project was to identify the contribution of each of these periods to the lifespan decrease of physical activity. A second objective was to verify if a quality daily physical education program could change the impact of these transitional periods.

Findings: These results add to the body of evidence indicating a non-linear age-related decline in PA levels from adolescence to midlife. In our sample, the proportion of "very active" participants (i.e. over 5 hours of PA per week) dropped from 70.4 to 17.0%. A more dramatic decrease was seen on entering the labour market, when the percentage of "very active" participants fell from 55.9 to 23.4%. Moreover, by the age of around 44 years, our experimental subjects (who had 5 hours of physical education per week during childhood) showed no benefit from their PA in adulthood. We conclude that initiatives aimed at further maintaining PA may be warranted during these important transition periods.

Research Methods

A total of 44 women and 42 men aged 44.0 ± 1.2 years were given a semi-structured interview; the frequency and duration of physical activities were examined during each of these transition periods. The subjects had been participants in either an experimental program (5 hours of weekly physical education (PE)) or the standard curriculum (40 minutes of weekly PE) from Grades 1 to 6. The interviews allowed a more in-depth examination of the events that occurred during the transition periods that could have been associated with a modification in PA behaviours. Our sample size also ensures the saturation of data, which, in qualitative studies, determines the point where the addition of new data no longer adds to comprehension of the phenomenon. Furthermore, the control process adopted when analyzing the interviews contributes to the credibility of our analyses.

Research Results

The proportion of "very active" participants decreased by almost 75% between secondary school and the arrival of children. Concomitantly, there was an almost tenfold increase in the prevalence of physical inactivity. According to earlier reports, the decline in PA was not linear; the biggest
negative factor was entry into the labour market, when the percentage of "very active" individuals dropped from 55.9 to 23.4%. The influence of each transition is discussed further below.

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Transition from primary to secondary school. Although it is difficult to disentangle the respective influences of a change in education system and the onset of puberty, in our investigation over 85% of participants claimed that they were still "sufficiently active" during adolescence. However, many of them had only vague memories of their childhood behaviours.

Beginning of post-secondary education. For those participants who went on to pursue post-secondary education, the percentage of inactive participants increased almost fourfold, while the proportion of "very active" individuals fell by about 15%. Other researchers have also observed a decline in PA during this transition. Many factors might be responsible. Firstly, for many students the need to combine work and academic studies greatly reduces the free time previously available for PA. Secondly, moving to another city for post-secondary studies is likely to reduce PA.

Entry into the labour market. In our study, this transition was associated with the most significant decline in PA. Many participants justified their reduced PA by citing a lack of time as a result of their work. Finally, several individuals reported logistic problems, including, for example, difficulty in getting access to a hockey arena at reasonable hours.

Parenthood. After the arrival of children, almost 25% of participants reported that they were inactive, and 60.1% did not meet the recommended PA level. Such rates are comparable to American data. Many participants suggested they lacked time to be active because of the need to take care of their children. Other researchers have also reported that parenthood is associated with a significant decrease in PA.

Impact of the experimental program on PA behaviour. In the previous follow-up of Trois-Rivières study participants, women from the experimental group were more active than controls when they were 35 years of age. However, our current results suggest that this advantage vanished over the following decade. Thus, it appears that exercise habits in childhood do not necessarily guarantee that individuals will maintain a high level of PA throughout adult life, even though several theoretical models have insisted on the importance of establishing the roots of an active lifestyle during childhood or adolescence. This finding is noteworthy given the importance of maintaining a high level of PA to prevent cardiovascular events, chronic diseases, cognitive impairments and all-cause mortality. The absence of significant differences in PA between the experimental and control groups could derive from many factors. Firstly, the experimental program ended upon entry to secondary school, which is known to be a critical period in the evolution of PA behaviours. However, in our study, the proportion of "very active" individuals during adolescence was still very high. Secondly, several studies have indicated that most adolescents do not compensate for the cessation of compulsory PE in the upper grades of high school by a spontaneous increase in their PA. Finally, early childhood interventions cannot be successful in influencing adulthood physical activity, if not supported by lifespan interventions to favour physical activity.

Policy Implications
Given the decrease in physical activity and sport participation during life transition periods, focus should be placed on individuals and their environment (workplace, post-secondary institution, etc.) throughout promotion campaigns.

Next Steps

Further research on how to prevent a decrease in physical activity and sport involvement during life transition periods is warranted.

Key Stakeholders and Benefits

- Provincial and federal health and education ministries and departments.
- Post-secondary education organizations.

TRUDEAU, FRANÇOIS

Université du Québec à Trois-Rivières
C. Beaudoin, L. Laurencelle, C. Lajoie
Standard Research Grant 2009

Comparison of the determining factors in adopting the Long-Term Athlete Development (LTAD) model for Canadian athletes among coaches from various sport disciplines

Summary of the project

The purpose of this investigation is to determine the process for the adoption and implementation of the Long-Term Athlete Development (LTAD) model by coaches of various sports: soccer (n=116), ice hockey (n=43), figure skating (n=49), gymnastics (n=50) and cross-country skiing (n=36). A large majority of coaches from all the disciplines believe in the benefits and effectiveness of the LTAD in improving their athletes' performance. However, there are significant and consistent differences among the disciplines in the perceived knowledge and ability to apply the LTAD principles. These differences may be due to (1) the type of disciplines that already encourage late vs. early development by their very nature, (2) how consistent the LTAD is with the knowledge in each of the sports, and (3) the moment when the sport federation developed and disseminated its own LTAD model.

Research methods

We carried out the investigation using an online questionnaire with Canadian sports coaches (n=574). We analyzed the questionnaire based on the sport disciplines that had at least 50 respondents (i.e., ice hockey, soccer, cross-country skiing, gymnastics and figure skating). To fully understand the process for adopting and implementing the LTAD, we referred to the diffusion of innovation theory (Rogers, 2003) to develop the questionnaire.

Research results

At the time that the investigation was carried out (2012-2013), cross-country skiing coaches had the highest perceived knowledge of the LTAD (fair to good, 61.1%), whereas for figure skating coaches and gymnastics coaches this percentage was 18.4% and 10%. The beliefs in the anticipated benefits and effectiveness of the LTAD were very high among coaches in all the sports studied. Coaches for soccer, figure skating, ice hockey, cross-country skiing and gymnastics expected fairly high to high benefits and effectiveness from the LTAD in the following respective percentages: 90.9%, 68.9%, 88.9%, 86.9% and 71.5%. The perceived ability to apply the LTAD principles follows the same pattern; it was the highest among cross-country skiing coaches (69.5%, fair to good), and 56.2% and 50% for soccer and ice hockey coaches respectively. However, for gymnastics and figure skating coaches only 30% and 26.6% felt they had the same ability to apply the LTAD principles in their coaching. In the same way, only 4.3% of cross-country skiing coaches believed that implementing the LTAD was fairly complex or complex in their discipline, compared to more than 20% for coaches in all the other disciplines studied. Some organizational constraints were identified by the coaches but no significant difference was noted between the various sports.

It is interesting to note that the large majority of coaches from all disciplines believed in the benefits and effectiveness of the LTAD to improve the performance of their athletes. However, the perceived knowledge and ability to apply LTAD principles show significant and consistent differences among the disciplines. The complexity of implementing the LTAD is also perceived differently depending on the sport. These differences may be attributed to various factors, namely (1) the type of disciplines that already encourage late vs. early development by their very nature, (2) how consistent the LTAD is with the knowledge in each of the sports, and (3) the moment when the federation developed and disseminated its own LTAD model. In the latter case, coaches of some sports may have been exposed to the LTAD earlier.

Policy implications
Research may help in the process of adopting and implementing the LTAD and other initiatives with coaches at the level of federations as well as in the relevant departments of the various levels of government.

Next steps
Our research is not able to explain the differences observed among the sports. A qualitative approach could help complete the questionnaire-based study by identifying the reasons for these differences among the coaches of the sports studied.

Key stakeholders and benefits
- Provincial and federal sport federations
- Sport Canada

TRUDEL, PIERRE
University of Ottawa
N. Durand-Bush, P. Werthner, W.Gilbert, M.Cloes
STANDARD RESEARCH GRANT–RT Stipend 2006

An Analysis of High School Sport

Project Summary
Among the various opportunities young people have to practise sports, school sports are of particular interest because the ultimate goal of schools is to shape our future citizens. Although school sport has become increasingly popular in Canada, there are very few studies enabling us to assess whether it is achieving its stated mission objective, specifically to promote the overall development of student athletes through sport. An analysis of the data collected over the past three years confirms that (a) all the players involved (administrators, coaches, student-athletes, parents) believe that sport helps impart values and life skills to student athletes; (b) the way in which school sport is structured can affect the transmission of values and life skills; (c) coaches receive little training on teaching values and life skills and have difficulty providing tangible examples of activities they use to do so; and (d) recruiting coaches is a significant problem.

Research Methods
In phase 1, interviews were conducted with school principals (n=13), coaches (n=50), student-athletes (n=20) and parents (n=20). In phase 2, a questionnaire was administered online to survey and gather the views of over 1,100 school sport actors in Quebec (administrators, coaches, student-athletes and parents).

Research Results
All school sport actors (administrators, coaches, parents and student-athletes) believe that this type of sport is beneficial but agree that there is room for improvement. Administrators report perceiving the greatest gap between the ideal situation and what the situation actually is. When we compare the sport structure in Quebec (where student-athletes practise one sport year-round) to that in Ontario (where student-athletes can practise several sports because the season lasts only a few months) we note significant differences in terms of who does the coaching (teachers, parents, student-athletes) and, consequently, the expected effect of sports practice on the transmission of values and life skills. Parents play a supportive role (financial, logistical and psychological), but this role becomes less important in the student-athlete's last year of high school. Interviews with student-athletes revealed that because of the way they are structured, certain sports provide more opportunities for developing values and life skills than other sports. In addition, the opportunity to negotiate their specific sports activities with their coaches and parents may be an important factor to the global development of student-athletes through school sport. In this study, data was collected through interviews and a questionnaire, which provided the views of the various actors on school sport. It would be useful to conduct field observation studies in this area.

Policy Implications

- Providing young Canadians with a positive sport experience in school will result in rising rates of sport participation and will help youth develop values and life skills. These two points have been previously raised in government reports.
- Sport Canada (2002; Canadian Sport Policy)
- There is a need to improve the place of sport and physical activity in schools and upgrade the training of coaches.
- Canadian Centre for Ethics in Sport (2003/2004; The Sport we Want)
- School sport functions independently from community sport and the two could be much more closely linked for the benefit of participants and the community.

Next Steps

Although sport can provide opportunities supporting the overall development of children and adolescents, we must maintain realistic expectations regarding the potential of school sport to impart values and life skills. The data indicates that a shortage of coaches leads administrators to rely increasingly on parents or students finishing high school, who often have no coaching training and are probably poorly qualified to use sport as a basis to teach values or life skills. Our initial reaction could be wanting to develop a training program specifically designed for schools but how would coaches respond? How many hours of training would be required to train a coach to teach values and life skills? Could we ask volunteer school sport coaches to put in even more hours? In addition, a strategy focusing solely on coaches would not be adequate because to ensure that school sport can contribute to the overall development of children and adolescents, coaches need the support of administrators, parents and players.

Key Stakeholders and Benefits

- Organizations Responsible for School Sport:
- Canadian School Sport Federation (CSSF)
- Ontario Federation of School Athletic Associations (OFSAA)
- Fédération Québécoise du Sport Étudiant [Quebec student sports federation] (FQSE)
- Coaching Association of Canada (CAC)

TRUSSEL, DAWN
University of Waterloo
Doctoral Stipend 2007

Organized Youth Sport, Parenthood Ideologies and Gender Relations: Parents' and Children's Experiences and the Construction of "Team Family"

Project Summary

This study sought to understand how family relationships, interactions, and values are shaped by children's sport involvement, and the social and cultural context in which their sport participation occurs. The themes that emerged from this study reflect the contradictory nature of organized youth sport, including the strengthening of familial relationships, as well as the tensions and disagreements arising out of divergent perspectives. Emphasis is put on the public nature of parenting in the youth sport context and its relationship to social constructions of being a "good parent". In terms of broader implications, the study emphasizes the close connection between organized youth sport, and changing cultural ideals and practices associated with gender and parenting.

Research Methods

Semi-structured interviews and on-line participant journals (10 days duration) were used to discover divergent experiences of mothers, fathers, and children. Individual semi-structured interviews occurred in the family home. Informal observations and conversations were also recorded while spending time with family members sharing meals and at other informal family gatherings. A purposive sample of seven families (19 children, 7 mothers, and 6 fathers) participated in the study. Data analysis was guided by a constructivist grounded theory approach to facilitate understanding of participants' perceptions and meanings of youth sport participation.

Research Results

Data analysis revealed three major themes: "Understanding Children's Experiences", "Parenting in Public and Private Spaces", and the "Nexus of Family Experiences". From these themes, a core theme emerged reflecting the idea of "Upholding Team Family".

"Understanding Children's Experiences" revealed the intensity of the children's activities and how it had become a way of life for many of them. Children clearly enjoyed the "fun" and social aspects of organized youth sport, and also understood the socio-cultural importance of their participation as it related to living a healthy and active lifestyle. Children's participation in organized youth sport also had implications for their relationships with their siblings in ways that both strengthened and caused considerable tension. For some children, organized youth sport gave them common interests, regardless of their age or gender that appeared to provide a sense of unity. Yet, for other children, living with a "star athlete", particularly when the "star athlete" was younger, created feelings of tension and inadequacy for the older sibling and a desire to drop out of sport.

The second major theme "Parenting in Public and Private Spaces" revealed the parents' perspectives on the high cost of youth sport for the family unit (emotional, physical, and financial cost). Yet, organized youth sport was believed to be a highly valued activity. The provision of such opportunities was characterized as a necessary characteristic of being a "good parent". The parents' own beliefs were then used to evaluate other parents (in the community, their spouse, and the grandparents) and their moral worth as a good parent. Observations of the other parents' behaviour in the community, and their level of involvement/support for their children's activities, as well as their behaviour at games, provided the basis for their judgment. Further, parents also expressed a sense of obligation to the sport organizations related to their volunteer responsibilities. The organizational politics were revealed to create heightened tension and frustration within the family unit. The parents' volunteer responsibilities were also seen to shape the parent-child relationship (both strengthen and weaken). The gendered nature of the parents' organizational responsibilities (fathers in highly visible roles, and mothers in hidden periphery roles) and the mothers' primary responsibility for the coordination of their children's activities was also evident.

"The Nexus of Family Experiences" illustrated the intersections of the children's and parents' perspectives. In particular, this theme revealed the complexity of the decision-making processes. On the surface it appeared that the children made their own decisions, but underlying this discourse was a sense of the subtle and not so subtle pressures exerted by the parents. At times, the children were coaxed in a particular direction and this was shaped by parental pressure related to family resources (e.g., time, money), parents' preferences for specific sports, and parents' notion of commitment and "sticking it out". Moreover, underlying pressures by family members, other children, and broader society, as they related to cultural values of gender-appropriate activities, shaped the children's decisions for their sport involvement.

From these three major themes, a core theme emerged reflecting the idea of "Upholding Team Family". Throughout the three major themes, there was an overall sense of organized sport creating a shared family identity and sense of belonging, and at the same time, the significant sacrifices to family life that were made in the creation of this identity. Moreover, the sense of upholding team family was revealed in both the public and private spheres of family life.

Policy Implications

Through education and awareness to youth sport organizations and parents, promote aspects that encourage positive experiences for parents and children:

Recognition of mandate of youth sport program and appropriate level of intensity. Many parents talk about the long and intense seasons that were often perceived as too much for the recreational level. Thus, families make the decision to limit the number of sport opportunities rather than supporting multi-sport/seasons, and/or drop out of the sport program altogether. Also, significant strain to family life is evident with the numerous "extras" (i.e., tournaments) that require additional financial resources and time commitments.

Recognition of the high time commitment of volunteers who are often parents of children on the team. This commitment shapes the nature of the parent-child relationship with their other children (often perceived negatively). It also heightens the parents' exhaustion and fatigue, and consequently, is a strain on continuing to support children's active participation. Consider alternate models such as "job sharing" to help minimize the time commitment as well as provide parents with the opportunity to spend time with their other children and family members.

Educate parents on how youth sport participation can shape sibling relationships. Some children may need to be supported in different programs/activities from their siblings to enhance feelings of being proficient and skilled, rather than live in the shadow of their athletically talented sibling (which for some increases their desire to drop-out).

Recognition by sport programs that youth sport becomes a venue where the quality of parenting may be judged by other parents. Development of support programs (e.g., formal car pooling schedules) to support families with diverse employment contexts (i.e., shift work, evening/weekend jobs, low-income) that constrain parents' ability to support their children's sport participation.

Next Steps

The present study was limited to the experiences of selected families. Clearly it will be important in future research to capture the experiences and meanings of other families. For example, the families who participated in this study were a fairly homogenous group with two heterosexual parents who were married (with no indication of being a "second-marriage"), and Caucasian. Families from diverse family forms such as co-habiting or gay or lesbian families may reveal diverse perspectives. Blended and single-parent families may also have different experiences related to time pressures and conflicting familial demands. Families from different race and ethnic groups may also attach different meanings to family life and organized youth sport. Further, many of the participants in this present study expressed a clear pro-sport ideology, and this may affect the applicability or transferability of the findings to other families who do not have similar pro-sport values and beliefs.

Key Stakeholders and Benefits

Grass-root community sport organizations such as "True Sport" and other federal/provincial governing minor sport organizations, may benefit from understanding how organized youth sport shapes family life, and consequently, the type and frequency of children's participation.

ULVICK, JOCELYN D.
University of Saskatchewan
K, Spink
Doctoral Stipend

The relationship between team cohesion and youth sport participation

Project Summary

The first objective was to examine the relationship between task and social cohesion, and three participation-related outcomes (self-reported effort, practice attendance, and intention to return to the team the following season).

Results indicated that cohesiveness around the team's task was positively related to effort and intention to the return, but not to practice attendance. Cohesiveness around the social elements of the team was only related to players' self-reported effort.

The second objective was to examine whether players' perceptions about their teammates' effort would qualify the relationship between task cohesion and individual effort.

Results indicated that, although cohesion was positively associated with effort for all athletes, this relationship was strongest when athletes perceived that their team had a high norm for effort (i.e., a greater percentage of players were identified by players as working as hard as they could). These findings suggest that team norms surrounding how hard team members are working may be an important consideration insofar as the extent to which team cohesion has the potential to enhance individual participation.

The third objective was to explore the role of social support in the task cohesion-participation relationship. Specifically, this study examined whether perceptions of teammate support (e.g., being available in times of need, sharing common interests, and feeling recognized and encouraged) could be a plausible explanation for why perceptions of early-season team cohesion may positively influence individual participation.

Results indicated that perceptions of teammate support were positively associated with both cohesion and individual participation (effort and intention to return). These findings provide an initial suggestion that it may be worth considering social support as a variable that might help explain the relationship (i.e., mediator) between a team variable such as cohesion and subsequent measures of player engagement in future experimental research.

Research methods

Participants completed a pen-and-paper questionnaire at two time points during their soccer season. The first time point occurred during the first two weeks of the season. The second time point occurred within the last week of the season. These questionnaires were administered during a scheduled team practice by the student researcher.

Research results

Team cohesion is related to several different participation outcomes in youth sport, including self-reported effort levels and intention to return to the team in the future.

This relationship was most pronounced on teams where more players were perceived to be working hard (i.e., high norms for effort).

Social support from teammates was related to players' perceptions of their teams' cohesiveness, as well as their own self-reported effort and intention to return.

Limitations:

These studies were conducted using non-experimental research designs. In order to determine whether perceptions of team cohesion can "influence" participation-related behaviours, the relationships reported here need to be tested using an experimental design.

As well, this series of studies was conducted with a small sample of ten youth soccer teams from a mid-sized Canadian city. Although there was a cross-section of competitive levels (recreational through competitive), findings from this research may be limited to youth soccer players in an urban setting. Considering that the majority of the sample (72.4%) was female, it also may be that these results pertain more to adolescent females (although no specific gender differences were found).

Policy implications

To date, the majority of the research on youth sport participation has focused on intrapersonal variables (e.g., motives, competence, etc.). This research considered how interpersonal variables, such as the nature of the peer relationships within the team setting (e.g., cohesion, norms, social support), may relate to sport involvement.

Research findings provide initial evidence that team cohesiveness, and concomitant factors such as team norms and teammate support, are important in how hard players work and whether they intend to come back to the team. With that, sport programmers and team coaches may wish to consider how principles of team building for cohesion could encourage improved player involvement with the team (Carron, Spink, & Prapavessis, 1997).

Next steps

This research represents initial work in understanding the relationship between team cohesion and individual sport participation in adolescents. In addition to the need to replicate the current findings with other youth samples, an important next step involves testing the relationships that emerged via experimental study designs. Specifically, it would be informative to examine how interventions aimed at enhancing team cohesion (i.e., team building) may affect various participation outcomes.

Key stakeholders and benefits

These preliminary findings may be interesting for researchers, coaches, and even parents. However, although these results point to the potential value of team cohesion in enhancing participation, more research is

needed to establish cause-effect relationships before specific guidelines are developed for promoting team cohesiveness in the youth sport setting.

Organizations that may be interested in these findings include:
- Local/provincial/national single or multi-sport bodies
- Physical education/school sport organizations, such as PHE Canada
- Coaching organizations, such as the Coaching Association of Canada (CAC)

WATTIE, NICK
York University
Doctorate 2008

Relative Age, Recreation Sport Participation and Youth Development

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Project Summary

In both youth sport and education, children and adolescents are grouped into cohorts by using annual age grouping policies, whereby a child must be a certain age by a specified selection date (e.g., December 31st). Relative age describes the fact that children born early in their cohort/selection year (e.g., January) will be *relatively older* - by up to 12 months - than their peers that are born late in the selection year (e.g., December). Research has shown that relatively older youth may be more likely to be selected to youth sport teams, including school sports teams, and also more likely to make it to elite/professional levels of play in some sports (i.e., soccer and hockey).

The purposes of the current project were:

- To gain a better understanding of the different factors that might affect whether or not relative age influences recreational youth sport participation among boys and girls. The current project considered the quality (low vs. high) of youths' school environment.
- To explore how sport participation and relative age interact to influence indicators of positive development (i.e., self-perceptions of academic competence, social acceptance, physical appearance, behavioural conduct and global self-worth).

Relative age was only an influence on sport participation among boys in a school with a low quality rating, with relatively older boys more likely to participate. Relatively older boys also reported higher levels of enjoyment of sport and physical education. Relative age was not related to participation or enjoyment among girls in a *lower-rated* school or a school with high quality rating. And relative age was not related to participation among boys in a *higher-rated* school. Interestingly, sport participation was only related to indicators of positive youth development among boys in the *higher-rated* school, where relative age had no influence on participation.

Research Methods

Participants were purposefully sampled from two different schools in the United Kingdom. The first sample was drawn from a school which had been given the <u>lowest</u> possible quality rating (i.e., Inadequate) by government inspection procedures. Youth were 11 to 14 years of age (mean±: 12.9, ± 0.86), and the sample size was 391 (46.3% female). The second sample was drawn from a school which had been given the <u>highest</u> possible quality rating (i.e., Outstanding). Youth were 11 to 12 years of age (mean±: 11.70, ±0.29), and the total sample size was 206 (48.1% female). Participants completed questionnaires that asked them to describe their participation in sport(s), how much they enjoyed sport, and indicators of positive youth development (i.e., self-perceptions of academic competence, social acceptance, physical appearance, behavioural conduct, and global self-worth). Demographic and school-related variables were also collected from the schools.

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Research Results

Among those in the *Inadequate-rated* school relatively older boys were more likely to be participating in sport(s). Relatively older boys, regardless of whether they participated in sport, also reported higher levels of enjoyment for both sport and physical education (PE) classes. Relative age did not influence sport participation or enjoyment of sport and/or PE among girls. Overall, approximately 32% of youth from this school participated in sport(s). Relative age and/or sport participation did not have an influence on boys or girls self-perceptions.

Relative age had no influence on sport participation among either boys or girls in the *Outstanding-rated* school. Overall, 76% of youth in this school regularly participated in sport, making youth in this school approximately 7 times (OR: 6.98, 95% CI: 4.75-10.26) more likely to participate in sport compared to youth in the *Inadequate-rated school*. Boys, and to a lesser extent girls, who participated in sport(s) had higher self-perceptions (i.e., perceptions of academic competence, social acceptance, physical appearance, and global self-worth) compared to those than didn't participate

Generalizations based on this project should be tempered by the fact that only two schools were sampled, and significant variation between schools may exist. Similarly, this project is only one of the few that has explored relative age among recreational participants and females; as such more research is needed in these areas. Furthermore, future research will need to consider the influence of specific sports on the trends reported in the current project.

Policy Implications

The results of the current project suggest that addressing the influence of relative on sport participation, at least at the recreational level, may not require making modifications to selections dates or annual age grouping policies. Solutions may need to consider wider social trends (such as inequalities in the distribution of resources), and broader non-sport characteristics (such as school environment). Furthermore, any policies aimed at addressing the influences of relative age may need to be gender-specific (since relative age had a more salient influence among boys). In summary, just looking at relative age alone does not provide a "whole picture" of the factors that influence sport participation.

Next Steps

The findings of the current study suggest several possible directions for future research. In particular, the current project suggests that by only looking at relative age alone important nuances and trends may missed. Therefore, for a complete understanding of how relative age influences sport participation and outcomes related to sport participation, future research will need to consider relative age alongside the many other factors that have been shown to influence sport participation. This "whole picture" may involve including socioeconomic status, ethnicity, family size, overall age as well as characteristics of specific sports in future relative age research projects.

Key Stakeholders and Benefits

The influence of relative age on sport participation would be of interest to policy makers, parents and coaches involved in both recreational and competitive youth sport. However, the results of the current project may

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also be of interest to those within the education sector. Dialogues between those in the sport and education sectors may be necessary to address the complexities of relative age's influence on sport participation.

WEIR, PATTI
University of Windsor
S. Horton, J. Baker
Standard Research Grant 2010

The relationship between sport, physical activity, and social engagement: A profile of Canadian seniors

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Project Summary

Models of successful aging (SA) encourage a continued engagement with life, which research literature refers to as a diverse set of activities including productive (e.g., housework), social (e.g., visiting friends), passive (e.g., reading), and active leisure (e.g., playing a sport) pursuits. It is widely accepted that engaging in life promotes a more meaningful and healthy aging process. However, despite the wide range of published literature, very little is known about the role of active leisure/physical activity in the maintenance of engagement, and thus successful aging. Similarly, literature remains sparse regarding the patterns of change that exist among engagement profiles throughout the decades of older adulthood. Therefore, the current research project develops our understanding of these concepts by examining the relationships between engagement and functional health, and by exploring "how" and "why" engagement patterns change during older adulthood.

Research methods

In Part 1 of this research project, 287 English speaking older adults (age range: 55-90 years; M age: 68.7 ± 8.09 years; males, n = 110; females, n = 177) participated. Participants completed a questionnaire that surveyed: a) how often they participated in productive (e.g., cooking), social (e.g., visiting with friends), passive (e.g., reading), and active leisure (e.g., walking for fitness) activities over a seven-day recall period (0, 1-3, 4-6, or 7 times), b) their level of physical function ("have no difficulty" to "not able to do") on a series of seven tasks (e.g., walk 0.8 km, climb a flight of stairs without resting, lift or carry a weight over 4.54 kg etc.), and c) their level of cognitive function on four tasks (e.g., find the right word when talking, remember where you put something, etc.). Two measures of frequency were quantified. First, within each category of engagement the percentage of activities participated in was calculated. Second, each of the 29 activities was grouped into either a high, moderate, or low activity frequency category based on the coefficient of variation calculated across all participants. Hierarchical regression was used to assess the impact of frequency of participation on physical and cognitive function.

Part 2 of this research project included 54 community dwelling older adults (age range = 65-97 years; M age: 79.17 years; 21 males) separated by decade of life (65-74 years: n = 21; 75-84 years: n = 21; 85+ years = 12). All participants completed two questionnaires in order to quantify 'past' and 'present' engagement in 30 engagement activities (e.g., reading) through the use of a four point Likert scale (1 – *never* to 4 – *often).* Differences in activity participation by decade of life and across a five-year time frame were determined through a series of mixed design ANOVAs. To determine 'why' engagement changed during older adulthood, (6) focus groups and (16) semi-structured interviews were completed with a subsample (n = 42) of participants from each decade of life (65-74 years: n = 17; 75-84 years: n = 17; 85+ years = 8). Textual data was

inductively analyzed allowing for the emergence of themes through the constant comparison of participant quotes.

Research results
Part 1
- The engagement category with the highest percentage of activities participated in was social, and the engagement category with the lowest percentage of activities participated in was active-leisure
- Despite the low participation, active-leisure activities were the only significant predictor of improved physical function
- The high frequency activities were comprised primarily of passive-leisure, productive, and active-leisure activities (e.g., computer use, gardening/light housework, walking for fitness)
- Participation in high frequency activities predicted improved physical and cognitive function

These findings suggest that accounting for the frequency of participation is important in establishing a relationship between different types of engagement and function. They also highlight that high levels of participation in a wide variety of activities over the course of the week is important for maintaining and improving function. Looking at engagement in terms of frequency adds to the literature by showing that the specific activity might not be important, rather the overall frequency of participation.

Part 2
- Participation in specific productive activities (volunteer work, care for others, employment, home repairs, and heavy housework), as well as overall participation in active-leisure activities, decreased over a five-year time frame in older adulthood
- Participation in social and passive-leisure activities was maintained throughout older adulthood
- Engagement profiles during older adulthood reflected: (1) the individual's health and physical functioning, (2) the death of one's spouse/social contacts, (3) a sense of freedom associated with older age, (4) one's desire to participate, and (5) external factors such as family role, finances, and the availability of direct support

These findings contribute to the literature, as limited knowledge currently exists pertaining to the time-use patterns of older adults. It is suggested that decreases in productive and active-leisure activities may result from factors such as decreased health or conflicting external circumstances, while the maintenance of social and passive-leisure activities may be a function of one's desire and freedom to participate in one's activities of choice. Taken together, exploring activity patterns during older adulthood provides a further understanding of the role 'engagement' plays in the overall process of successful aging.

Policy implications
These findings highlight the importance of community organizations offering a wide variety of programming and engagement options for older adults as a greater frequency of participation in *any* activity may surpass the benefit of participation in a *specific* activity. Therefore, if a range of activities is available, older adults may increase the frequency in which they engage in activity, as they can utilize their freedom of time and choice to participate in an activity in which they desire, and are physically capable of completing. However, it remains important that community organizations create opportunities for active-leisure participation in older adulthood as such engagement contributes to the maintenance of physical functioning and is highly valued by

older adults. As such, it is suggested to collaborate with older adults to identify active-leisure activities that may garner continued participation. For example, by capitalizing on the maintained social engagement profile of older adults (as identified in 'Part 2' of this research study), community organizations are suggested to target pre-existing social groups as a means to foster the desire to participate in active-leisure pursuits (i.e., a walking group).

Next steps

Through an understanding of the patterns of engagement profiles during older adulthood, as well as the importance of overall activity frequency, especially in active-leisure pursuits, this research project has set the foundation for the development of a community intervention framework focused on providing opportunities for active-leisure participation within community neighborhoods. Interventions will seek to capitalize on the value older adults place on maintaining social engagement, by providing opportunities to pre-existing social groups to participate in active-leisure activities (i.e., urban pole walking). In addition, future work will seek to identify active-leisure preferences among older adults and make such options available in community neighborhoods. Identifying such preferences is of importance as this research project provided evidence that older adults will use their resources (i.e., time) to participate in activities in which they desire. Thus, future interventions must focus on offering desirable active-leisure activities in order to encourage older adults to maintain their past level of engagement in such health-promoting activities.

Key stakeholders and benefits
- Provincial Ministries of Health Promotion, Sport and Physical Activity
- Health Canada
- Sport Canada
- Provincial and National Associations for Aging and Gerontology
- Municipal bodies responsible for health promotion, sport, and physical activity

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Prospective Examination of Special Olympics Sport Retention in Ontario

The overall goal of the current research is to understand the factors that lead to sport participation for Canadian youth with intellectual disabilities (ID). We examined sport participation of youth with ID in the largest Multisport Service Organization for individuals with ID in Canada: Special Olympics (SO). More specifically, this project aimed to (1) determine the characteristics that are predictive of involvement in SO, and (2) identify the characteristics that are predictive of retention in SO over time. We originally surveyed 498 parents of SO athletes in 2012, and then examined who was registered as an active athlete in 2015. We compared athletes who were active in 2015 to those who were not active in 2015 in their 2012 survey information, including demographic and clinical characteristics, sport involvement, access to resources, experiences in sport. Athletes who did not remain active had lower levels of positive sport experiences and coach-athlete relationship scores, and less access to resources to enable their participation in sport. They did not differ with respect to clinical characteristics, level of ability, demographics, or social and community participation outside of SO.

Research methods

We invited all parents of athletes registered in Special Olympics (SO) in 2012 to participate in a survey. Youth 11 to 21 years of age and their parents were recruited from SO Ontario, which has the greatest active youth programming in the country (with 16,000 registered athletes overall). We will target youth across Ontario (rural, suburban, and urban areas). The broad age range is purposeful, as it has been identified as the greatest growth area for SO, and consequently for understanding youth sport participation more generally. Inclusion criteria for youth consist of having a diagnosis of an ID by a registered health professional (Psychologist, Physician). We collected in 2012: Demographic Variables and Involvement in Sport, Adaptive Behaviour, Mental Health, and Parent Support of Physical Activity. We then examined which of these athletes remained registered in SO in 2015, and compared those who were registered from those who were not, in terms of the information collected in 2012. We obtained some initial information from 498 athletes in 2012, and after screening to ensure the presence of an intellectual disability, being registered in community programs (rather than only a school program), and having sufficient information to ensure the potential for a match between 2012 and later registration lists, we obtained a final sample of 345 athletes.

Research results

Approximately 10% of 2012 athletes were no longer registered in 2015 (inactive athletes). In terms of 2012 variables, inactive athletes were less likely to have participated in non-sport Special Olympics events, such as parties or dinners, and participated less frequently in sport than athletes who remained registered. Inactive athletes also had lower ratings on friendship quality in SO, on overall positive experiences in sport, and on the athlete-coach relationship, and less access to environmental supports to participate in SO, than athletes who remained registered. There was no difference in athlete clinical characteristics, such as their diagnoses,

adaptive or maladaptive behaviour, or mental health. There was also no difference in demographics (e.g. age, gender, location) or in the degree of parental support for sport participation. These results support that retention in sport is related to proximal and sport specific factors, rather than broader youth or family characteristics.

There are a number of limitations to these findings. We relied solely on parent report, and it would be important and informative to incorporate athlete perspectives. Research examining the level and frequency of sport participation often focuses on high levels of involvement in one particular sport (i.e., sport specialization), whereas this study examined high levels of involvement across all SO sports. A focus on sport specialization among athletes in SO is an important area to investigate further as the outcomes may differ. Future studies could also explore how the type of sport (e.g., team sport versus individual) and level of competition influence outcomes. While longitudinal, 2012 was not a baseline year for athletes – they may have differed in other variables prior to 2012.

Policy implications

This research can have significant social impact for individuals with intellectual disability in Canada. Special Olympics and other sport organizations that aim to improve retention of their athletes with cognitive impairments can aim to make programming improvements to target the variables that we identify as predictive of sport involvement and retention in this population: Refining access to resources for participation, sport experiences, and coach training. Given the global reach of SO, this may also support international sport participation.

Next steps

Our data was based solely on parent report, and results may differ if athlete experiences were collected from athletes themselves. This is a particular challenge with this population, as many individuals with intellectual disability struggle to participate in structured interviews or completing questionnaires developed for individuals without cognitive impairments. Qualitative methods may be better suited to elucidate this information. We also focused on athletes 11-21 years of age, and understanding what predicts retention in younger athletes can further speak to early retention efforts.

Key stakeholders and benefits

- Special Olympics Canada
- Special Olympics International

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Lifespan Analyses of Social Influence on the Sport Commitment and Participation of Masters Athletes

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Project Summary

This research aimed to identify the nature of various social influences determining increased commitment to continue sport involvement among middle-aged and older sport participants. Research was conducted among samples from international-, national-, and regional-level masters sport (> 35 yrs old) events, as well as from Senior Games (55+ yrs) events. First, results showed that the influence of significant others was related to higher levels of voluntary (functional) sport commitment among masters athletes (MAs), which is important because voluntary commitment typically encourages continued participation. Some evidence showed that the influence of significant others on functional commitment depended on age status. For example, younger MAs (40 yrs old) reported more functional resolve to continue sport when perceived expectations and pressures from others declined, whereas older MAs (early 60s) increased their desire to continue sport as expectations from significant others rose. Second, results showed that both positive social influence (support) and negative social influence (expectations/pressure) were important to consider in ensuring that participants continued in sport, without feeling highly obligated to do so. For example, when international-level MAs reported increases in perceived social support over the course of a year, their feelings of obligatory commitment correspondingly decreased, which is important because high feelings of obligation do not typically foster continued involvement. Third, for subsets of MAs that reported a broad social network around them, the four most important agents for influencing sport commitment were one's spouse (or significant other), own children, training partners, and one's health professional. Masters athletes' obligatory commitment levels were predicted by perceived pressure from one's spouse and from training partners, such as the anticipated disapproval from these agents should they quit their sport. Endorsement of sport participation from one's physician, on the other hand, was associated with lower obligatory commitment. Pressure from one's children to continue in sport was a salient perception explaining both obligatory and functional commitment. Fourth, descriptive data revealed that not all MAs have a broad social network surrounding them (e.g., > 20 % report no children or spouse), and it may be possible that a different set of social agents may be influential for these athletes. Fifth, some small gender differences were observed, with males typically reporting stronger obligations to have to continue their sport involvement, with males' obligatory commitment levels being more strongly tempered by social support, and males' obligatory commitment levels being more strongly related to social pressures.

A secondary objective was to examine the influence of individual factors on sport commitment, in order to more fully understand what facilitates continued commitment, above and beyond social influences. In both longitudinal and cross-sectional samples, functional commitment was most strongly predicted by the degree to which participants reported enjoying the sport experience. Additionally, longitudinal results for international-level masters demonstrated that increased perceptions of having invested personal resources in sport predicted increased functional commitment, especially among older cohorts (> 60 yrs). When athletes increasingly anticipated having enjoyable experiences and special occasions as a result of future sport

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involvement (i.e., involvement opportunities), then their voluntary commitment also rose, especially among younger masters (40 yrs). Results indicated that involvement opportunities relating to mastery of personal skills, improvement of health and fitness, travel through sport, achieving competitive goals, delaying effects of aging, and social reasons, were important. Findings were replicated for the most part in cross-sectional analyses for regional-level masters and Senior Games athletes. Gender effects indicated that females' functional commitment was more strongly predicted by personal investment.

Research Methods
Cross-sectional and longitudinal (panel design) self-report survey methods involving reliable and valid instruments relating to the Sport Commitment Model were distributed on-site or via an on-line platform to participants from masters sport events and clubs, and Senior Games events.

Research Results
Current MAs and Senior Games participants report much higher levels for functional (voluntary) commitment than they do for obligatory commitment. Thus, on the whole, they are doing sport because they want to and have freely chosen it. Still, many participants report concurrent, yet lower levels of obligatory commitment, which may be problematic because obligation does not necessarily facilitate continued involvement and may be related to drop-out.

Perceived social support was positively associated with the types of commitment that sustain sport involvement, and perceived social pressures determined the types of commitment that possibly result in drop-out or discontinuance.

Individual factors related to enjoyable experiences, prior investments in sport, and perceptions of diverse beneficial involvement opportunities unique to masters sport, each determined the types of commitment that facilitate continued sport participation. Perceptions of enjoyable experiences are particularly important at all life stages, perceptions of prior personal investments are increasingly important at older ages (> 60 yrs) and more so among females than males, and perceived involvement opportunities have the strongest effects on commitment under the age of 60.
Social support interventions should focus on the social agents that appear most influential for increasing commitment. Based on the present findings, MAs (who report a broad social network) would benefit from interventions that focus on spouse, children, training mates, and health practitioners.

Limitations of results/conclusions:
Additional analyses need to link each of the types of commitment to the frequency, intensity, and seasonal nature of MAs' involvement, and to determine the impact of across several consecutive seasons.

Results pertain to already active sport participants, thus, findings are more likely to inform interventions to retain individuals; applying findings towards the recruitment of new individuals to masters sport would require confirmation with different samples.

Policy Implications
Relevance of research to enhancing sport participation in Canada:

- Strategies to increase participation should focus on elevating functional commitment, while alleviating conditions that cause obligation. Education and sport curriculum guides for MAs, their significant others, coaches or programmers might illustrate examples of ways to facilitate conditions for functional commitment.
- Sport programming interventions might consider means to reduce pressures from, and/or encourage support and the sharing of supportive resources from spouse, children, and training mates, and find means to heighten support from health practitioners.
- Informational strategies to promote lifelong sport should enunciate the enjoyment of present participation, but also highlight the diverse involvement opportunities that have been reported by MAs. Opportunities that should be advertised as part of the masters sport 'brand' include: competitive achievement and personal challenge, skill learning and mastery, health and fitness, social motives, travel through sport, and deferral of aging effects. These involvement opportunities should inform activity programming. Without discounting its important, our findings suggest that prior literature has possibly overestimated the opportunity for social affiliation, while failing to acknowledge the attractive opportunities that MAs see in competition and testing one's skills. The aforementioned opportunities should perhaps be celebrated as being more diverse than opportunities afforded by other alternative leisure pursuits for middle-aged and older individuals. It may also be important that these opportunities be advertised as applying to an entire community of masters participants, to counter the risk that many in society see the masters sport experience as relating only to the exceptional few (i.e., the super age-group athletes) featured in popular media. Interventions that advertise anticipated benefits unique to sport participation should be important at all life stages, though our research suggests that their effects may be greatest for participants < 60 yrs. Finally, strategies to retain active participants (especially females, and those > 60 yrs) might focus on having individuals reflect on the amount of time, energy, and effort that they have already invested in sport.

Next Steps
One research question may be to identify the individual and social conditions that attract new people to masters sport. Newcomers may be 're-engagers', people who formerly did sport in youth but then disengaged, 'transfers' from one sport to another, or 'first-timers' who are engaging in sport for the first time as an adult, and the conditions for adopting sport activity may vary among these groups.

Key Stakeholders and Benefits
Findings may inform sport programmers/organizations who seek to strategically tailor activities and resources to the personal and social motives of MAs, with the goal of building a critical mass of lifelong sport participants, in a system that sufficiently sustains participants' involvement such that they may benefit from sport over the long-term.