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Julie Beaulac
AUTEUR DE LA THÈSE / AUTHOR OF THESIS

Ph.D. (Clinical Psychology)
GRADE / DEGREE

School of Psychology
FACULTÉ, ÉCOLE, DÉPARTEMENT / FACULTY, SCHOOL, DEPARTMENT

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

TITRE DE LA THÈSE / TITLE OF THESIS

Elizabeth Kristjansson
DIRECTEUR (DIRECTRICE) DE LA THÈSE / THESIS SUPERVISOR

CO-DIRECTEUR (CO-DIRECTRICE) DE LA THÈSE / THESIS CO-SUPERVISOR

EXAMINATEURS (EXAMINATRICES) DE LA THÈSE / THESIS EXAMINERS

Robert Flynn

Denise Spitzer

Michelle Fortier

Richard Walsh-Bowers

Gary W. Slater
Le Doyen de la Faculté des études supérieures et postdoctorales / Dean of the Faculty of Graduate and Postdoctoral Studies

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

Julie Beaulac

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ABSTRACT

Young people from low socio-economic, minority, and other disadvantaged groups tend to be less physically active and to have poorer health. With this in mind, a community-academic partnership was formed to respond to the need for more physical activity programming targeting disadvantaged young people. The purpose of this thesis was to investigate the implementation and perceived impact of a new hip-hop dance program on the psychological, social, and physical well-being of youth aged 11 to 16 years living in a multicultural, disadvantaged community in Ottawa. In total, two studies were conducted. The first paper responds to the first project objective, which sought to better understand the needs, barriers, and facilitators to youth participation in physical activity in order to conceptualize the new program. Three focus groups were conducted with young people and parents from the target community. Findings suggested a need for more physical activity programming that was safe, accessible, age-appropriate, and culturally relevant. Hip-hop dance was reported as an appealing program option and thus, girls-only and co-ed formats of the program were implemented across two separate 3-month sessions, with funding from United Way Ottawa. The second and third objectives related to the evaluation of the new program, which involved a non-experimental pretest-posttest design from the perspective of the youth participant, parent, and program staff. Mixed methods were used, including document review, interview, focus group, observation, and questionnaire format. The second paper reviews the implementation of this new program. Overall, the consistency and quality of program implementation were moderately satisfactory; however, important concerns were noted, and the findings suggested that this program was only partially delivered as planned. Finally, the third paper reviews the success of the program. Quantitatively, there was a significant improvement in perceived hip-hop dance skills. The qualitative findings were more promising, showing positive perceived impacts across eight areas of well-being. Overall, the findings suggested that this intervention is a promising and relevant program for the promotion of youth psychological, social, and physical well-being, particularly if implementation concerns are addressed. Implications for the promotion of physical activity among this population and future research are reviewed.

CONTENTS

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INTRODUCTION

Most countries have seen a significant increase in life expectancy; however, this increase reflects only averages. Around the world, people of higher socio-economic status (SES) and more privileged groups live longer and healthier lives than those of lower SES and less privileged status within the same population (Abernathy, Webster, & Vermeulen, 2002; Evans, Whitehead, Diderichsen, Bhuiya, & Wirth, 2001; Goodman, 1999). Moreover, well-being and longevity lie along a social gradient, increasing with every upward step on the socio-economic ladder (Shaw, Dorling, & Smith, 1999; Wilkinson, 1996; Marmot, 2005). This social gradient in health, also referred to as a health inequality or inequity, exists throughout the lifespan (Starfield, Riley, Witt, & Robertson, 2002) and is present for most diseases and conditions, regardless of the indicator of socio-economic position (Townson, 1999). For the purpose of this thesis, the term socio-economic inequalities in health will be used, defined as "differences, variations, and disparities in the health achievements of individuals and groups" according to social status (Kawachi, Subramanian, & Almeida-Filho, 2002, p. 647). Socio-economic inequalities are both an individual- and societal-level concern, as societies where larger socio-economic inequalities exist are associated with poorer well-being (Wilkinson, 1996). Until recently, these socio-economic inequalities in health have not received much research or policy attention (Mackenbach, 2003). However, there is increased recognition that efforts are needed to address the root causes of health inequalities, the social determinants of health (Starfield, Riley, Witt, & Robertson, 2002). Acting to increase physical activity is one means of promoting well-being and preventing illness and disease.

Physical Inactivity among Canadian Adolescents: A Major Public Health Concern

Physical inactivity, like health inequalities, is a significant individual and public health problem (Blair, LaMonte, & Nichaman, 2004). Physical activity can be defined as "any bodily movement produced by skeletal muscles that results in energy expenditure" (National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 1997). It is widely recognized that youth participation in physical activity promotes physical, psychological, and social well-being; however, less research has been conducted on the benefits of physical activity for young people as compared to adults (Paluska & Schwenk, 2000). The current evidence on benefits ranges from improved fitness, immune functioning, and self-confidence, to reduced stress, anxiety, and depression (Calfas & Taylor, 1994; McAuley, 1994; Scully, Kremer, Meade, Graham, Dudgeon, 1998; Task Force on Community Preventive Services, 2002). In addition, participation in physical activity during adolescence has also been linked to important social benefits, such as reduced rates of delinquency, substance abuse, and increased prosocial activities and educational progress (Eccles & Baber, 1999; Holland & Andre, 1987; Jones & Offord, 1989; Kahne et al., 2001; Youniss, Yates, & Su, 1997).

Despite the vast benefits of physical activity, the majority of Canadian adolescents are not physically active (Active Healthy Kids Canada 2007; Stone, McKenzie, Welk, & Booth, 1998). Moreover, evidence has shown a significant decline of 26% to 37% in physical activity during the period of adolescence (Aaron, Storti, Robertson, Kriska, LaPorte, 2002). These trends are cause for major concern as patterns of physical activity in youth are predictive of adult levels of physical activity (Biddle & Mutrie, 2001; Gordon-Larsen, Nelson, & Popkin, 2004; Stone et al., 1998). Adolescence is also a key time to

intervene as it is a period of increased stress and an important period of life in the formation of self-identity and the development of healthy long-term behaviours (Fardy et al., 2005). Moreover, adolescents spend about half of their waking hours engaged in leisure activities (Larson & Seepersad, 2003), and therefore, the opportunity exists to promote greater involvement in physically active leisure.

Female youth and youth from lower socio-economic and minority populations are less physically active as compared to male youth and youth from higher socio-economic populations (Active Healthy Kids Canada, 2007; Burton, Turrell, & Oldenburg, 2003; Craig & Cameron, 2004; Gauvin, 2003; Mo, Turner, Kreski, & Mo, 2005; Stone et al., 1998; Taylor, Baranowski, & Young, 1998). These youth are also at a higher risk for a variety of negative health and social outcomes, particularly for youth living in disadvantaged neighbourhoods (Crews, Lochbaum, & Landers, 2004; Gonzales, George, Fernandez, & Huerta, 2005; Grant, Behling, Gipson, & Ford, 2005).

A Social-Ecological Model of Physical Inactivity

In order to improve the health of all people and reduce health inequalities, our models of physical activity must address the complexity of health-related behaviours (Wilkinson, 1996). A social-ecological model accounts for this complexity, viewing behaviours as resulting from multiple levels of influence including, individual, interpersonal, organizational, community, and public policy influences (Dalton, Elias, & Wandersman, 2001; Krieger, 2001; McLeroy, Bibeau, Steckler, & Glanz, 1988). Individual-level factors are those that exist within a person, such as demographic, psychological, and behavioural characteristics. In contrast, environmental or contextual-factors are influences that exist outside of a person and range from influences within someone's immediate surroundings to

influences at the societal-level (King, Stokols, Talen, Brassington, & Killingsworth, 2002). Some important environmental factors related to physical activity are access to transportation, equipment, and affordable quality programming, in addition to neighbourhood safety concerns (Ewing, Seefeldt, & Brown, 1993; Klebanoff & Muramatsu, 2002; Quinn, 1999; The Canadian Council on Social Development, 2001). Evidence on factors related to physical inactivity can be helpful in understanding the discrepancy in physical activity rates among young people, and, therefore, can be useful in appropriately developing interventions to help reduce these differences.

A social-ecological approach to addressing physical inactivity among youth needs to address contextual factors in addition to individual-level influences (King et al., 2002). Evidence on factors related to physical inactivity supports this approach (Brodersen, Steptoe, Williamson, & Wardle, 2005). Another factor in support of a social ecological model, and the need to address environmental factors, is the trend for disadvantaged populations to have a poorer response to individual-level behaviour change interventions (Gauvin, 2003; Sallis & Owen, 1997). For example, health education is effective for people from higher income groups, but it is largely ineffective for people from lower-income groups (Gepkins & Gunning-Schepers, 1996). Moreover, interventions that address multiple levels of influence are associated with greater impact. Despite this evidence, health promotion and intervention efforts have generally neglected the role of the social and physical environment (Giles-Corti & Donovan, 2002; Schooler, 1995). More recently, the field has begun to shift in focus toward approaches that include environmentally-oriented health promotion strategies (Merzel & D'Afflitti, 2003; Stokols, 1996).

Interventions in community settings have the potential to address both individual and environmental barriers to physical activity among youth (Klebanoff & Muramatsu, 2002) and have the potential to play a particularly important role during adolescence as young people spend considerable time in community settings (Elder et al., 2007; Strong et al., 2005). Moreover, these interventions may address some of the root causes of physical inactivity, such as access to programs or resources (Pate et al., 2000), in particular, if a new program can be sustained within a community. The strategy of improving access to physical activity programs while at the same time targeting youth living in a disadvantaged community is congruent with a social-ecological model, and has potential to improve health and decrease the activity and health gaps among youth (Klebanoff & Muramatsu, 2002; Kristjansdottir & Vilhjalmsson, 2001; Lee, 2005).

Rationale for Thesis

Physical activity programs have demonstrated positive health and social benefits; however, fewer studies have been conducted among children and adolescents and research thus far has focused largely on physical health outcomes (Jago & Baranowski, 2004). Furthermore, most studies have been school-based interventions, while only a few have been conducted on community-based physical activity interventions for young people (Jago & Baranowski, 2004; Salmon, Booth, Phongsavan, Murphy, & Timperio, 2007; Stone et al., 1998) and fewer studies still have included disadvantaged youth (Taylor et al., 1998; Yancey et al., 2004). Research has begun to investigate physical activity among disadvantaged youth (e.g., Flores, 1995; Ransdell, Dratt, Kennedy, O'Neill, & DeVoe, 2001); however, the evidence for this population remains limited and inconclusive, in particular for psychological and social benefits (Marcus et al., 2006). In order to take meaningful action

on the problem of physical inactivity and its consequences, we need to know what will work in improving the well-being for all youth, and in particular, of those youth who are most in need.

A community-based hip-hop dance intervention was identified as a relevant physical activity program for the target community. The first reason was that this type of program fits the criterion of a structured voluntary activity (SVA), an activity that is organized by positive adult role models, that is intrinsically motivating, and requires significant effort over a period of time (Larson, 2000). A large proportion of adolescents' leisure time is typically spent engaged in unstructured voluntary activities (e.g., watching television, "hanging out" with friends). Although unstructured activities are important in their own right, youth participation in SVAs has been linked to particular benefits for positive youth development in that these activities foster the development of initiative (Larson, 2000; Larson & Seepersad, 2003; Verma & Larson, 2003). Another reason for the significance of SVAs is the preference Canadian adolescents, especially female adolescents, report for structured over unstructured physical activities, compared to younger children who enjoy both types of activities equally (Craig, Cameron, Russell, & Beaulieu, 2001).

A second reason in favour of a community-based hip-hop dance intervention is the fact that hip-hop dance is currently popular among young people. Hip-hop dance comes in many styles. Older styles commonly included breakdancing, while newer styles are typical of hip-hop displayed in the media and focus mostly on upright dancing (Chang, n.d.). Dance as an activity, and particularly hip-hop dance, appeals to young people across gender, ethnic, and other social and ethno-cultural lines (Grieser et al., 2006). This diverse appeal is important in promoting access to youth who tend to face greater constraints to participation

(The President's Council on Physical Fitness and Sports, 1997). Hip-hop dance does not require any special equipment or abilities. It is also a non-competitive form of dance that emphasizes freedom of individual expression, allowing youth to create movement that suits their own style. This point is important in that research has shown non-competitive types of physical activity to be more beneficial for adolescents, and more acceptable for female adolescents, than competitive forms of physical activity (Larson & Seepersad, 2003; Marsh & Peart, 1988; The President's Council on Physical Fitness and Sports, 1997; Yancey, Ory, & Davis, 2006). Hip-hop is also likely to be particularly appealing to female youth as dance has been reported as one of the preferred types of physical activity for female adolescents (Craig et al., 2001; Grieser et al., 2006; Yancey et al., 2006). The appeal that a hip-hop program will likely have for female adolescents is important given that female youth have the highest prevalence of physical inactivity. Hip-hop dance also fosters social involvement, which is a critical factor implicated in positive youth development programs (Anderson-Butcher, 2005; Anderson-Butcher, Cash, Saltzburg, Midle, & Pace, 2003). A final reason in support of hip-hop dance as a physical activity intervention is that research has demonstrated interventions with a hip-hop component to be an appealing and effective intervention for disadvantaged youth (Fitzgibbon, Stolley, Dyer, VanHorn, & KauferChristoffel, 2002; Flores, 1995). For these reasons, a hip-hop dance program is a particularly relevant activity for intervening with adolescents living in multicultural, disadvantaged urban communities (Anderson-Butcher, 2005).

Research Objectives and Questions

This thesis project involved a community-academic partnership that was initiated by this doctoral student and developed over one year between 2004 and 2005 with three

community partners: South-East Ottawa Community Health Centre (SEOCHC), Culture Shock Canada, and Heron Road Community Centre. As a partnership, an application for funding was granted from United Way Ottawa for a new physical activity intervention for South-East Ottawa, a multicultural, disadvantaged Canadian urban community. The social world of young people living in the intervention neighbourhoods has been described as complex and more challenging as compared to the average youth living in Ottawa (K. Tonner, personal communication, May 9, 2008). A recent report found that this community is socially and economically disadvantaged relative to the general population in Ottawa. Specifically, a higher proportion of immigrant and visible minority youth live in these neighbourhoods and a greater number of them live in poverty. Youth in these neighbourhoods also experience more health problems (Social Planning Council of Ottawa, 2005). These findings are consistent with the social context of neighbourhoods consisting of a high proportion of social housing, and signify an increased cumulative risk for social problems (Policy Research Initiative, Government of Canada, 2006). For instance, gangs and youth delinquency are common concerns in these neighbourhoods, and it is often assumed that young people feel pressured to fill the role of victim or aggressor in order to gain social acceptance. The disparity between youth living in the target neighbourhoods and other nearby communities, in addition to the significant social stigma of living in social housing, affects young people's feelings of social acceptance and likelihood for social inclusion outside of their neighbourhood, such as at school (K. Tonner, personal communication, May 9, 2008).

After conceptualizing the new intervention, a weekly hip-hop dance program was implemented in November, 2006 and the evaluation ran until June 2007. The overall goal of

the intervention was to foster psychological, social, and physical well-being among male and female adolescents by using a youth and culture-relevant community-based hip-hop dance program. Intervening with youth living in a disadvantaged community is congruent with a health promotion approach, as the program sought to promote positive development and well-being prior to any problems necessarily existing (Millstein, Petersen, & Nightingale, 1994; Sallis, 1994). A program logic model was developed to provide the framework for the study (see Appendix A).

The move toward evidence-based practice has dramatically increased the importance of evaluating health promotion programs. However, there are limitations to assessing only the efficacy or effectiveness of a program (Glasgow, Vogt, & Boles, 1999). Therefore, this project adopted the RE-AIM framework, a public health model that asserts the need to evaluate interventions on multiple dimensions including an examination of impact at the individual- and organizational-level (Glasgow, 2002; Glasgow, Goldstein, Ockene, & Pronk, 2004). The evaluation of this intervention investigated the reach, effectiveness, implementation, and short term maintenance of the hip-hop intervention. It was not possible to investigate the adoption dimension as this program was implemented at one site only (see Table 1 for Evaluation Questions according to the RE-AIM Framework).

The RE-AIM framework better permits the evaluation of an intervention's generalizability, and, therefore, its potential public health impact (Estabrooks & Gyurcsik, 2003). Research not considering the generalizability and issues of implementation and maintenance of interventions, can lead to poor dissemination of otherwise effective interventions. The dearth of evidence on effective interventions for disadvantaged populations, added to the current practice of implementing interventions that have not been

Table 1. Evaluation Questions according to the RE-AIM Framework

Dimensions	Research and Evaluation Questions
Reach	*The total number, proportion, and representativeness of participants relative to the targeted population* - Did the program reach the target population? - Were there any differences between the youths who completed and did not complete the program?
Effectiveness	*The success of the intervention on achieving the desired outcomes and avoiding negative outcomes* - Did the program have an impact on the targeted outcomes? - Were there any differences in benefits for: o Females as compared to males? o Participants in the co-ed compared to the girls-only format? o Participants in the winter as compared to the spring session? o Participants according to level of SES? - Were there any unintended adverse outcomes (e.g., injury)?
Adoption	*The total number, proportion, and representativeness of settings and intervention personnel who start the intervention* - Not investigated as intervention was implemented at one site only
Implementation	*The degree that the intervention was implemented according to plan* - To what extent was the program delivered as planned? - To what extent was the program delivered in a culturally appropriate manner? - Were the youths satisfied with the program and staff? What aspects of the program did the youths find most beneficial? How could the program be improved? - What were the program's attendance and completion rate for the youths? What were the youths' reasons for discontinuing? - To what extent were there adequate resources (financial, space, and human) to support the important program activities?
Maintenance	*The degree individual-level impacts and the program itself are sustained* - Will benefits last beyond the program (i.e., at a 3-month follow-up period)? - What is the likelihood of improvement in the longer-term outcomes as a result of participation in this program? - To what extent could the program be sustained?

(Glasgow et al., 1999)

comprehensively evaluated can work against the reduction of health disparities (Kerner, Rimer, & Emmons, 2005). Importantly, the RE-AIM framework is compatible with the social-ecological model (Glasgow et al., 1999).

The present thesis consists of three papers, followed by a general discussion. The first paper consists of the intervention conceptualization study, which involved verifying the needs of the target community in the development of the new intervention. The second and third papers consist of the second study, the evaluation of the new hip-hop dance program, which included co-ed and girls-only formats across two separate 3-month sessions (i.e., winter and spring). The second paper responds to the implementation evaluation and the third paper responds to the outcome evaluation.

Paper 1. The first study sought to conceptualize the new hip-hop dance intervention prior to its implementation in South-East Ottawa. An extensive review of the literature guided the development of the intervention in order to ensure that it was based on the theory and principles of effective physical activity programming and relevant for addressing the needs of lower-income and diverse youth in Ottawa. In addition, the first phase of this project included three focus groups with youth and parents/guardians from the target community, which sought to better understand the needs, barriers, and facilitators to youth participation in physical activity. Findings from the focus groups were then used to produce the planned program. The purpose of the community involvement in the development of the intervention was to improve the implementation, sustainability, and therefore, likely impact of the intervention (Green, Daniel, & Novick, 2001; Israel, Schulz, Parker, & Becker, 1998).

Paper 2. The second paper examined the implementation of the new program in terms of the degree of adherence to the intervention plan (i.e., implementation fidelity), the

quantity or dose of the intervention delivered and received, and the perceived intervention quality and level of participant satisfaction. In addition, this paper investigated one of the elements of reach (i.e., whether the program reached the target population) and the maintenance of the program at the setting level (i.e., sustainability). The methods included document review, observation, interviews, focus groups, and surveys. Youth participant, parent/guardian, and program staff perspectives were assessed. Reporting on program process in effectiveness studies has been limited, but is an important component of investigating particularly new programs (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). The findings of the implementation evaluation may be important for understanding what factors lead to the success or failure of the program (Witt & Crompton, 1997). Implementation evaluations can also enhance program impact by shedding light on program areas needing improvement in the future implementation of this and similar programs (McGraw et al., 1994).

Paper 3. The third paper investigated the success of the program, in terms of the extent to which youth participation in the weekly hip-hop dance program resulted in improved psychological, social, and physical well-being, in addition to identifying the intervention elements linked to these outcomes. This investigation involved a non-experimental pretest-posttest design from the perspective of youth participant, parent, and program staff. Mixed methods were used including interview, focus group, observation, and questionnaire format. Based on the physical activity and positive youth development literature, it was hypothesized that adolescents' involvement in the intervention would lead to improved hip-hop dance skills, physical well-being and health-related quality of life, self-perception and mood, behaviours (e.g., participation in physical and sedentary activities),

and family and peer relations. It was further expected that these benefits would be maintained at a three-month follow-up period. Differences in perceived impact according to attendance, sex, program format (co-ed vs. girls-only), session, and level of SES were also explored. The second element of reach, a comparison of baseline characteristics between the youths who completed and did not complete the program, was also assessed. Finally, the likelihood of improvement in the longer-term intended outcomes (e.g., school results and completion) as a result of participation in this program was also explored.

Running head: PHYSICAL ACTIVITY FOR ADOLESCENTS

Physical Activity for Adolescents Living in a Disadvantaged Neighbourhood: Views of Parents and Adolescents on Needs, Barriers, Facilitators, and Programming

Beaulac, J., B.A. [a]

Bouchard, D., B.A. [a]

Kristjansson, E., Ph.D[a,b]

[a]School of Psychology, University of Ottawa
125 University, Montpetit Hall, room 416A, Ottawa, Ontario K1N 6N5 CANADA

[b]Institute of Population Health, University of Ottawa

Corresponding author: Julie Beaulac (E-mail: jbeau080@uottawa.ca; Telephone: 204-787-3739)

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Abstract

Physical activity promotes physical, psychological, and social well-being for young people. However, socio-economically disadvantaged adolescents participate significantly less in physical activity. Three focus groups were held with disadvantaged adolescents and parents to better understand factors related to participation in physical activity and to successfully implement and sustain a new program for such young people in one target community in Ottawa. One focus group comprised seven male adolescents, another comprised ten female adolescents, and the third comprised thirteen mothers. The participants identified a range of constraints and facilitators to youth physical activity. They also raised important considerations for the implementation of a new program. The most common theme was the need for more accessible physical activity programming that was fun, safe, and relevant for young people. Implications of the focus group findings for implementing physical activity programming in disadvantaged neighbourhoods are discussed using the newly implemented community-based hip-hop dance program as an example.

Key words: physical activity intervention, community-based, disadvantaged community, young people, barriers and facilitators to physical activity

Physical Activity for Adolescents Living in a Disadvantaged Neighbourhood: Views of Parents and Adolescents on Needs, Barriers, Facilitators, and Programming

Participation in physical activity is important for the positive development and well-being of young people (Beauvais, 2001; Mo, Turner, Kreski, & Mo, 2005; Steptoe & Butler, 1996). Unfortunately, however, there is a significant decline in physical activity during the period from childhood to adolescence (Aaron, Storti, Robertson, Kriska, & LaPorte, 2002). Moreover, the majority of Canadian young people are not sufficiently physically active to experience health and social benefits (Canadian Fitness and Lifestyle Research Institute (CFLRI), 2004; Wharf Higgins, Gaul, Gibbons, & Van Gyn, 2003). The problem of physical inactivity is even greater for female adolescents and for young people who are socially or economically disadvantaged (Burton, Turrell, & Oldenburg, 2003; Taylor, Baranowski, & Young, 1998). For example, data from the 2003 Canadian Community Health Survey indicated that low income young people were at a 30% higher risk of being physically inactive (Mo, Turner, Kreski, & Mo, 2005).

Evidence on factors related to physical activity for young people can be helpful in understanding why certain groups of youth have lower rates of participation in physical activity. There are many models that have been used to try to understand differences in health behaviours such as physical inactivity, most of which have focused on individual-oriented factors (King, Stokols, Talen, Brassington, & Killingsworth, 2002). However, overall, the literature on physical inactivity is consistent with a social-ecological framework (King et al., 2002) and is increasingly supporting the need to also consider contextual factors (Grzywacz & Marks, 2001).

Social-ecological models consider both individual and contextual factors related to health behaviours. The nature of these influences is interactive and transactional. Examples of individual-level factors include perceived ability, attitudes, beliefs, and knowledge. Contextual factors range from influences within an individual's immediate surroundings (e.g., home) to influences that are more distal (e.g., transportation design, political conditions of society) (King et al., 2002; McLeroy, Bibeau, Steckler, & Glanz, 1988; Stokols, 1996). One example of a social ecological model is by McLeroy and colleagues (1988). This model includes five levels of influence: intrapersonal, interpersonal, organizational, community, and public policy. The intrapersonal level includes demographic, psychological, and behavioural characteristics that are within an individual. Some commonly found intrapersonal correlates of participation in physical activity for young people include age (-), sex (male), ethnicity (white), perceived physical competence (+), time (+), knowledge of physical activity (+), self-esteem (+), motivation (+), previous physical activity (+), and school attendance (+) (Carron, Hausenblas, & Estabrooks, 2003; Norman, Schmid, Sallis, Calfas, & Patrick, 2005; Sallis, Prochaska, & Taylor, 2000; Wharf Higgins, Gaul, Gibbons, & Van Gyn, 2003). The next level, the interpersonal level, refers to the influence of families, friends, and one's social network more generally. Interpersonal factors such as parental barriers (-), support from significant others (+), social norms (+), household income (+), and parental education (+) have been linked to adolescent participation in physical activity (Norman et al., 2005; Sallis et al., 2000; Wharf Higgins et al., 2003).

The top three levels of the model, organizational, community, and public policy, all refer to environmental or contextual influences on behaviour. While some ecological models

have a separate level of influence for physical environment, factors related to the natural environment (e.g., climate, geography) and to the constructed environment (e.g., transportation, recreation infrastructure) (Sallis & Owen, 1999), McLeroy and colleagues (1988) include these factors within the three contextual levels of their model. Important organizational influences for younger people include places such as schools and community centres, while community influences refer to relationships and networks between multiple organizations. Insufficient funding for programs (-), transportation problems (-), program fees and equipment costs (-), accessibility and quality of facilities (+), community programs (+), culturally specific activities (+), perceived safety of environment (+), attractiveness of scenery (+), presence of sidewalks (+), weather (+), traffic (-), and place of residence (urban) have all been linked to participation in physical activity (Brownson, Baker, Housemann, Brennan, & Bacak, 2001; Burton et al., 2003; Carron et al., 2003; Fleury & Lee, 2006; Gyurcsik, 2006; Humbert, 2006; Humpel, Owen, & Leslie, 2002; Kristjansdottir & Vilhjalmsson, 2001; Norman et al., 2005; Sallis et al., 2000; Welk, 1999; Wharf Higgins et al., 2003). Limited research has been conducted on policy level influences of physical activity; however, suggested factors include policies related to zoning and land use, building requirements, and funding for active transportation and recreation infrastructure (Brownson et al., 2001; Heath et al., 2006; Sallis, Bauman, & Pratt, 1998).

At the same time that individuals from lower socio-economic status (SES) experience greater constraints due to lower incomes, they also perceive greater social and environmental constraints to participating in physical activity as compared to individuals of higher SES (Chinn, White, Harland, Drinkwater, & Raybould, 1999). Other research has supported this perception, finding environmental inequalities in access to physical activity

resources by neighbourhood level of socio-economic status, to the disadvantage of poorer neighbourhoods (Macintyre, Maciver, & Sooman, 1993; King et al., 1995). Furthermore, evidence suggests that discrimination and perceived acceptance also influence disadvantaged populations' participation in different types of physical activities (Philipp, 1999). For instance, there is evidence of gendered recreational space, such that girls feel unwelcome or unsafe in those areas perceived to be controlled by boys (Tucker & Matthews, 2001; Karsten, 2003). Boys tend to play in larger groups than girls, and as a result, dominate larger areas of space; this can be particularly problematic in places where recreational space is limited (Karsten, 2003).

Despite the evidence highlighting the importance of environmental factors in contributing to physical inactivity, health promotion and intervention efforts have generally targeted intrapersonal factors related to behaviour change (Giles-Corti & Donovan, 2002; Schooler, 1995). These approaches have been met with only limited success (Sallis & Owen, 1997), particularly for disadvantaged populations who face greater environmental constraints (Gauvin, 2003; Stokols, 1996). It is becoming increasingly apparent that interventions need to go beyond individual behaviour change to target multiple levels of influence, such as fostering social networks and removing environmental constraints to participation in physical activity (Brodersen, Steptoe, Williamson, & Wardle, 2005; Gauvin, Lévesque, & Richard, 2001). This need is particularly important as there is greater potential for impact with increasing levels of influence (Stokols, 1996).

Research has linked faulty and inadequate theory to poorer intervention outcomes (Domitrovich & Greenberg, 2000; Fitzpatrick, 2002).Therefore, in order to successfully implement a new physical activity intervention in a disadvantaged community, this study

sought to first conceptualize the new intervention. Initially, a thorough review of the physical activity intervention literature was conducted, which highlighted the core elements of effective youth programming (e.g., Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004; Larson, 2000; Roth, Brooks-Gunn, Murray, & Foster, 1998). During this process, a community-based hip-hop dance intervention was identified as a potentially relevant option for the target community. The literature supported this intervention as it fit the criterion of a structured voluntary activity (SVA), an activity that is led by positive adult role models, that youth are likely to find intrinsically motivating, and that would require significant effort over a period of time (Larson, 2000). SVAs are a type of leisure activity that has been linked to particular benefits for positive youth development (Larson, 2000; Larson & Seepersad, 2003). Moreover, structured physical activities tend to be preferred by Canadian adolescents and especially female adolescents (Craig, Cameron, Russell, & Beaulieu, 2001). Other reasons in support of hip-hop dance as a type of SVA are that it is currently popular with younger people of diverse socio-cultural groups (Grieser et al., 2006), that it does not require special equipment or abilities, and that it has the potential to foster social interaction rather than competition, all elements that have been linked to effective youth programming (Anderson-Butcher, 2005; Anderson-Butcher, Cash, Saltzburg, Midle, & Pace, 2003).

Community experience and research suggest that factors related to participation in physical activity for a lower-income, multicultural neighbourhood may differ than those for the more commonly studied white middle-class neighbourhood (Johnson, 2000). Currently, there is limited research on this issue, particularly from the perspective of youth (Humbert et al., 2008). Moreover, past research has emphasized the importance of involving the community prior to implementing new interventions (Lee, 2005). For these reasons, the

needs of the target community were verified through focus groups with young people and parents/guardians from the target neighbourhood. The objectives of the focus groups were: (1) to develop a better understanding of the barriers and facilitators to adolescent participation in physical activity in general and related to the implementation of a new program in their community; and, (2) to identify preferences and concerns regarding the characteristics of the new physical activity program. The findings were then used to produce the planned physical activity intervention according to the needs and interests of the target community.

This study represents a collaborative effort between three not-for-profit organizations and an academic institution. The not-for-profit organizations include a community health centre in the target neighbourhood (South-East Ottawa Community Health Centre - SEOCHC), an organization that uses hip-hop dance as a youth outreach tool (Culture Shock Canada) and a City of Ottawa community centre that provided free space for the new program (Heron Road Community Centre). The study questions and methods were developed in consultation with community partners.

Method

Participants: Recruitment and Setting

Three separate focus group discussions were conducted with parents/guardians, female adolescents, and male adolescents from target lower-income, multicultural neighbourhoods in South-East Ottawa. A recent report indicated that the target neighbourhoods of South-East Ottawa have a higher proportion of socially and economically disadvantaged residents and 8 to 10% more youth relative to the general population in the

city of Ottawa. The overall health of young people is also poorer (Social Planning Council of Ottawa, 2005).

Young people between the ages of 11 and 15 years and parents/guardians were recruited from pre-existing groups with the assistance of SEOCHC and partnering organizations. Adolescent consent forms were distributed one week prior to the focus groups to allow young people to obtain parent/guardian consent. For their participation, adolescent participants received a $10 movie pass and parents received a $10 grocery voucher. Snacks and beverages were also provided during youth sessions.

Parent group. Parent/guardian participants were recruited in-person through a weekly multicultural dinner at a Community House in South-East Ottawa. One week prior to conducting the focus group discussion with parents, two researchers visited the community house to participate in the dinner. The researchers briefly introduced the study and sought their interest in the focus group the next week.

Thirteen female parents/guardians participated in the focus group after a weekly dinner. A male community facilitator was present during the discussion. Although we were not able to obtain socio-demographic information directly due to time and literacy constraints, basic information on the characteristics of the parent group was obtained through observation and discussion with the community facilitator. All parents represented disadvantaged cultural groups originally from outside of Canada (e.g., Iraq, Somalia, West Indies) and none of the parents spoke English as their first language. Most parents had one or more teenagers.

Female adolescent group. This group was recruited from a weekly girls' night at a different Community House in South-East Ottawa with the assistance of a youth

coordinator. Ten female adolescents participated in a focus group discussion at the Community House during one of these nights; a female community facilitator was present during the discussion. Girls ranged in age from 11 and 14 years; six reported their race/ethnicity as Black, three reported it as Arab/West Asian, and one reported it as other. Five of the 10 were born outside of Canada (e.g., Africa, Middle East) and most were living in subsidized housing.

Male adolescent group. This group was recruited from a free basketball drop-in at Heron Road Community Centre with the assistance of a youth coordinator. Seven males participated; they ranged in age from 12 and 14 years; all reported their race/ethnicity as Black. Five of the seven were born in Canada; the two others were from Africa and the Middle East. Young people participating in the basketball drop-in are predominantly lower-income living in subsidized housing.

Procedures and Measures

This study received ethical approval from the University of Ottawa. Focus group discussions were conducted in English during April and May 2006 and lasted approximately one and a half hours per group. The discussions were moderated by the first author (JB) with assistance from the second author (DB). Two moderators were used to reduce the potential for bias and enhance the trustworthiness of the findings. Discussions were recorded by digital recorder and detailed notes including both verbal and non-verbal observations were taken by the assistant moderator. Community facilitator involvement during the focus group discussions was minimal and the results are therefore not considered reflective of their opinions.

The moderator first explained the overall purpose of conducting the study and briefly defined physical activity. Participants were advised that all information they shared would be confidential; the limits to confidentiality and anonymity due to the group format were highlighted. The moderator then obtained written consent from participants (in the case of the youth participants, collected consent forms with their parent's signature). Next, adolescent participants were asked to complete a brief demographic and information questionnaire (5 to10 minutes). The focus group procedures were then explained and the group discussion conducted. Areas explored included: perceived benefits of physical activity for young people, barriers and facilitators to adolescent participation in physical activity and structure of a new physical activity program in their community, including interest in hip-hop dance as a potential physical activity program. Questions were carefully prepared and delivered in a set sequence, in an open-ended manner. The main advantage of using this strategy is the enhanced consistency of delivery across the multiple focus groups and the enhanced quality of analysis (Krueger, Morgan, & King, 1998). However, flexibility within the protocol was permitted when relevant to the research questions. At the end of the session, participants received a debriefing form, a physical activity resource sheet, and compensation. All participants were also given the opportunity to request a copy of the report on the focus group discussions. Following each focus group discussion, post-focus group debriefings were held between the focus group moderator and the assistant moderator during which time general observations and preliminary themes were discussed and recorded. In addition, the researchers recorded their observations of the neighbourhoods.

Analysis

After each session, JB and DB listened to the recording to capture any pertinent details and quotations missed during the session. These details were added to the notes taken during the focus groups in order to create an abridged transcript that would better ensure the reliability of the focus group discussion data (Krueger et al., 1998). Data from the three focus groups were first analyzed separately by group using a modified grounded theory approach. The analysis involved a content and theme analysis using an inductive process of identifying themes from the data (Strauss & Corbin, 1998). The first step of the analysis involved familiarization with the data by reviewing the transcripts. Preliminary themes and ideas were noted during this stage. Following this, transcripts were separated into single meaningful units or chunks of information. Two independent reviewers (JB and DB) then established themes or codes by hand, including no code, one code, or multiple codes. A topic was considered a theme when it was mentioned by several participants and considered sufficiently meaningful in light of the research questions and context. Themes were then independently grouped into categories (see Morse, 2008). After discussion, consensus on the final themes and categories were reached. As a quality check, the third author (EK) was then consulted who reviewed all of the coded transcripts; this led to some minor modifications in the organization of the themes within the different categories. Subsequently, themes were compared across focus groups, capturing similarities and differences across the three groups. Quotations were also selected from the abridged transcripts to illustrate the themes.

Results

The analysis revealed 10 key categories from the adolescent focus group discussions and nine key categories from the parents' focus group discussion. Seven categories were

common to parent and adolescent groups, including: 1) benefits of physical activity; 2) barriers and facilitators to participation in physical activity; 3) type and structure of physical activity; 4) the appeal of a hip-hop program; 5) preference for either a single-sex or co-ed program format; 6) timing of the program; and, 7) program and/or instructor characteristics. Furthermore, three other categories were common to both girls and boys, including: 1) program observers; 2) age range of program participants; and, 3) frequency of program. Parents, on the other hand, spoke of two different categories: 1) the need for supervision; and, 2) a distrust of the community. Reasons for differences in categories across the adolescent and parent groups appeared to be the result of different concerns related to a physical activity program. The male and female young people matched on overall categories; however, there were numerous differences in themes. The themes are presented by category within two sections in response to this study's two main objectives.

Participation in Physical Activity: Benefits, Barriers, and Facilitators

All of the participants viewed youth involvement in physical activity positively and described a range of physical, psychological, and social benefits. In general, the female youths placed less emphasis on the physical and external benefits (e.g., winning, "bragging rights") than the male youths. For instance, one girl described a psychological benefit, saying that "It (physical activity) calms me down." In contrast, the parents emphasized the social benefits: "At this age they are very, very active, you know, so we have to just think that if these kids are spending their energy to sports they don't spend their energy to different things (sic)."

The participants had a great deal to say regarding the factors related to youth participation in physical activity. Barriers refer to those factors which make participation in

physical activity more difficult, while facilitators refer to those factors which encourage participation. Some factors were reported as influencing physical activity in both negative and positive ways. All groups related a number of barriers to participation in physical activity ranging from every day life (e.g., school), technology (e.g., computers, TV), to safety of the physical environment and neighbourhood. The participants mentioned fewer facilitators than barriers, one common example being positive social support for participation in physical activity (see Table 1 for more details).

Table 1. Barriers/facilitators* for physical activity

Parents	Female Young People	Male Young People
1. Accessibility (-)	1. Accessibility (-)	1. Accessibility (-)
2. Social support (+)	2. Social support (+/-)	2. Social support (+/-)
3. Technology (-)	3. Technology (-)	3. Technology (-)
4. Every day life (-)	4. Every day life (-)	4. Every day life (+/-)
5. Personal factors (-)	5. Neighbourhood/safety (-)	5. Neighbourhood/safety (-)
	6. Independence (-)	6. Weather (+/-)

Note. + = Barriers; - = Facilitators. Barriers/facilitators listed in no particular order.

There was consensus among all of the young people and parents that accessibility was an important barrier to adolescent participation in physical activity. The female youths highlighted concerns about the limited activities available in their neighbourhood, "When the (basketball) court is taken over (by boys), there is nothing else just go back in to watch TV." In addition, the girls described having to play games in a pile of rocks as a result of there being no grassy areas available to them nearby. One emphasized the strength of the

problem when she said "It feels like a dead neighbourhood." The male adolescents also recounted difficulties accessing affordable physical activity programs. For instance, gym capacity issues limited access: "If the gym is full they will not let you in - we only have one gym." In addition, a few males suggested the need to "make it (the program) cheap" or free in order for young people such as themselves to be able to participate. A female echoed this concern by saying that "some people are kind of poor so they are not going to come (if the program is not free)." In general, all of the young people agreed that cost was an important barrier to participation in physical activity. They also expressed concern regarding accessing appropriate transportation to facilities. For instance, when asked about participating in a potential physical activity program, one girl commented: "How are we going to get there, tell me that?" Another girl explained "If it's really far then people will not bother going." In addition, the parents described limited availability of affordable programs, limited diversity and cultural and age appropriateness in available programs, and difficulties with transporting their adolescents to programs outside of the neighbourhood. One parent's frustration was evident when she expressed "there is nothing there!"

All of the participants described social support (or lack thereof) as an important factor in physical activity. The girls described the influence of peers and parents as mostly negative, whereas the boys described the influence as being mixed and the parents viewed social support as a positive influence for youth participation in physical activity. For instance, the girls and boys expressed concern regarding lack of parental and peer support for their participation in physical activity. According to one boy: "It kind of helps when your parents are active too." A girl stated: "They (parents and friends) keep me back." In contrast,

the parents indicated that they were supportive but emphasized the importance of peers over parental support.

Technology and everyday life were commonly described by all of the groups as constraining youth participation in physical activity. Examples of such technology included television, mobile phones, computers, and the internet. The accessibility of technology in young people's lives combined with the inaccessibility of physical activity resources and programs were viewed as barriers to being physically active. In terms of everyday life, school, homework, and daily routines were similarly viewed as barriers to physical activity by all groups, with only one male youth indicating that physical education at school facilitated physical activity. One difference between groups was that the girls described chores and other responsibilities as getting in the way, whereas the boys and parents did not talk about this barrier.

A difference in perceived barriers between the young people and the parents was that many of the female youths stressed the importance of having independence to participate in physical activity, but felt constrained due to their own and perceived parental concerns about neighbourhood safety. For instance, some of the girls reported safety concerns related to the physical environment (e.g., broken glass on the ground, loose dogs) and neighbourhood, whereas quite a few of the boys expressed concerns related to the social environment, such as the concern that they "can get in trouble outside." Some of the male youths also described the winter weather as a significant constraint and referred to it as "basically three months of doing nothing." In contrast, many of the parents mentioned laziness and poor sense of responsibility as barriers to adolescent participation in physical activity whereas the young people did not mention such constraints.

Characteristics of the New Intervention: Preferences and Concerns

In terms of the type and structure of physical activity, the girls and parents expressed preferences for a broader scope of activities than the boys, with an emphasis on structured group activities. In contrast, the boys enjoyed more traditional sports and exercise and also expressed the importance of an activity that was relevant for their age and interests. The parents expressed more ideas related to the structure and purpose of physical activity. In particular, some described wanting culturally appropriate activities for their young people that involved working toward a goal with older positive role models.

When hip-hop dance was suggested, all of the groups found this appealing. One male youth stated: "A lot of people are interested in the hip-hop culture, so they would be interested in coming." The female young people were almost uniformly excited by the idea of a hip-hop dance program in their community, and the parents also expressed a high level of interest in hip-hop dance. One parent indicated, "For me, I think it's great because that's how they express themselves."

Despite a general approval for a hip-hop dance program, some concerns were mentioned by both the male youths and parents. For instance, some of the male adolescents expressed concerns related to parental approval due to religious reasons and/or indicated that some boys may be too shy to participate in a dance program. Overall, the male youths also seemed to be more interested in other types of physical activity. Despite the concerns described by the boys group, six out of the seven indicated that they would be interested in a hip-hop dance class. A few parents also expressed disapproval of a dance program of any kind, regardless of whether the male and female young people were separated. Finally, while

the boys emphasized the importance of good music at a hip-hop program, the parents expressed concern related to appropriate choice of hip-hop music.

Another major finding was that almost all of the girls indicated a strong preference for a girls-only program, whereas the boys were mixed. Most of the girls were concerned that the boys would tease them. The parents in favour of a hip-hop dance program, on the other hand, indicated a strong preference for a co-ed program format. "We are neighbours. We like to see our children come to relationships like brothers and sisters", one parent expressed. The youths also had strong ideas about the ideal age of program participants. Both the female and male youths agreed that young-to-mid adolescents would be best. One male youth described this sentiment well by saying "12 to 16; not too young, not too old."

In terms of timing, some of the young people suggested that the new program should not interfere with other programs or responsibilities, while the parents emphasized the importance of providing programming during times when youth were most vulnerable to getting in trouble. All of the groups identified evenings as being the best time, with the male youths and parents identifying weekday evenings in particular. In terms of frequency, the female youths tended to want a program to be held more frequently than the male youths, most of the girls indicating a preference of two to three times weekly. Although some of the male youths also felt that more often would be ideal, their reason for this preference was to give them more choice between days they could attend. Other male youths, however, expressed that less often would be better to encourage youth to come to the program regularly – "once a week to keep them coming back." Some of the young people suggested that an indoor program such as hip-hop might be more desirable in the winter or when the weather is less pleasant. A final issue related to timing was the importance of considering

religious holidays when planning a new program. All female youths agreed that planning around religious holidays was necessary. "For the whole month (of Ramadan) we can't listen to music or anything," one expressed.

All of the groups also described a variety of important program or instructor characteristics. For instance, both the male and female adolescents desired an instructor who would provide structure but also give them freedom; one boy described the ideal instructor as someone who "keeps you in control but you're free..." In terms of instructor gender, most of the girls indicated a preference for a male instructor, whereas most of the boys indicated a preference for a female instructor. The reason for the girls' preference seemed in part to be based on the belief that a male instructor would be a better dancer; "guys put expression into it." Overall, however, the general sentiment on instructor gender was described well by a male youth "As long as we have a program and we have fun, it doesn't matter who instructs it." In addition, the male youths and parents described a need for programs to better target and recruit young people by improving program publicity and offering incentives or "something to show for the effort" (parent participant).

A strong finding from the adolescents was that observers, and in particular parent observers, were not wanted. Most of the girls expressed seeking independence from parents and fear of embarrassment as reasons for not wanting parents to attend a physical activity program: "It's embarrassing, 'cause like your parents are watching you...and if you made a mistake or something it's embarrassing." Overall, the boys' comments were consistent with this sentiment, however, a couple felt that the presence of parents would be supportive. Somewhat related to this issue was the expressed need for the young people to be supervised while participating in physical activity and other community programs. Although all of the

groups expressed a concern for safety while participating in physical activity, the parents were the most concerned about ensuring a controlled environment.

Finally, a theme of distrust of community authorities emerged. Whereas the young people expressed frustration that programs were not available or more accessible to them, the parents expressed a strong distrust that authorities genuinely cared about their neighbourhood or that they were going to make improvements to the current situation. For instance, several parents indicated that they had talked with people from the community who had promised them more programs for their children but that they have not seen results. The parents found it stressful to continually share their ideas without results: "They take all our ideas, but nothing for us, nothing for our kids."

Discussion

The young people and parents described barriers and facilitators related to youth participation in physical activity at the individual, intrapersonal, and environmental level: this is consistent with a social ecological model and with previous research showing that physical inactivity is related to multiple layers of influence (Brodersen et al., 2005). Importantly, the young people and parents alike were aware of the benefits to adolescent participation in physical activity. This evidence is consistent with past research showing that the problem of physical inactivity and other health behaviours is not primarily an issue of limited education or awareness, but instead is related to a variety of other constraints (Trost, Owen, Bauman, Sallis, & Brown, 2002).

An important intrapersonal factor mentioned by the parents and younger people was everyday life, which is also commonly referred to in the literature as time constraints (e.g., Allison, Dwyer, & Makin, 1999). The parents in this study also felt that laziness and poor

sense of responsibility contributed to youth's decisions to participate in physical activity. This finding is consistent with past research that has linked motivational factors to physical activity (Sallis et al., 2000).

At the next level, this study identified interpersonal factors such as youth seeking independence and social support. Past research has consistently supported the importance of peer and parental social support in facilitating participation in physical activity (Sallis & Owen, 1999). Interestingly, this study's findings suggested that the girls felt less support for participation in physical activity than the boys. This is quite interesting in light of the fact that female youth are less likely to be physically active than male youth. In addition, it seems that the girls may have had more chores at home, a trend that is supported by past research reporting that female youth spend more time engaged in domestic responsibilities, homework, and paid employment, all activities that take time away from physically active leisure (Hilbrecht, Zuzanek, & Mannell, 2008; Raley & Bianchi, 2006). The female youths also perceived that there were fewer programs and activities for girls. Overall, these gender differences fit with other research on differences in physical activity patterns between male and female youth (Allison et al., 1999; Caspersen, Pereira, & Curran, 2000; Crespo et al., 1999; Sallis et al., 1996).

Another related issue is gender/ethnic differences in relevancy and comfort or perceived "welcomeness" in physical activity programs and/or recreational spaces (e.g., neighbourhood basketball court; Tucker & Matthews, 2001; Karsten, 2003). Consistent with previous research, all of the activities that the young people mentioned enjoying were activities that they could afford, that were more accessible to them within their immediate neighbourhood, and for the most part, that tended to be associated with minority young

people (e.g., basketball, soccer, running, dancing). Neither the young people nor the parents mentioned activities that are more commonly associated with white middle-or upper-class young people (e.g., gymnastics, ballet, hockey, figure skating; Sallis et al., 1996).

The participants in this study strongly emphasized the influence of environmental factors related to youth participation in physical activity; this again is consistent with other research (Brodersen et al., 2005). Overall, the most striking theme was the need for improved access to physical activity facilities and programs that were fun, safe, age-appropriate, and culturally relevant for young people within this community. These characteristics have been identified as critical for effective youth programming (Anderson-Butcher, 2005; Eccles & Templeton, 2002; Freedson & Rowland, 1992; Task Force on Community Preventive Services, 2002). The participants clearly stated that recreation facilities and programs were either unavailable or inaccessible (e.g., cost too much money). They also described an unsupportive physical environment, including insufficient safe and appropriate places for active leisure (e.g., grassy areas) and difficulties accessing facilities due to transportation concerns, including access to public transit. The researchers' observations of the neighbourhoods were consistent with these findings in that the physical environment did not appear to be conducive to youth engaging in physical activity. Furthermore, other studies are consistent with the finding that access to physical activity resources is associated with higher rates of youth participation in physical activity (Brodersen et al., 2005; Sallis et al., 2000). The participants also described poor neighbourhood safety as a barrier to participation in physical activity. This finding is supported by previous research that has demonstrated that participants of lower SES were more likely to report safety issues at their playgrounds and parks as part of the reason for

lower participation rates in physical activity, as compared to participants of higher SES (Oliver & Hayes, 2005).

Overall, the findings of this study on factors related to youth participation in physical activity, in addition to past research, highlight the need for multiple levels of influence to be considered when allocating recreation resources and planning physical activity programs. Some of the factors also extend beyond the purview of municipal recreation departments and support the need for a multi-pronged approach involving partnerships with families, schools, communities, and multiple levels of government. Potential strategies include interventions and healthy public policies that consider the social and physical environment in an effort to promote youth participation in physical activity. An example would be school curricular changes that promote more collaborative and regular participation of all youth in active leisure in conjunction with increased funding allotted for community-based physical activity interventions that target more disadvantaged neighbourhoods.

Strengths and Limitations

This study has a number of strengths; it also has some limitations. The consideration of both adolescent and parent perspectives and the community-based nature of the research are important strengths. In addition, this study recruited participants with the assistance of community partners. This method was viewed as important in providing the researchers with the credibility and access required to reach an underserved population. One limitation regarding this method was that recruiting the boys from a basketball drop-in may have resulted in a sample that was somewhat biased toward interest in traditional sports; they also may have been more active than the average group of male young people living in a disadvantaged community. Furthermore, having a group of young people that were familiar

with one another had advantages and disadvantages. The boys appeared to be comfortable with one another; however, this comfort also appeared to lead to less serious responses. Similarly, the presence of community facilitators during two of the focus group discussions likely put the participants at ease; however, their involvement may have influenced the discussion. This possibility does not seem likely given the openness of the participants in discussing both positive and negative aspects related to youth participation in physical activity in this community.

An important limitation of this study is the small sample size including three focus groups, which were not sufficient to reach data saturation. Another limitation is the use of only one data collection method. As a result, these findings relate to the group of young people and parents interviewed for this study, and may not be generalizable to the overall community of South-East Ottawa or to other contexts. However, a number of procedures were used to strengthen the trustworthiness of the data, including the use of two moderators in the focus groups and two independent reviewers in the coding of the data. In addition, a third researcher was consulted to confirm the quality of the analysis. The similarity of findings between the female youth, male youth, and parents also strengthen the trustworthiness of the data. Furthermore, the consistency between this study's findings and existing research on young people living in disadvantaged communities and physical activity suggest that the current findings are meaningful in providing some general suggestions for the development of new physical activity programs in disadvantaged communities. Future research will be important in order to better understand how and what contextual factors influence youth participation in active leisure, and what approaches are most effective and efficient at improving the level of activity and well-being of youth living within

disadvantaged communities. Future research would benefit from developing collaborative partnerships with the community followed by intervention efforts to give back to the community, as community distrust has been reported as common among disadvantaged communities (Benoit, Jansson, Millar, & Phillips, 2005; Cardona, & Joshi, 2007).

Implications of Study for New Program and Beyond

In light of the focus group findings, community partners continued their plans to implement a new free community-based hip-hop dance intervention in South-East Ottawa for young people between 11 and 16 years of age. Our results, together with existing empirical evidence, informed the development of this new intervention according to a social-ecological framework. The findings from this study also provide helpful suggestions for the development of other similar interventions.

The participants in this study clearly voiced their concern that physical activity programming be fun, relevant, and safe. Hip-hop dance was viewed to be an appealing option that could fit these criteria. For one, previous research has shown dance as a relevant and fun activity for youth of diverse cultures (Grieser et al., 2006). The need for supervision and important instructor characteristics were two additional factors related to this concern. Although the availability of sufficient funding is often a barrier to hiring sufficient program personnel, resources for hiring both program instructors and a supervision coordinator previously had been secured for the new program on the basis of the experience of community partners. Consistent with the positive youth development literature, the youths were also seeking adequate structure from program instructors (Larson, 2000).

The female youths' strong preference for single-sex programming is also consistent with past literature (The President's Council on Physical Fitness and Sports, 1997). In

response to this preference, a girls-only format was offered in addition to the intended co-ed format. The response to the girls-only format was very positive. This option ought to be considered in physical activity programming, particularly for culturally diverse communities.

This study's findings also provide useful suggestions around the timing, recruitment and incentives for community-based physical activity programs. For instance, the ideal frequency for such a program seems to be once to twice weekly after school or on the weekend, and would be best decided in consultation with community partners. In addition, the female adolescents highlighted an important need to schedule programming dates around common holidays celebrated within a community (e.g., Ramadan). Many participants also felt that it would be important for programs to offer incentives to encourage participation, an idea that is supported by the literature (Chinman, Imm, & Wandersman, 2004). It may also be important to young people that parents and other observers not be allowed, to give young people an opportunity to be independent from their families in a safe environment. One possible strategy for responding to both parent and young people needs would be to hold the first class as an open class, while thereafter closing the class to participants and staff only.

Finally, it is critical that communities make physical activity programs as accessible as possible (Task Force on Community Preventive Services, 2002). One important example mentioned by numerous participants was providing bus tickets and other transportation assistance to reduce the impact of this barrier to young people's participation. In conclusion, this study presents findings that are consistent with the literature at the same time as highlighting the importance of tailoring interventions to meet the needs and interests of specific communities.

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Running head: IMPLEMENTATION FINDINGS

"There was a lot that didn't happen." Implementation Findings from a Community-Based Hip-Hop Dance Program for Youth in a Disadvantaged Community

Beaulac, J., B.A. [1]

Olavarria, M., B.A. [1]

Kristjansson, E., Ph.D[12]

School of Psychology, University of Ottawa[1]

Institute of Population Health, University of Ottawa[2]

Abstract

Participation in physical activity is important for the positive development and well-being of youth, and yet most youth are inactive; this inactivity is a problem particularly for socially and economically disadvantaged youth. A community-academic partnership was formed to respond to this problem in one disadvantaged community in Ottawa. After consulting the target community, a new hip-hop dance intervention was implemented. Different adolescents aged 11 to 16 years participated in one of two 3-month sessions, the first in the winter and the second in the spring. A girls-only and co-ed format were offered both sessions. This study investigated the implementation of the intervention from the perspective of the youth participants, parents, staff, and researchers. Multiple methods were used including document review, observation, questionnaire, focus groups, and telephone interviews. Overall, the consistency and quality of program implementation were moderately satisfactory and improved in the second session. However, important concerns were noted and findings suggested that this program was only partially delivered as planned. For instance, staff and transportation inconsistencies were significant problems during session 1, while consistency of program duration, high attrition, unclear protocols, and adult management of youth behavioural issues were central issues across both sessions. Overall, the findings showed strengths and weaknesses in the implementation of this new program. Suggestions for improving the implementation of this intervention and similar recreation programs targeting disadvantaged communities are discussed.

"There was a lot that didn't happen." Implementation Findings from a Community-Based Hip-Hop Dance Program for Youth in a Disadvantaged Community in Ottawa

Young people living in poverty and on the margins of society are more vulnerable to health and social problems, including obesity, violence, teenage pregnancy, school drop-out, and juvenile delinquency. Participation in physical activity is important for the prevention of these problems and for the promotion of youth well-being (Biddle, Gorely, & Stensel, 2004; Mo, Turner, Kreski, & Mo, 2005; Steptoe & Butler, 1996; Task Force on Community Preventive Services, 2002). Rates of participation in physical activity decline across adolescence (Aaron, Storti, Robertson, Kriska, & LaPorte, 2002), and the majority of Canadian youth are not sufficiently physically active to experience health and social benefits (Wharf Higgins, Gaul, Gibbons, & Van Gyn, 2003). Moreover, youth who are socially or economically disadvantaged participate significantly less in physical activity as compared to the general Canadian youth population (Burton, Turrell, & Oldenburg, 2003; Taylor, Baranowski, & Young, 1998).

The lower rate of participation in physical activity by disadvantaged youth is likely due, in part, to greater contextual constraints (The President's Council on Physical Fitness and Sports, 1997). For instance, socially and economically disadvantaged youth often face the added constraint of living in resource-poor communities, where funding for physical activity programs may be limited. In the province of Ontario, there is a deficit in the accessibility of recreation and physical activity programs for socially and economically disadvantaged young people (Offord, Hanna, & Hoult, 1992).

Given these complex constraints, interventions aimed at improving participation in physical activity among disadvantaged youth must consider both environmental and

individual causes of physical inactivity (Brodersen, Steptoe, Williamson, & Wardle, 2005). In particular, physical activity interventions for youth should be designed to improve access and strengthen social networks (Task Force on Community Preventive Services, 2002). Community-based programs consistent with a social ecological model allow for the consideration of environmental factors when targeting behaviour change (Pate, Trost, Mullis, Sallis, Wechsler, & Brown, 2000; Sallis & Owen, 1997).

A community-academic partnership was developed to respond to an identified need for innovative, pro-social, structured, and accessible physical activity programs that consider the diverse needs and interests of adolescents living in a lower-income and multicultural community. This partnership included three non-profit community partners (South-East Ottawa Community Health Centre (SEOCHC), Culture Shock Canada, and Heron Road Community Centre) and the University of Ottawa.

Background

Intervention Rationale

During the developmental phase, we undertook a number of activities to ensure that the physical activity program was needed, wanted, and relevant to the target community. A hip-hop dance program offered by Culture Shock Canada was identified as a particularly relevant physical activity program for youth in disadvantaged communities. The mission of Culture Shock Canada is to use hip-hop dance as a tool to promote "positive lifestyles, non-violence, physical fitness, and community involvement" for youth of all ages in disadvantaged urban communities (Culture Shock Canada, n.d.). It is important that programs be developed based on a positive youth development framework rather than on a deficit framework (Hirsch et al., 2000). Positive youth development programs attempt to

promote well-being in young people across a number of domains, such as sense of competence (e.g., social competence), self-efficacy, emotional connections, positive behaviour, and identification with prosocial norms (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004). Research has linked particular benefits for positive youth development to structured voluntary activities (SVAs; Larson, 2000; Larson & Seepersad, 2003). SVAs are structured leisure activities organized by adults for youth that are intrinsically motivating and require engagement in the activity and significant effort. The identified hip-hop dance program is consistent with a positive youth development framework and met criteria as a SVA. Furthermore, dance is an activity that appeals across diverse socio-cultural groups of youth and is likely to be particularly attractive to female youth, who have the lowest rates of physical activity (Grieser et al., 2006). Hip-hop is currently a popular form of dance among young people that does not necessitate exceptional abilities, strength, endurance, or special equipment; rather, it emphasizes social interaction and freedom of individual expression.

Focus groups were conducted to better understand the needs, barriers, and facilitators related to youth participation in physical activity, from the perspective of young people and parents within the target community. The parents and young people reported a need for more physical activity programming that was safe, accessible, age-appropriate, and culturally relevant. Hip-hop dance was seen as a relevant and fun option. This finding is important in that activities need to be relevant and fun in order to maintain interest and involvement (Eccles & Templeton, 2002; Freedson & Rowland, 1992). Other suggestions for fostering youth participation in the program were also considered when implementing the new program (see Beaulac, Bouchard, & Kristjansson, in press).

Intervention Description

A new, free community-based hip-hop dance program was 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 expressed by the focus groups and community partners, in particular by providing a free, relevant, and supervised activity, in an accessible location, that included transportation assistance and participation incentives. Overall, the objectives of the program were: 1) to foster improved youth self-identity; 2) to improve physical, psychological, and social well-being, including quality of life; 3) to improve family and social relationships; and, 4) to improve youth behaviours. In the longer-term, the ultimate program objectives, beyond the evaluation, were to reduce involvement in violent and delinquent activities, to improve school results and completion, and to increase positive involvement and leadership in Culture Shock Canada and in the greater community (see Appendix A for a program logic model).

Two program sessions were offered: a winter session (November, 2006, to February, 2007) and a spring session (April to June, 2007); different young people participated in each session. The winter session consisted of 13 weekly classes and the spring session consisted of 12 weekly classes. Two program formats were offered during each session, girls-only and co-ed, to meet the female adolescents' strong preference for a girls-only format. The girls-only format ran Tuesdays, 5:00 to 6:15 pm, and the co-ed format ran on the same evening from 6:15 to 7:30 pm. For the spring session, a 15-minute break was created between the girls-only and co-ed programs. Each class was divided into the following components: a 5-minute sign-in and welcome, 5 to 10-minute warm-up, a minimum 40-minute period of moderate intensity aerobic hip-hop, a 5-minute water break half way through the hip-hop

dance period, and a 5-minute farewell period. In response to youth preference, only the first class was open to observers. However, 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. In addition, a community-wide showcase, including all Culture Shock youth outreach programs and semi-professional dance troupes, was held in July 2007. Involvement of the young people in this showcase took place beyond the evaluation period.

In order to ensure intervention integrity, the program was delivered according to a structured intervention manual (Beaulac, 2006). New routines were to be taught every odd-numbered class (except for the final class for the winter session), with even-numbered classes used to improve and integrate the previously taught choreographed routines. The same sequence of routines was taught across the two formats and two sessions. Two bilingual (English-French) dance instructors from Culture Shock Canada (one White male and one Black female) taught the classes in a dance room at Heron Road Community Centre. A youth coordinator was hired to provide youth with transportation to and from classes in a community van, to distribute bus tickets, to provide on-site supervision, and to link young people and their families to additional services and resources at SEOCHC, as needed. A health promoter for youth was also available to provide assistance with coordination and outreach. In addition, the first author was present most classes to monitor the implementation of the program and to assist with supervision when necessary. 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 (Kahne et al., 2001). Program staff stressed the importance of regular attendance (Little & Lauver, 2005)

and young people attending classes regularly had the opportunity to win participation prizes (e.g., activity passes, MP3 player).

Funds were received from United Way Ottawa to implement and run the program. The majority of the program budget comprised staffing costs (i.e., dance instructor and youth coordinator hourly pay); a small amount was used for program supplies. In-kind resources also contributed, such as one volunteer dance instructor, the use of municipal recreational space for the program, the use of a community van, participation prize donations, and significant coordination and resource support from SEOCHC.

The Present Study

This project adopted a public health framework, the RE-AIM model (Reach, Effectiveness, Adoption, Implementation, Maintenance), which strives for the comprehensive evaluation of interventions (Glasgow, Vogt, & Boles, 1999). This framework was used as it examines impact at the individual- and organizational-level and is compatible with the social-ecological model, therefore better considering issues of generalizability and potential public health impact (Estabrooks & Gyurcsik, 2003; Glasgow et al., 1999). The purpose of this paper is to evaluate the implementation of the South-East Ottawa hip-hop dance intervention in terms of the degree of adherence to the intervention plan (i.e., implementation fidelity), the quantity or dose of the intervention received, and the perceived intervention quality and level of participant satisfaction (Domitrovich & Greenberg, 2000). In addition, this paper investigates whether the program reached the target population and the maintenance of the program at the organizational level (see Table 1 for evaluation questions).

Table 1. Evaluation Questions

Evaluation Questions
1. To what extent was the program delivered as planned?
2. To what extent was the program delivered in a culturally appropriate manner?
3. To what extent were the personnel appropriately trained to deliver the program?
4. Did youth appear to be satisfied with the program and staff? What program elements did youth seem to find most beneficial?
5. What was the program's attendance and completion rate for youth? What factors promoted participation? What factors led youth to discontinue their participation?
6. To what extent were there adequate and appropriate resources (financial, space, and human) to implement and deliver the program?
7. To what extent could the program be sustained?

Implementation evaluations provide evidence that an intervention was delivered according to plan (Rossi, Lipsey, & Freeman, 2004). Further, they clarify the strengths and weaknesses of a program, and therefore are often useful when reporting to funders and other interested stakeholders on such issues as the quality of program delivery and the likelihood of the program in achieving successes. An important purpose of implementation evaluations is to contribute to program improvements (Love, 2004; Rossi et al., 2004) and to allow for the replication of effective programs (Domitrovich & Greenberg, 2000). They are also increasingly recognized as vital to our understanding of outcomes, such as why some programs work and why others do not. However, to date, many evaluations have focused on outcomes only (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). In particular, the

literature has identified a need for implementation evaluations of physical activity interventions in order to better understand what intervention elements are related to success (Pate et al., 2003; Salmon, Booth, Phongsavan, Murphy, & Timperio, 2007; Taylor et al., 1998). It is hoped that the implementation of the current program will respond to these objectives.

Method

Intervention Participants

The participants targeted for the new intervention were young people between the ages of 11 and 16 years living in South-East Ottawa, a multicultural, lower-income urban area of Ottawa, Canada. A recent report indicated that this community is socially and economically disadvantaged relative to the general population in Ottawa (Social Planning Council of Ottawa, 2005). Moreover, the new program was deliberately implemented in a particularly disadvantaged neighbourhood of this community. All partners believe in an inclusive approach to physical activity programming, and thus all youth were invited to participate, regardless of their capacity to pay or their abilities. Young people were registered in the program if they planned to stay within South-East Ottawa area for the duration of the evaluation, had no previous participation in a Culture Shock Canada hip-hop dance program, were sufficiently fluent in English to complete evaluation measures, agreed to participate in the evaluation, and reported being able to participate in moderate-intensity physical activity.

Recruitment efforts were varied and included advertisement and outreach to partnering organizations, public and Catholic intermediate and secondary schools, a shopping centre, and community events. Registration was done during the outreach activities

or through the partnering organizations. Sixty-seven youths started the winter session (27 co-ed; 40 girls-only), and twenty-eight youths started the spring session (17 co-ed; 11 girls-only).

Evaluation Methodologies

Mixed methods were used to evaluate the implementation of this intervention. These methods were comprised of a document and literature review, attendance, observation (using a program fidelity checklist), surveys, and focus groups. Table 2 provides an overview of the purpose of the evaluation methods by evaluation question.

Document and Literature Review

The document review consisted of a review of both administrative information and program documentation, including the program budget and manual.

Table 2. Evaluation Methodologies

Evaluation Question[a]	Methodology							
	Document Review	Literature Review	Attendance Form	Fidelity Checklist	Survey		Focus Group	
					Youth	Personnel	Parents[b]	Personnel
1.	X		X	X	X	X		X
2.		X			X		X	X
3.	X					X		X
4.					X		X	X
5.	X		X		X	X	X	X
6.	X					X	X	X
7.						X	X	X

[a] For evaluation questions, see Table 1. [b] Telephone interviews were conducted in the case of parents not able to attend the focus group

Attendance Form

Attendance was recorded at every class, and the youths who missed a class received a phone call from the youth coordinator or researcher. These phone calls provided the

opportunity to discuss class, transportation, or other concerns with the youths and parents. Reasons for missing a class were recorded up to the point of drop-out, at which time the reasons for drop-out were recorded. In addition, the number of young people receiving transportation assistance was recorded.

Program Fidelity Checklist

A checklist was used to monitor the consistency of program implementation across a random four hip-hop dance classes for both the girls-only and co-ed formats across both sessions. The checklist included 14 questions related to program components requiring a yes or no response (e.g., length of class – did the class run for 75 minutes?). There was also space for raters to describe any concerns regarding the implementation of the program. A slightly revised 13-item checklist was used for the second session (see Appendix B).[1] Thirteen of the 14 items were included in the overall fidelity score for the first session and all thirteen items for the second session.[2] Raters completed the checklist during the same classes and included dance instructors, a youth coordinator, and researchers.[3]

Youth Survey

The youths completed two surveys related to the implementation of the program: a demographic and family information questionnaire completed by all of the youths at the first class to confirm whether the program reached the intended population (see Appendix C), and a satisfaction survey completed at the end of the final class. The satisfaction survey included 43 questions for the first session and 40 questions for the second session (3 fewer questions because there was one less program personnel to rate; see Appendix D for the revised youth survey). The questions were related to overall satisfaction, class level of challenge, enjoyment and value, program personnel characteristics, sense of inclusion, and

program likes/dislikes. This survey was completed by 38 out of the original 67 youths registered for the winter session (i.e., 23 out of 40 girls-only youths; 15 out of 27 co-ed youths) and 13 out of the original 28 youths registered for the spring session (i.e., 7 out of 11 girls-only youths; 6 out of 17 co-ed youths). The youths who had come to at least two classes but who were absent during the final class were contacted by telephone or e-mail for their feedback; two youths contacted in this fashion provided brief qualitative feedback that was included in the qualitative analysis.

Personnel Survey

A 10-item questionnaire was completed at the end of each session by four program personnel for the winter session, including the two dance instructors, youth coordinator, and health promoter for youth, and by the three program personnel for the spring session, including the two dance instructors and the health promoter for youth (see Appendix E for personnel survey). Unfortunately, the youth coordinator from the winter session felt that she could not respond to most of the questions as she was not present for most of the classes and the youth coordinator from the spring session did not return the survey.

Focus Groups

Three focus groups were conducted: one with the program personnel (see Appendix F for the list of questions) and two with the parents/guardians of the youths involved in the program (see Appendix G for the list of questions). The focus group with the program personnel was held in a boardroom at SEOCHC with the four individuals who were most involved in the new hip-hop program; the two dance instructors and two health promoters for youth participated. Unfortunately, the youth coordinator was not available to attend.

Due to difficulties in recruiting parents, focus groups with the parents/guardians of youths from the co-ed and girls-only formats were held together. The two focus groups included one father (from the co-ed group), three mothers (two from the girls-only group; one from the co-ed group), and one grandmother (from the co-ed group) (Note. All references to parent/guardian participants will be to "parents" from this point forward).[4] As a result of low participation in the parent focus groups, additional one-on-one telephone interviews were conducted with seven parents (four from co-ed, three from girls-only); the same questions were asked.

Procedures. The focus group discussions and telephone interviews were held during March and April, 2007, after the winter session was completed. All discussions were conducted in English, except for one telephone interview that was conducted in French. The focus group discussions lasted approximately one to one and a half hours per group, while the telephone interviews lasted approximately ten minutes. The second author (MO), who had no previous contact with the personnel, facilitated the personnel focus group. The co-facilitator, an undergraduate student (DB) listed in the acknowledgements, had some involvement in the intervention-conceptualization stage but had no involvement with the personnel prior to the focus group discussion. The two parent focus groups and telephone interviews were facilitated by two of the authors (JB and MO). The focus group discussions were digitally recorded, and the assistant moderator also took detailed notes, including both verbal and non-verbal observations. In the case of the telephone interviews, detailed notes were taken. The participants in both the parent and personnel focus groups were provided with snacks and beverages. Bus tickets were also provided to parents requesting them.

The moderator or interviewer first explained the overall purpose of conducting the study. The participants were advised that all information they shared would be kept confidential by the researchers. Written consent was then obtained from the participants (except in the case of telephone interviews, in which verbal consent was obtained). In the case of the focus groups, procedures were then explained and the group discussion conducted. The questions for both the focus groups and telephone interviews were open-ended and designed to elicit a variety of responses, including both positive and negative opinions. At the end of the focus group session, the participants received a debriefing form, or in the case of the telephone interviews, an explanation of the purpose of the evaluation. All participants were also given the opportunity to request a copy of the report on the focus group discussions. Following each focus group discussion, debriefings were held between the focus group moderators, during which time general observations and preliminary categories were discussed and recorded (Krueger, Morgan, & King, 1998).

Analysis

The qualitative analysis involved a content and theme analysis of the data from the three focus groups and the seven telephone interviews, using a modified grounded theory approach (Strauss & Corbin, 1998). After each focus group discussion, two reviewers (J.B. and M.O.) listened to the recorded discussion in order to capture any pertinent details or quotations. This step was conducted to create an abridged transcript that would better ensure the reliability of the focus group discussion data (Krueger, Morgan, & King, 1998). The two reviewers then independently identified themes as they emerged from the data. A topic was considered a theme when it was mentioned multiple times by multiple participants and considered sufficiently meaningful in light of the research questions and context. The

themes were noted by hand on hard copies of the transcripts, including no code, one code, or multiple codes. The first focus group involving personnel was open coded (Hruschka et al., 2004). The reviewers discussed their identified themes and reached consensus. From this stage, the themes were grouped into categories and an initial draft codebook was developed, as proposed by Hruschka and colleagues (2004). This draft codebook was then used to code the first parent focus group, while still remaining open to new themes and categories as they emerged from the data. Additional modifications were then made to the codebook prior to the coding of the second parent focus group and then again prior to the coding of the telephone interviews. The same codebook was used for the personnel and parent focus groups, given the similarity between the evaluation questions and content. In addition, two independent reviewers analyzed the qualitative portions of the survey measures in a similar fashion to that used with the interviews, focusing on the successes and/or problem areas of implementation. The themes identified from the youth and staff survey responses were mapped onto the focus group codebook. Attention was given to consensus and disagreement throughout all coding.

As for the quantitative analysis, youth survey data were entered into SPSS and checked for the accuracy of data entry by double entering 10% of the data. The data then were screened for normal distribution and other problems. Only a few values were missing, which were treated as missing. Subsequently, t-tests were conducted related to program and staff satisfaction to determine mean youth satisfaction across various dimensions. Finally, data from the fidelity checklist were entered into Excel; the fidelity and consistency of program delivery across the two sessions and two formats were then computed.

Results

Quantitative Findings

Participant Characteristics

The youths who began participation in the program were diverse. A significant proportion reported to have immigrated to Canada (38.5%); 27.5% identified themselves as Arab/West Asian, 23.1% as Black, 8.8% as mixed, 22% as White, and 17.6% as other. Most of the youths identified as Christian (42.9%) or Muslim (35.2%). The mean age of the participants who began the program was 12.6 years, and many were female (82.4%; for other details, see Beaulac & Kristjansson, 2008).

Attendance and Attrition Rates

Including all the youths who started the program, the participants attended, on average, 7.61 out of the 13 hip-hop dance classes offered during the winter session (girls-only youth: 7.90 vs. co-ed youth: 7.19) and, on average, 7.29 out of the 12 hip-hop dance classes offered during the spring session (girls-only youth: 8.55 vs. co-ed youth: 6.47). Thirty out of 67 from the winter session and 10 out of 28 from the spring session participated in or watched the final showcase performance. Twenty-eight out of the 67 youths from the winter session and 11 out of the 28 youths in the spring session were provided with transportation assistance, all but a couple in the form of providing rides in the community van.

For the winter session, 49% of the youths (33/67) did not complete the program (girls-only: 21/40; co-ed: 12/27). For the spring session, 43% (12/28) did not complete the program (girls-only: 4/11; co-ed: 8/17). The youths were considered drop-outs if they stopped coming at any point before the last class but not if they chose not to participate in

the showcase. Of particular interest was the relatively higher level of drop-out for male as compared to female participants in the co-ed format. For the winter session, 33% of the female youths (4/12) and 53% of the male youths from the co-ed format discontinued (8/15). For the spring session, 23% of the female youths discontinued (3/13), while all of the five male youths from the co-ed format discontinued. It is likely that the small proportion of male youths in the spring session co-ed class contributed to their higher rate of attrition, as three of the five male youths joined the program late, after the initial two male youths had already discontinued.

Schoolwork was the most commonly reported reason for drop-out in the winter session, reported by almost half of the girls-only youths who discontinued. It was noted that many youths receiving transportation assistance did not come back after an interruption in transportation assistance that occurred as a result of a period of unavailability of the youth coordinator. In the spring session, being busy with something other than schoolwork was the most commonly reported reason for drop-out, reported by one third of the youths who discontinued. In addition, a general increase in attrition was most notable when the co-ed and girls-only formats were joined for the final few classes, a program deviation that will be discussed in more detail later (see Appendix H for a breakdown of rates and reasons of drop-out by format and session; see Appendix I for breakdown of reasons for missing classes by format and session).[5]

Implementation Fidelity

The consistency of program implementation for the winter session was 78% (10.16 of 13 items), ranging from a low of 73% (9.5 of 13 items) to a high of 85% (11 of 13 items).

For the spring session, the consistency of program implementation was 94% (11.85 of 13 items), ranging from a low of 87% (11.25 of 13 items) to 100% (13 of 13 items).

Areas of inconsistency during the winter session related to length of class, inclusion of a warm-up and cool-down, playing of a variety of hip-hop music, use of hand signals to direct youth during class, observers to the class, and behavioural disruptions. Specifically, an important deviation was that the length of class was often shorter than intended, in part due to many youths arriving late as a result of transportation delays and to a slow transition between the two classes. A warm-up period was missing from one class for both the girls-only and co-ed formats and the instructors decided early on in the program to remove the cool-down period from the class as a result of a lack of youth interest. In addition, one young sibling of a participant watched most of the girls-only classes. She was quiet and did not present any noticeable problems. The final concern worth more specific mention is behavioural disruptions, which were reported in two of the four observed co-ed classes and one of the four observed girls-only classes; these disruptions took approximately five minutes away from class time.

Areas of inconsistency during the spring session included length of class, use of a welcome and farewell period, and observers to the class. Similar to the first session, the program length was shorter than intended for two of the four observed classes, for both girls-only and co-ed formats. In addition, some raters suggested that staff did not engage with the youths during the welcome and farewell periods of two of the four observed classes. Finally, a parent observer was present during a short portion of two of the classes.

In general, the instructors tended to rate the implementation fidelity as slightly higher than did the researchers. Differences in program fidelity between the girls-only and co-ed

formats did not appear to be meaningful, although the spring session appears to have been implemented with greater fidelity. This finding is in the expected direction, given that the program was newly implemented in the winter session. In addition, the spring session included fewer youths, an improved disciplinary system, and, likely as a result, no recorded behavioural disruptions. On the other hand, part of the improved fidelity was also the result of setting more realistic expectations related to program delivery. Additional fidelity issues related to the spring session were uncovered in the qualitative feedback and will be addressed in the qualitative section.

Youth Survey

Overall satisfaction with the class was assessed in the youth survey. For the winter session, 83% (19 out of 23) of the female youths and 93% (14 out of 15) of the co-ed youths reported that overall they were happy with the hip-hop classes (i.e., "yes a little" or "yes a lot" to this one item). Four t-tests were run to assess potential differences on level of satisfaction between the girls-only and co-ed formats within the winter session for: 1) program overall; 2) sense of inclusion; 3) class level of challenge, enjoyment, and value; and, 4) staff. Although there was a trend for the co-ed group to appear slightly more satisfied than the girls-only group, all t-tests were non-significant (see Table 3). This finding suggests that the delivery and quality of the program did not differ between groups.

For the spring session, 12 of 13 youths responded to the overall satisfaction question, and 100% indicated that they were happy with the classes. Due to the small number of youth respondents in the spring session, differences between the girls-only and co-ed formats were not assessed (see Table 4). Comparing the two sessions, it appears that there was a slight tendency for increased satisfaction in the second session as compared to the first session.

Table 3. Winter Session: Means by Format (Girls-only; Co-ed)

		Girls-only		Co-ed	
Measure of Satisfaction	Range	Mean (SD)	N	Mean (SD)	N
Program Overall	8-32	25.82 (7.17)	22	27.32 (4.58)	15
Sense of Inclusion	5-20	13.59 (6.28)	23	15.93 (3.17)	14
Class Level of Challenge, Enjoyment, and Value	6-24	17.59 (5.49)	23	17.77 (3.99)	14
Staff	20-80	68.08 (11.56)	23	71.25 (11.60)	11

*Note. No significant between group differences

Table 4. Spring Session: Means Overall

Measure of Satisfaction	Range	Mean (SD)	N
Program Overall	8-32	28.92 (2.81)	13
Sense of Inclusion	5-20	17 (2.97)	13
Class Level of Challenge, Enjoyment, and Value	6-24	18.68 (4.95)	12
Staff	20-68	63.70 (4.07)	13

In general, youth satisfaction with the program overall and with staff was high. The area of lower satisfaction across all groups was with class level of challenge, enjoyment, and value. In addition, for the girls-only group in the winter session, sense of inclusion was relatively low.

Qualitative Findings

The two independent coders reached a high level of agreement for the key categories (79% for the first parent focus group, 92% for the second parent focus group, and 84% for the telephone interviews). Four categories emerged from the qualitative analysis: 1) who participated in the program and reasons for participating; 2) what about the program was attractive; 3) what worked and what did not work in the program; and, 4) is the program sustainable (see Table 5 for a list of identified categories).

Table 5. Key Identified Categories

Thematic Area	**Categories**
1) Who participated in the program and reasons for participating	- Who participated - Reasons for participating
2) What about the program was attractive?	- Accessibility of the program - Hip-hop program: Relevant - Opportunity to connect and experience diversity - Hip-hop program: Enjoyed - Performance
3) What worked and what didn't?	- Deviations: Program not implemented entirely as planned - Program resources - Program schedule - Problems in class - Research: Benefits and concerns
4) Is the program sustainable?	- Sustainability

The findings from the focus groups, telephone interviews, and the youth and personnel surveys are presented together; however, the findings from the focus groups pertain only to the first session, while the survey findings pertain to both sessions. Any differences by session, format, or method will be highlighted.

Who Participated in the Program and Reasons for Participation?

Who participated. Certain members of the staff felt that the group that was targeted by the program was "perfect". Youth were recruited from several multicultural and lower-income neighbourhoods within the South-East Ottawa community, which, according to staff, resulted in an appropriate diversity of young people that participated. Some youths had higher needs, including problems related to school, mental health, and employment. One staff member expressed that "The kids just didn't come and learn how to dance. There were all kinds of issues and challenges that young people brought to that room with them." Parents viewed this program as either a complement to what their children were already doing or as the only opportunity their children had to be involved in a physical activity program.

Reasons for participating. Staff and parents identified several reasons for the youths' participation in the program. All saw the program as an opportunity to learn something new, including young people who indicated that this was an important reason for participating. Several parents indicated that their youths had the opportunity to learn dance skills, and one also stressed the importance of learning an activity that the young person could practice at home on their own. However, opportunities to learn were not limited to hip-hop skills; some parents indicated that the young people had an opportunity to gain better social skills. Some parents expressed that this program also gave their youths something to do other than watching television or kept their youths out of trouble. All staff and some parents mentioned that this program was an opportunity for young people to have some time away from their regular routine or time away from their parents. One reflected this idea by saying "It gave him time without us, and us some time without him."

What about the Program was Attractive?

Accessibility of the program. Most parents stated that the fact that the program was offered for free was important especially for families that have several children, one saying "I am sure that it being free made a huge difference for a lot of people." Several parents indicated that they could not have afforded to pay for such dance classes. However, one wondered if not having to pay led to commitment issues with some youths and might explain some of the absenteeism.

Transportation was another important issue. Most staff and many parents believed that offering transportation assistance in the form of bus tickets and rides facilitated youth participation. For instance, one staff member indicated:

> I think we are talking about young people who are living in abject poverty that for those reasons have trouble with the financial costs of transportation, the parents have issues with their kids getting on OC Transpo (public transit) and going to a program, particularly after dark, and in the winter, they are just not going to do it.

On another note, one staff member suggested that providing transportation also made the program something that was unique, and enhanced youth motivation to participate in the program. Providing transportation was also seen as a valuable means of obtaining information from the youths in order to link them to additional resources.

Both the staff and parents viewed the program location positively. For instance, the parents who lived within walking distance suggested that the location was a facilitator to youth involvement in the program. "Having it just around the corner was a big plus. This was motivating to her (youth)". Parents also suggested that the location was appropriate, given the densely populated area around the community centre and the proximity to stores

and other amenities that allowed parents to run errands while the program was taking place. The staff highlighted the appropriateness of the location in reaching the young people the program was trying to reach. Finally, it was reported that the advertising/recruitment strategy was adequate, as posters were put up in places and outreach was conducted where youth had easy access to the information.

Hip-hop program: relevant. Hip-hop was described as a relevant and attractive activity for young people, most noting the relevance of hip-hop dance as an exercise to help youth stay active. "Hip-hop (...) it's the fashion now, so everybody wants to dance (hip-hop) and everybody listens to hip-hop", described one parent. The young people also indicated that they enjoyed the active aspect of the program.

Parents commented on the style of dance as being unisex, and many described hip-hop as a relevant dance style for diverse cultures, one noting that hip-hop may not be appropriate for some religions and cultures. Some commented on the possibility of offering other styles of dancing that were more familiar to them; however, they agreed that hip-hop was a more attractive style of dance for youth. The staff also viewed hip-hop as a useful tool for reaching out to all types of youth, and many young people agreed that what they liked most about the class was that it involved hip-hop dancing.

One of the distinct features of this program was the option of either a girls-only or co-ed format. Three out of the four members of the staff indicated that it was an important option as it appealed to some parents and religious groups. In addition, it was suggested that having a girls-only option might have helped some female adolescents feel more comfortable in participating if they were more self-conscious. Some parents also felt that providing this option was a good idea, even if it was not necessary for their adolescents. "I

was very happy that that choice was there…especially if you want to get people who are concerned about (…) boys and girls dancing together to take part." Another suggested that a boys-only class be considered; however, this parent acknowledged that it might be hard to obtain the numbers to make this option feasible.

Opportunity to connect and experience diversity. For the staff and some parents, the fact that young people had the opportunity to interact with people from diverse backgrounds was important. The parent of one daughter explained that this program was good as she met "Almost completely a new set of people (…) this expanded her world, and that is good. (…) that's important she knows different people because when you meet different people you have different values and you share the experiences." Another parent also reflected on the benefit of interacting with others from diverse backgrounds.

> (…) Watching them coming out the door after class, having differences in age and ethnicity is good, because it makes them respect each other and other people. (…) if kids integrate, they become much more respectful toward each other and not so much bullies.

The staff and parents further indicated that youth participation in the program gave young people time away from parents to act their age and the opportunity to connect and form friendships with same-sex and/or opposite-sex peers. Many youths mentioned enjoying meeting new people and making new friends as aspects of the program that they liked most. The staff believed that the young people wanted to connect with them and demonstrated this by seeking information and guidance. The staff felt that they served as positive role models for the youths, and that this fostered discipline among the youths and respect for staff and peers. In particular, the younger dance instructor felt that being closer in age with the

participants made it easier to relate to them. Many young people felt that the class was comfortable and respectful toward issues of diversity, although a few commented on issues of disrespect among some peers and staff.

Hip-hop program: enjoyed. Many parents reported that their adolescents looked forward to their weekly class. The parents and staff reported that the youths enjoyed the program, noting that the youths considered hip-hop dance a fun activity and that they liked the music and the choreography. Some parents felt that participation rewards were also useful in motivating their youths. A few parents felt that their youths were happy with the level of challenge in the choreography, while one parent thought the level was too advanced for her youth. The young people agreed that they enjoyed this program, with only a few suggesting that the choreography could have been more challenging. Some youths and staff expressed that youth ideas could have been incorporated more into the choreography.

The parents also believed that their adolescents liked and were motivated by the instructors, quite a few commenting on the high level of instructor dance skills. "He felt he was in hip-hop now. He wasn't just going to a dance class where they were teaching him a little something", one parent described. Another commented on her impression that the instructors were giving more than what she had seen at other dance classes. Many youths agreed that they liked and were motivated by staff. However, a few mentioned some concerns about adult management of discipline.

Several commented on the relaxed atmosphere of the program, such as when a staff member expressed: "when we had to be serious we had to be serious and when we goofed off, we goofed off." The staff and parents felt that the young people enjoyed the relaxed, non-competitive atmosphere of the program. One stressed the importance of the positive

environment "where they can be encouraged to explore their talent and practice something healthy in a structured and safe environment."

Performance. The parents and staff commented on the importance of the showcase that took place at the end of the program, one parent describing the showcase as the highlight of the program. Others felt that this opportunity promoted the youths to work toward a goal in a collaborative atmosphere in which all the youths would want their classmates to improve for the final performance. A staff member suggested that the large number of family members and friends who attended was an indication of the high level of success of the program. The young people also commented on the importance of the performance, a couple indicating that they would have liked to perform somewhere other than the community centre.

What Worked and What didn't Work?

Deviations: program not implemented entirely as planned. In general, staff and parents felt that the program objective had been somewhat met for the first session. One parent expressed that "Everything I would have expected to happen, happened." Another parent was not clear on the purpose of the program, but reported that,

> If it was to divert at-risk youth, like to give people who would otherwise be getting into trouble perhaps, to do something useful and constructive, it was very well designed because it is at the beginner level, it's free, and it's in an appropriate neighbourhood.

The staff felt that they managed in terms of teaching the young people hip-hop dance and keeping them safe during class; however, a couple had also intended for the program to

be an access point for youth and their families to receive additional services at SEOCHC. One staff member expressed,

> There was a lot that didn't happen. [...] We did not do a good job of connecting those young people in the program with somebody in the centre that could support them with all of those other issues that came from the community, from school, from their house, and that would have gone a lot farther to having bigger impact. It was a key part of our plan but I don't think it ever materialized.

Despite the program objective not entirely being met, there was a general sentiment that the community was satisfied with the program, articulated by one staff member saying: "We did exactly what we advertised. We did exactly what the community thinks we said we were going to do. It wasn't exactly what we had envisioned." Overall, most young people from both sessions described being satisfied with the class; quite a few youths even described liking everything about the class or indicated that they would change nothing about the classes overall.

According to the staff, the main reason that the linking and outreach component of the program did not take place was a result of unanticipated role changes. Specifically, the underestimated transportation demands and several weeks of unavailability and the premature end of the youth coordinator's contract placed additional demands on the SEOCHC health promoter for youth. One staff member expressed this problem when saying:

> We had intended for the coordinator to be on-site, managing behaviours, making connections with young people, establishing relationships, and doing all the traffic control in the building so that (the dance instructors) could teach the dancing. It

> wasn't our intention to have that person (the coordinator) act as the taxi driver...That person's role was not what we had planned or what we had anticipated.

In addition, some staff described a lack of clear protocol for achieving this objective.

The staff described transportation as a major problem during the first session. One parent also indicated that pick-up times were inconsistent. As a result of these inconsistencies, classes tended to start late. One staff member felt that "Because of that challenge around the transportation...it sent ripples through everything else." Transportation issues were not raised during the second session, likely as a result of improved transportation coordination and a change in staff.

An important program deviation related only to the second session. Specifically, the program instructors decided without consulting other partners to combine the girls-only and co-ed formats in order to hold longer classes in preparation for the showcase performances. Some young people and staff felt that this change was disruptive.

In sum, it appeared that the staff members had different expectations about the objectives of the program, which influenced the individual staff members' perceptions of program success. Despite the deviations in program plan, a couple felt that the outcome of the program was not affected, while others believed that the program impact would have been greater had they been able to fulfill the roles as they were intended.

Program resources. Program resources were an important issue for the staff members, who indicated that the administrative aspect of the program had been demanding on the program staff. Some felt that there were adequate resources to support the important program activities, whereas other staff disagreed. It is likely that this issue related to differing points of view in terms of the program's objectives. The staff members agreed that

a skilled person was needed to provide transportation, if offered, since the role involves connecting and intervening with youth.

Despite insufficient human resources mentioned by some, all staff felt that they had sufficient skills and that they had made positive connections with the young people in this program. Nonetheless, the staff stressed the need to continually adapt to new youth. They also indicated that they felt the program space was good; however, the location of the program away from SEOCHC as a result of insufficient space on-site made the outreach component more challenging.

Another issue related to location was a need to work more closely with the community centre in terms of their expectations related to youth behaviour, as the program risked losing the free space as a result of community centre staff perception that the youths were causing too much disruption. The coordination of co-occurring activities was also believed to require more attention, as an adult meditation group taking place on the same floor and at the same time as a youth hip-hop dance program presented some obvious challenges. In addition, some staff believed that the target youth of this program have traditionally not been welcomed into community centres and suggested that removing financial constraints to accessing programs and increasing communication with community centre staff would be necessary to help others better understand the needs of disadvantaged youth. One staff member indicated:

> I am not saying that kids who live in poverty or these communities should be allowed to run (wild…) or that our expectations for their behaviours are any less…but they make noise (…) they are not yelling obscenities or knocking old ladies (…) (community centre) staff needs to understand.

Program schedule. The schedule of the program was judged appropriate by most; the parents indicated that it did not interfere with other important activities of the day. The parents also viewed the program length, frequency, and duration of the classes as appropriate. The general feeling was that a longer program would have led to greater benefits, but that the existing program length was sufficient. On the other hand, most staff members and young people felt that the program should have run for a longer period of time; a few also expressed a desire for classes to be held more frequently and for longer duration. The staff stressed the importance of maintaining consistency in the timing of the program for regular attendance and fostering positive change; however, one felt that the classes' regularly starting late affected the youths' progress.

Problems in class. Many indicated that there were some disruptions and felt that they took time and enjoyment away from the class. Specific problems included teasing and behavioural problems; the staff believed that when problems were addressed during class, behaviours improved and the parents felt that these issues were not unique to this program.

Concerns were also expressed related to adult management of discipline. During the first session, suggestions for improving discipline included more clearly identifying ground rules from the beginning of the program and having specific guidelines to follow when facing youth disruption. These suggestions were implemented during the second session and were no longer identified as a problem. However, during both sessions, some staff and several youths expressed concerns regarding the frequency and length of lecturing by instructors, indicating that it affected youth attendance and interest in the program. One such instance was related to the behavioural disruption of a few youths that resulted in the entire class being sent home around 30 minutes early.

Research: benefits and concerns. The staff felt that the research component was innovative and important in that it was gathering evidence on the effectiveness of the program; however, they also had some concerns. For one, the dance instructors believed that the research resulted in an overly structured program that limited the amount of creativity the youths could express in adding to the choreography, since both classes had to receive the same program. They also felt that the research held them back from removing disruptive youth from the program, as they worried about having enough youth in the program. On another note, a couple of staff questioned the appropriateness of using a quantitative approach to examine the program. They felt that using such a method, which they viewed as prioritizing quantity over quality, would affect the research capacity to detect real changes.

Is the program sustainable?

All participants were in agreement that the program should be continued. Furthermore, the majority of the parents did not have any major changes to suggest to the program as it stood, one parent saying:

> In terms of making it easier, I can't really think of a way that you could make it easier to get in at the entry level…I mean, you did so much. The transportation, the free cost, the incentive prizes, a central location in a densely populated area. I mean, you did everything I can think of, really, to get people started.

Some parents, however, did have minor recommendations for change, one suggesting that the program have a place for parents to mingle or participate in an activity while waiting. Another suggested the possibility of giving the parents more feedback regarding youth progress in the class. Other suggestions included holding classes of multiple levels of skill and targeting younger youth so that siblings could also join.

The staff felt that some important changes were needed in order to successfully continue the program, a couple suggesting that more resources would be needed in order to have both an on-site program coordinator and a qualified youth worker to drive the community van. The staff also suggested that it would be important to increase the community centre's awareness regarding the particular needs of the programs' targeted youth. Not withstanding these suggestions, all staff viewed their experiences as an important learning opportunity for them as an organization and a partnership in how to deliver youth services through such a program.

Discussion

In summary, the findings of this evaluation provided valuable feedback on the strengths and weaknesses of this new community-based physical activity program for adolescents, and suggest implications for the implementation of similar recreation programs for youth living in disadvantaged communities. A discussion of the findings is presented by evaluation question.

1. To what extent is the program being delivered as planned? How has the program been modified since its implementation?

High program fidelity is important in that it is associated with improved outcomes (Catalano et al., 2004; Fixsen et al., 2005). Although it is important that implementation fidelity be balanced with the need to adapt interventions to best fit diverse contexts, deviations to the intended plan are problematic when they affect the quality of the program (Green & Glasgow, 2006). Despite the somewhat improved implementation across the sessions, the program was only partially delivered as planned. One important deviation was

inconsistent program timing, which has been identified as a critical ingredient of effective youth programming (Catalano et al., 2004). Staffing was also a significant implementation concern; this finding highlights the difficulties programs can face related to limited resources and staff turnover, common issues among community programs (Mahoney, Larson, Eccles, & Lord, 2005; Roth, Brooks-Gunn, Murray, & Foster, 1998).

Another deviation was that the linking and outreach component of the program was not realized. From its inception, this program was intended to be about more than just hip-hop dance, yet personnel reported different expectations about the program objectives. The program development phase of this project (see Beaulac et al., in press), in addition to other literature (Kahne et al., 2001; Larson, 2000; Task Force on Community Preventive Services, 2002), suggest that physical activity programming for youth ought to include much more than just the activity. Providing assistance to reduce barriers to participation is critical for involving youth living in disadvantaged communities such as this one (e.g., transportation assistance, participation incentives: Brodersen et al., 2005); the youths and parents agreed that the accessibility of this program facilitated the youths' involvement. The opportunity to connect with peers and adult role models is also a significant program element, one that could have been emphasized more (Quinn, 1999). For instance, the welcome and farewell periods of the program could be more interactive and positive. Promoting a greater sense of inclusion among youth could also be beneficial, as this was an area of weakness, in particular for the girls-only group in the winter session. Moreover, ensuring a thorough discussion of program objectives during the developmental phase could improve implementation and has also been linked to greater impact (Tsai Roussos & Fawcett, 2000).

A related staffing issue had to do with the staff and youth concerns around adult management of discipline. It appeared that identifying clearer ground rules and a disciplinary protocol for the second session improved personnel satisfaction with this issue and reduced the number of behavioural disruptions; however, some staff and youths expressed continued concerns in the second session, particularly around the frequency and length of instructor lecturing.

Overall, the findings suggest that program deviations were largely related to the unexpected time commitment of providing transportation assistance, disagreement on program objectives, and the staff management of youth behavioural issues. Given these concerns, the full impact of this program was likely not realized, and program improvements would likely enhance the success of the program. On the other hand, the program was delivered to the intended population.

2. To what extent is the program being delivered in a culturally appropriate manner?

The young people, parents, and personnel viewed hip-hop dance as a particularly relevant physical activity and indicated that they believed that the program was delivered in a culturally appropriate manner. This finding is consistent with other studies that have found dance to appeal across diverse ethnicities (Grieser et al., 2006) and hip-hop dance as an appealing program for youth (Fitzgibbon, Stolley, Dyer, VanHorn, & KauferChristoffel, 2002; Flores, 1995). Similar efforts to promote youth participation in positive, active leisure ought to consider program relevance and culturally appropriate delivery when implementing new programs. Furthermore, the staff and some parents viewed the diversity of the youth participants as a positive experience for the youths. This finding is not surprising, given the

integral nature of diversity to the history of hip-hop culture, the origins of which stem from the urban Black political movement in the United States (Conyers, 2005). Popular hip-hop culture today attracts youth across socio-cultural groups, and thus, physical activity programs such as this one can also be a means of promoting increased awareness and skill in interacting cross-culturally (Cortis, Sawrikar, & Muir, 2007). One issue that does warrant further exploration is how this type of program can attract and retain more male youth, while at the same time remaining attractive to female youth. In addition, potential differences in same-sex as compared to cross-sex programming warrants further investigation, particularly as it relates to culturally diverse youth.

3. To what extent are personnel appropriately trained to deliver the program?

All staff felt they had the necessary training to fulfill their respective functions. Some parents also commented on their children's impression of the dance instructors as highly skilled. However, as has been suggested in previous implementation research (Pate et al., 2003), program adherence requires both theoretical and experiential training in an intervention's conceptual framework. For this and similar recreation programs, training around effective positive youth development and youth behavioural management would likely be beneficial.

4. Do youth appear satisfied with the program and staff? What aspects of the program do youth seem to find most beneficial?

Notwithstanding program implementation issues, the young people reported satisfaction with the program. In addition, all parents indicated that their youths enjoyed the

program, many adding that they eagerly looked forward to classes. Elements of the program that the youth, parents, and/or staff suggested as most beneficial were the opportunity to learn something new and relevant, two factors that have been previously cited as critical to youth involvement (Anderson-Butcher, 2005). In addition, the accessibility of the program, the appropriate level of challenge, and the high level of instructor skill were also reported as essential program components. Also consistent with the youth development literature, another important element was found to be the opportunity to positively connect with the staff (Anderson-Butcher et al., 2003; Ewing, Gano-Overway, Branta, & Seefeldt, 2002; Quinn, 1999; Rhodes, 2004; Roth et al., 1998). This finding is not surprising as "In human services, practitioners are the intervention" (Fixsen et al., 2005, pp. 45). Connecting with peers and experiencing diversity were further reported as valuable program components. As previously mentioned, the program could have done more to foster positive peer relations (Anderson-Butcher, 2005). Although the performance was an exciting and important program element, some staff and youths suggested that there was too much pressure to perform well for the showcase and that this affected participation adversely, in particular during the second session. Working toward a goal at an appropriate level of challenge is a key factor implicated in youth development (Larson, 2000); however, excessive challenge and/or competition can counteract or undermine some of the benefits of physical activity, particularly for female youth (Larson & Seepersad, 2003; Elder et al., 2007; Marsh & Peart, 1988). One staff member suggested that youth satisfaction would have been greater if the instructors had sought more youth feedback regarding the development of choreography. Fostering greater autonomy within this program would likely promote an increased sense of accomplishment among youth, an area of notable program weakness (Anderson-Butcher,

2005). In addition, consistent with the literature, the youths, staff, and parents felt that the program should be longer-term (Roth et al., 1998); a review of positive youth development programs in the United States has suggested nine months as a minimum length (Catalano et al., 2004).

5. What is the program's attendance and completion rate for youth? What factors promote participation? What factors lead youth to discontinue their participation?

Attendance and completion were problematic, despite much being done in an attempt to reduce attrition and improve attendance. Data from the program records indicate that 95 youths started the program and 50 youths completed the program. More specifically, 49% of the youths discontinued participation in the first session and 43% in the second session. The male youths discontinued at a higher rate than the female youths; however, reasons for this trend were not clear. In addition, the youths attended, on average, approximately 60% of program classes. Many physical activity intervention studies fail to report on issues of attendance (van Sluijs, McMinn, & Griffin, 2007); however, high attrition and attendance issues have been reported as common problems of community-based programs for youth and disadvantaged populations (Jago & Baranowski, 2004; Stone, McKenzie, Welk, & Booth, 1998; Taylor et al., 1998). According to the young people, parents, and staff, there were a number of factors that promoted youth participation, including the opportunity to learn something new, working toward a goal, having time away from parents and their communities, being a part of something special, and receiving prizes for regular attendance. Offering relevant and fun activities for youth is critical for the effective promotion of youth physical activity; importantly, hip-hop dance was reported as an activity that the young

people enjoyed (Eccles & Templeton, 2002; Freedson & Rowland, 1992). The accessibility of the program was also viewed as a significant factor promoting youth participation, including the free cost, program location, and recruitment strategies. Most of the young people who discontinued the program cited external factors for the cause of their drop-out. Thus, some of the attrition is likely due to external factors beyond the control of the program (e.g., poverty, competing demands such as homework and part-time jobs). However, a number of program implementation issues also likely contributed to the high attrition. For one, providing a consistently run program, where the timing of classes remains consistent, classes begin on time, and disciplinary issues are dealt with in an appropriate and timely fashion was found in one study to be the most significant predictor of attendance (Walker & Arbreton, 2005). In addition, high quality adult-youth relationships have been linked to enhanced program retention and impact (Anderson-Butcher, Cash, Saltzburg, Midle, & Pace, 2003; Rhodes, 2004). Future research needs to investigate the effect of attempts to reduce barriers to participation on rates of attendance and attrition, as the effect of this program's attempt to do so remains unknown.

6. To what extent are there adequate and appropriate resources (financial, space, and human) to implement and deliver the program?

Overall, the parents suggested that there were appropriate and sufficient resources available for this program. However, most staff stated that more resources were needed to completely implement the program, such as providing transportation assistance and achieving the intended outreach objective. On the other hand, some of the administrative demands described by the staff would likely not exist outside of evaluation efforts. The staff

and parents judged the location as both adequate and appropriate. However, the location of the program away from the community health centre did increase the challenge of linking youth and their families to SEOCHC services. This issue highlights an important dilemma of some of the factors that go into deciding on program location. Availability of free or low cost space is often limited in disadvantaged neighbourhoods, and, therefore, deciding on location often involves a series of compromises.

7. To what extent can the program be sustained?

All respondents agreed that the program should be continued. However, important modifications would be required in order to successfully continue the program, as previously described. Should these suggestions be adopted, additional resources would likely be needed. Finally, the funding of this program was a one-time non-renewable grant from United Way Ottawa. As is often the case with community-based programs, the continuation of this program will depend on securing additional funding (Lerner, & Thompson, 2002; Quinn, 1999).

Strengths, Limitations, and Lessons Learned

This evaluation had a number of strengths, such as the consideration of youth, parent, and personnel perspectives, multiple methods used to respond to each of the evaluation questions, and the community-based nature of the evaluation. However, several limitations need to be acknowledged. The parent findings represent the perspective of almost half of the parents whose youth completed the program. Although these parents' opinions

may differ from parents who declined to participate or from parents of youth who did not complete the program, they were highly consistent with personnel findings.

Focus group discussions and telephone interviews were important methods used for this evaluation. Evaluators and researchers have used focus groups, in particular, as a method of exploration that is suitable among many culturally diverse populations (Gardner, 2003). However, linguistic barriers may have rendered such an approach problematic for parents' participation. Indeed, some parents indicated not feeling sufficiently comfortable in either French or English to be able to express their opinions. One alternative could have been to facilitate the group with an interpreter; however, the budget for this project and the diversity of languages that would have required interpretation did not make this feasible.

Another aspect that has often been mentioned in evaluations involving diverse cultural groups is the importance of taking the time to build trusting relationships (Anderson-Draper, 2006; Gardner, 2003). Importantly, the nature of this evaluation allowed for the first author to build relationships with the youths, and often also their parents, by being present during many of the program's classes. However, the parent participants faced numerous constraints that could have been better accommodated to encourage greater participation. By using telephone interviews as a complementary way of accessing parent feedback, we were able to overcome some of this limitation and engage additional parents in the evaluation. Nonetheless, future evaluation efforts involving culturally diverse parents living in disadvantaged communities would likely benefit from providing transportation and childcare assistance. In addition, acknowledging parents' important contributions, through for example the use of honoraria, could also improve their involvement in the research (Chinman, Imm, & Wandersman, 2004).

Although the staff feedback on implementation was received across both sessions and by multiple means, it proved difficult to engage the youth coordinators from both sessions in this evaluation, and their limited feedback is a drawback. A likely contributor to this problem was the precarious nature of their work, while the other personnel were longer-term employees of SEOCHC or Culture Shock Canada. Finally, as suggested by Glasgow and colleagues (1999), investigation of implementation over less than one year is a limitation of this study. It is possible that implementation inconsistencies and concerns would have improved with a longer period of evaluation.

In conclusion, a recent review of implementation evidence highlighted core implementation components or "intervention drivers" of successful programs, including staff selection, training, ongoing consultation, and staff and program evaluation (Fixsen et al., 2005). In light of the present findings, it appears that the success of this program could have been impacted particularly by staff selection and training, in the sense that important staff inconsistencies and management issues were reported. Although the lead author consulted with personnel regarding issues throughout the intervention, more could have been done to promote intervention integrity in terms of formal training and ongoing consultation (Domitrovich & Greenberg, 2000). However, this program did involve the community and conducted a needs verification study prior to implementation, both factors that have been linked to greater program implementation (Fixsen et al., 2005). Amelioration of any areas of weakness would likely improve program implementation for this or other similar programs; it would also likely improve program effectiveness (Catalano et al., 2004). This study illustrated one program's strengths and weaknesses; more implementation

research is needed to better understand how other interventions work and why a particular intervention may or may not be effective.

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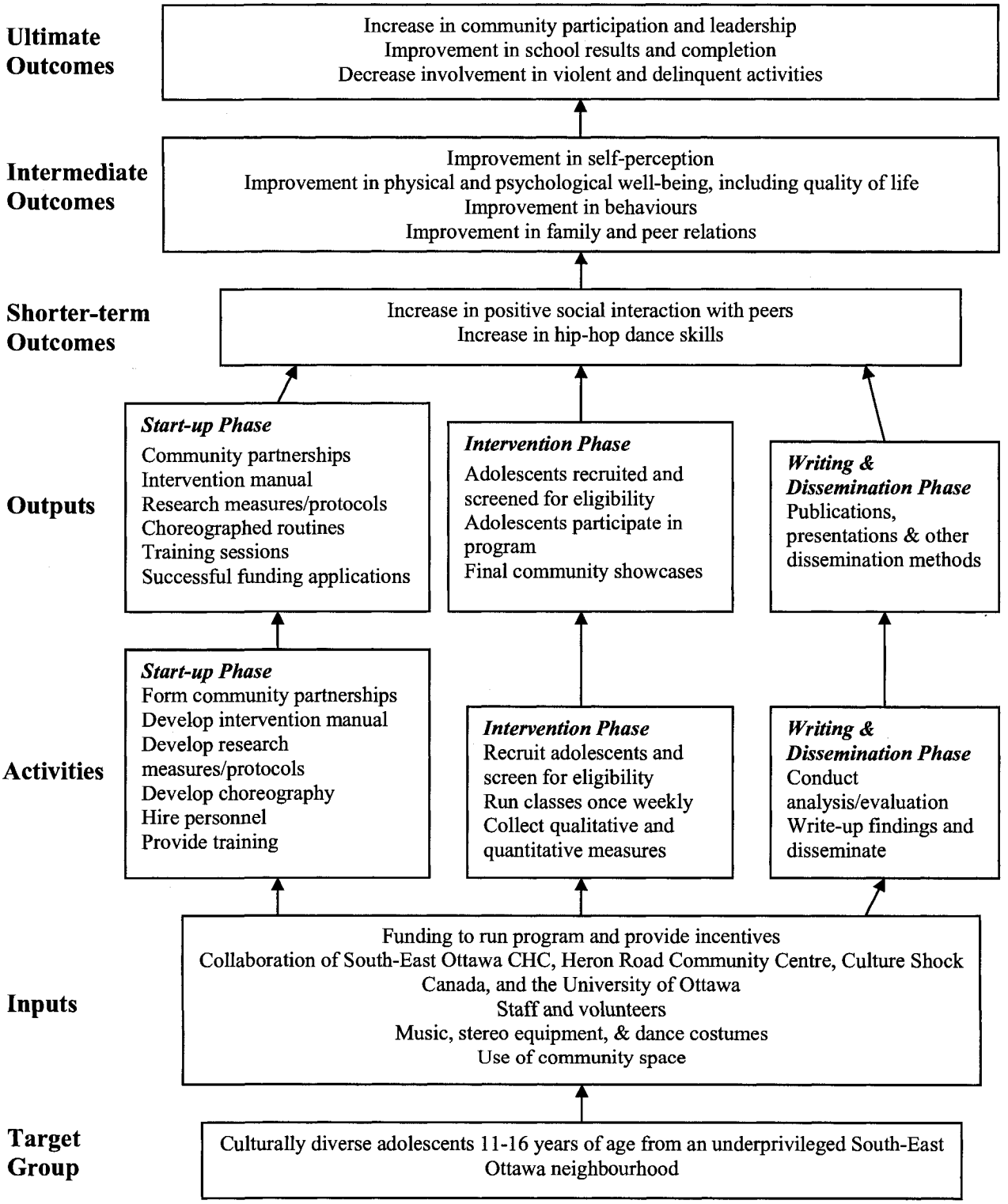
Appendix A

Program Logic Model



Appendix B

Program Fidelity Checklist

Instructions

- Thank you for agreeing to answer these questions. They ask about program delivery.
- Your answers will help us better understand the implementation of this new hip-hop dance program.
- The researchers will keep your answers confidential in cases where you want to remain anonymous.
- Please answer **ALL** of the questions.
- There are no right or wrong answers.
- If you do not understand a question, please ask for clarification.

Personnel and Researcher Program Fidelity Checklist - Revised

Question	Yes	No
1. Did this class run for 75 minutes?		
2. Was hip-hop dance taught during this class?		
3. Did a 5-minute sign-in and welcome take place during this class?		
4. Was there a 5 to 10-minute warm-up during this class?		
5. Was there a minimum of 40-minutes of moderate to intense aerobic hip-hop dance during this class?		
6. If during classes 1, 3, 5, 7, and 9 was new hip-hop choreography taught during this class? **OR** If during classes 2, 4, 6, 8, 10, 11, and 12, was time spent on improving and integrating the previously taught choreographed routines for the showcase performance?		
7. Was there a 5-minute break at the mid-point of the class?		
8. Was hip-hop music playing during parts of this class?		
9. Was an entire song-based routine(s) reviewed near the end of class?		
10. Were there any parents or non-program participants other than researchers and program personnel observing this class? **(N/A for 1st class)**		
11. Was there a 5-minute farewell period where youth were able to ask program personnel questions and say goodbye to other youth at the end of this class?		
12. Were there any behavioural problems that disrupted this class? ▪ **If yes, please indicate how many minutes of class instruction time were disrupted _____**		
13. Did any other activities take place during this class? ▪ **If yes, please explain.**		

Comments. Please note any concerns regarding the quality and implementation of the program.

Appendix C

Demographic and Information Questionnaire

1. How old are you? _____ years old (**please write #, e.g., 12**)

2. Sex (**CHECK ONE**)
   - ☐ Male
   - ☐ Female
   - ☐ Trans

3. How would you best describe your race/ethnicity (**CHECK ALL THAT APPLY**):
   - ☐ Arab/West Asian (e.g. Armenian, Egyptian, Iranian, Lebanese, Moroccan)
   - ☐ Black (e.g. African, Haitian, Jamaican, Somali)
   - ☐ Chinese
   - ☐ Filipino
   - ☐ Japanese
   - ☐ Korean
   - ☐ Latin-American
   - ☐ Native/Aboriginal people (e.g. North American Indian, Métis or Inuit/Eskimo)
   - ☐ South Asian (e.g. East Indian, Pakistani, Punjabi, Sri Lankan)
   - ☐ South East Asian (e.g. Cambodian, Indonesian, Laotian, Vietnamese)
   - ☐ White
   - ☐ Other (**please specify the ethnicity**) _____

4. What is your religion, if any (**CHECK ONE**)?
   - ☐ No religion
   - ☐ Buddhism
   - ☐ Christianity
   - ☐ Hinduism
   - ☐ Islam (Muslim)
   - ☐ Judaism
   - ☐ Sikhism
   - ☐ Other (**please specify the religion**) _____

5. How long have you lived in Canada? **(CHECK ONE)**
   - ☐ Since birth
   - ☐ More than 10 years
   - ☐ 5-10 years
   - ☐ Less than 5 years

6. What adult(s) do you currently live with most of the time (**CHECK ALL THAT APPLY**):
   - ☐ Birth father
   - ☐ Birth mother
   - ☐ Adoptive father
   - ☐ Adoptive mother
   - ☐ Step father
   - ☐ Step mother
   - ☐ Other (**please specify the adult**) _____

7. How many adults (19 or older) live at your home?_____ (**please write # e.g., 2**)

8. How many youth (0-18 years old) live at your home (including yourself)? _____ (**please write # e.g., 2**)

9. What is the highest level of education that your father or male guardian has completed? (**CHECK ONE**)
   - ☐ No schooling or some elementary (1 to 8 years)
   - ☐ Completed elementary
   - ☐ Some secondary
   - ☐ Completed secondary
   - ☐ Some post-secondary (university; community, technical or teacher's college; CEGEP)
   - ☐ Completed community college, technical college, or CEGEP
   - ☐ Completed university or teacher's college
   - ☐ Master's, Doctorate or professional degree (e.g., medical degree)
   - ☐ Other education or training
   - ☐ Don't know
   - ☐ Don't have a father or male guardian

10. What is the highest level of education that your mother or female guardian has completed? (**CHECK ONE**)
   - ☐ No schooling or some elementary (1 to 8 years)
   - ☐ Completed elementary
   - ☐ Some secondary
   - ☐ Completed secondary
   - ☐ Some post-secondary (university; community, technical or teacher's college; CEGEP)
   - ☐ Completed community college, technical college, or CEGEP
   - ☐ Completed university or teacher's college
   - ☐ Master's, Doctorate or professional degree (e.g., medical degree)
   - ☐ Other education or training
   - ☐ Don't know
   - ☐ Don't have a mother or female guardian

11. Does your family own or rent your home (**CHECK ONE**)?
    - ☐ Rent
    - ☐ Own

12. Does your family own a car, van or truck (**CHECK ONE**)?
    - ☐ No
    - ☐ Yes, one
    - ☐ Yes, two or more

13. Do you have your own bedroom for yourself (**CHECK ONE**)?
    - ☐ No
    - ☐ Yes

14. During the past 12 months, how many times did you travel away on holiday with your family (**CHECK ONE**)?
    - ☐ Not at all
    - ☐ Once
    - ☐ Twice
    - ☐ More than twice

15. How many computers does your family own (**CHECK ONE**)?
    - ☐ None
    - ☐ One
    - ☐ Two
    - ☐ More than two

16. During the past 30 days, how often did you go hungry because there was not enough food in your home (**CHECK ONE**)?
    - ☐ Never
    - ☐ Rarely
    - ☐ Sometimes
    - ☐ Most of the time
    - ☐ Always

Appendix D

Youth End-of-Hip-Hop Dance Class Survey

Instructions

- Thank you for agreeing to answer these questions. They ask about what you thought of the hip-hop classes, the instructors and other staff, and the program overall.
- Your answers will help us better understand this new hip-hop dance program and how to make it better.
- All your answers are confidential meaning that only the research staff will see your answers and your answers will not be connected to your name, only to your ID number
- The researchers will keep your answers PRIVATE. No one from your home, school, hip-hop program, or community will ever see what you write, so please answer honestly.
- Please answer **ALL** of the questions.
- There are no right or wrong answers. We want to know your honest opinion, bad and good.
- If you do not understand a question, please ask for help by raising your hand.
- If you want to change an answer, put a line through your first answer and then write your correct choice.

Youth End-of-Hip-Hop Dance Class Survey

Please help us make the hip-hop classes better by answering some questions about what you thought about the classes. Please answer Questions 1 to 8.

Overall Satisfaction Questions	**No, not at all**	**No, not really**	**Yes, a little**	**Yes, a lot**
1. Did you enjoy the hip-hop classes?				
2. Did you get what you wanted out of the hip-hop classes?				
3. Were you happy with the number of hip-hop classes offered (i.e., 13 classes)?				
4. Were you happy with the length of the hip-hop classes (i.e., 1 hour and 15 minutes)?				
5. Were you happy with how often the hip-hop classes were offered (i.e., once a week)?				
6. Overall, were you happy with the hip-hop classes?				
	No, definitely not	**No, I don't think so**	**Yes, I think so**	**Yes, definitely**
7. Would you come to this hip-hop class again?				
8. Would you suggest this hip-hop class to a friend?				

Below are some statements that might describe how you feel about the hip-hop classes. For each statement, please check whether you agree a lot, agree a little, have no opinion, disagree a little, or disagree a lot. Please answer Questions 9 to 12.

Inclusion Questions	**Agree a lot**	**Agree a little**	**No Opinion**	**Disagree a little**	**Disagree a lot**
9. I feel like I belong here					
10. I feel like my ideas count here					
11. This place is a comfortable place to hang out					
12. I feel like I matter here					

Thinking of the hip-hop dance program you are just completing, please check the response that is closest to how you feel about the hip-hop dance program for each of the following statements. Please answer Questions 13 to 35.

Classes	**No, not at all**	**No, not really**	**Yes, a little**	**Yes, a lot**
13. During the hip-hop classes I achieved things I thought were beyond my personal limits.				
14. The hip-hop classes were valuable for my personal growth and development.				
15. I found the hip-hop classes to be challenging.				
16. I found the hip-hop classes to be fun				
17. I achieved what I wanted to get out of the hip-hop classes.				
18. The hip-hop classes were worth the time and effort it took me to do them.				
Instructor 1 (X)				
19. (Instructor 1) was enthusiastic about the hip-hop classes.				
20. (Instructor 1) showed real interest in me personally.				
21. (Instructor 1) worked well with the group.				
22. (Instructor 1) had a good teaching style.				
23. Overall, I think that (Instructor 1) was an excellent instructor				
Instructor 2 (Y)				
24. (Instructor 2) was enthusiastic about the hip-hop classes.				
25. (Instructor 2) showed real interest in me personally.				
26. (Instructor 2) worked well with the group.				
27. (Instructor 2) had a good teaching style.				
28. Overall, I think that (Instructor 2) was an excellent instructor.				
Youth Coordinator				
29. (Coordinator) worked well with the group.				
30. (Coordinator) was very professional in her actions and style.				
31. Overall, I think that (Coordinator) was excellent.				
Staff Overall				
32. I felt safe at the hip-hop classes				
33. Staff could be trusted at the hip-hop classes				

	No, not at all	No, not really	Yes, a little	Yes, a lot
34. I could go to a staff member at the hip-hop classes for advice or help if I had a problem				
35. Staff treated all youth fairly at the hip-hop classes				

Other questions about the hip-hop project (*Please answer Questions 36 to 40)*

36. What did you like most about the hip-hop project?

37. What would you change about the hip-hop project to make it better?

38. Did you find the hip-hop project to fit for you in terms of your age, religion, culture, and background?
    Yes No
    a. Please explain

39. Do you feel that there were behavioural disturbances from any youth in the hip-hop classes that bothered you?
    Yes No
    i. ***If yes***, please explain:

40. What did you think about the program prizes and other rewards?

OTHER COMMENTS
Please use this space to write your own comments on the hip-hop classes, instructors, youth coordinator, and anything else about this project.

Thank you for your help!

Appendix E

Personnel Implementation Survey

Instructions

- Thank you for agreeing to answer these questions. They ask about program delivery, impact of program on youth, and strengths and weaknesses of the program.
- Your answers will help us better understand the implementation and impact of this new hip-hop dance program.
- The researchers will keep your answers confidential in cases where you want to remain anonymous.
- Please answer **ALL** of the questions.
- There are no right or wrong answers.
- If you do not understand a question, please ask for clarification.

Personnel Implementation Survey

1. Was the program delivered as planned? Yes No

2. Were there any changes to the program plan? Yes No
    i. *If yes*, please explain:

3. Did you notice a change in youth related to any of the following outcomes, that you feel is a result of youth's participation in this hip-hop dance program:

    i. Hip-hop dance skills? Yes No
        1. *If yes*, please explain:

    ii. Youth identity/self-esteem? Yes No
        1. *If yes*, please explain:

    iii. Physical or psychological well-being (e.g., fitness, depression) Yes No
        1. *If yes*, please explain:

    iv. Peer and family relationships? Yes No
        1. *If yes*, please explain:

    v. Youth behaviours (e.g., participation in recreational activities, drug use) Yes No
        1. *If yes*, please explain:

    vi. Other benefits Yes No
        1. *If yes*, please explain:

4. Did youth's participation in this program have any negative effects? Yes No
    i. *If yes*, please explain:

5. Do you feel that change is likely in the following longer-term outcomes, as a result of participation in this program:
    i. Community participation and leadership Yes No
        1. *If yes*, please explain:

    ii. School results and completion Yes No
        1. *If yes*, please explain:

    iii. Violent and delinquent activities Yes No
        1. *If yes*, please explain:

6. What were the specific elements of the program that you think lead to changes for youth?

7. What do you feel the youth liked most about the hip-hop dance program?

8. What would you change about the hip-hop dance program to make it better?

9. Do you feel that there were disturbances from any youth that negatively impacted on other youths' participation in this program? Yes No
    i. *If yes*, please explain:

10. Did you feel that there were adequate resources (financial, space, and human) to support the important program activities? Yes No
    i. *If no*, please explain:

OTHER COMMENTS Please use this space to write your own comments on the hip-hop dance program. This can be on the above questions or on anything else not covered

Thank you for your help!

Appendix F

Personnel Focus Group Questions

- Tell me what you think of this new hip-hop program.

- As the program staff, do you feel that you had adequate and appropriate training to do your job well?

- What do you feel the youth liked most about the hip-hop dance program?
- What did you think about having a girls-only AND co-ed class?

- Was the program delivered as planned?

- Did you notice any changes in youth that you think is a result of their participation in this program?
    1. Did your notice any negative consequences to youth's participation in this program?

- What were the specific elements of the program that you think lead to changes in psychological and social well-being for youth?

- Should this program be continued?
    1. Do you feel that there were adequate resources (financial, space, and human) to support the important program activities?
    2. Were the youth participating in the program appropriate or should the program have targeted or included different youth?

- Is there anything else you think would be important for us to know?

Appendix G

Parent/Guardian Focus Group Questions

1. Overall, what did you think of this hip-hop dance program for your children
2. What did you think about having a choice between a girls-only OR mixed girls and boys class?
3. How did this program make it easier for youth to participate in the classes?
4. What could this program have done differently to make it easier for youth to participate?
5. Did the program fit for your child in terms of his/her age, religion, and cultural background?
6. Now I'd like to ask your opinions about what you think the hip-hop program did for your children over the past three months.
7. Did your children's participation in this program have any negative consequences?
8. What do you feel your children liked most about the hip-hop dance program?
9. What do you feel your children did not like about the hip-hop dance program?
10. What would you change about the hip-hop dance program to make it better?
11. What did you think about having a showcase performance?
12. Should this program be continued?
13. Is there anything else you think would be important for us to know?

Appendix H

Table H1. Drop-out: Reasons by Format: Winter Session

Reason for Drop-out	Girls-only (N=40)	Co-ed (N=27)	Overall (N=67)
Busy – schoolwork	10	1	11
Busy – other	2	5	7
Illness	1	0	1
Transportation problems	0	1	1
No longer interested	4	3	7
Other/Unknown	4	2	5
Total	21	12	33

Table H2. Drop-out: Reasons by Format: Spring Session

Reason for Drop-out	Girls-only (N=11)	Co-ed (N=17)	Overall (N=28)
Busy – schoolwork	1	1	2
Busy – other	0	4	4
Illness	0	0	0
Transportation problems	0	0	0
No longer interested	1	2	3
Unknown	2	1	3
Total	4	8	12

Appendix I

Table I1. Missed Classes: Reasons by Format: Winter Session

Reason for Missed Class	Girls-only (N=40)	Co-ed (N=27)	Overall (N=67)
Busy – schoolwork	25	9	34
Busy – other	12	17	29
Illness	30	15	45
Transportation problems	8	11	19
Forgot	0	2	2
Weather	2	3	5
Other/Unknown	12	9	21
Total	89	66	155

Table I2. Missed Classes: Reasons by Format: Spring Session

Reason for Missed Class	Girls-only (N=11)	Co-ed (N=17)	Overall (N=28)
Busy – schoolwork	2	6	8
Busy – other	11	13	24
Illness	3	3	6
Transportation problems	0	0	0
Forgot	1	0	1
Weather	0	0	0
Other/Unknown	3	6	9
Started program late	0	9	9
Total	20	37	57

Author Note

Julie Beaulac, Marcela Olavarria, and Elizabeth Kristjansson, Department of Psychology, University of Ottawa. Julie Beaulac conceived of the study concept and design. Julie Beaulac and Marcela Olavarria collected, analyzed, and interpreted the data. Julie Beaulac drafted the paper and Marcela Olavarria and Elizabeth Kristjansson critically revised it for important intellectual content. All authors gave final approval of the version to be published.

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Correspondence concerning this article should be addressed to Julie Beaulac, School of Psychology, 125 University, Montpetit Hall, room 416A, University of Ottawa, Ottawa, Canada, K1N 6N5, or through e-mail jbeau080@uottawa.ca

Footnotes

[1] A slightly revised 13-item checklist was used for the second session. Two items were removed from the original 14-item checklist as they were not deemed necessary elements of the program ("Did the instructor use hand signals to direct program participants during this class?" And, "Was there a 10-minute cool-down period involving stretching exercises during this class?"). In addition, one item was modified ("Was a variety of hip-hop music playing during parts of this class?" was changed to "Was hip-hop music playing during parts of this class?"). Finally, one item was added to the checklist to reflect the importance of having a short water break ("Was there a 5-minute break at the mid-point of the class?").

[2] For the first session, one of the 14 items was excluded from the overall fidelity score (i.e., did any other activities take place during this class?) as it was felt that the perceived unexpected activities were part of the intended program despite not being reflected in the checklist (e.g., encouraging discussion on practicing, handing out of participation prizes).

[3] In the first session, the program fidelity checklist was used by the two dance instructors and two researchers. In the second session, it was used by the two dance instructors, one researcher, and one youth coordinator.

[4] The parents/guardians of the 34 youths who had completed the program were recruited for the focus groups by telephone. Some young people, particularly the older youths, did not want their parents to be invited to participate in the focus group discussion, citing reasons such as embarrassment and parents not feeling comfortable participating in English. In these cases, the youths wishes were respected and six parents were not invited to

participate. For the parents invited to participate, a choice among three times was provided, and the two most convenient times to the parents/guardians were selected. Both parent focus groups were held in a boardroom at Heron Road Community Centre, the location of the hip-hop program. The parents who declined participation cited such reasons as not having the time, not feeling comfortable having a conversation in English, and not feeling that they would have opinions to contribute to the discussion. Initially, 14 participants agreed to participate in a focus group discussion. All interested participants received a telephone call reminder the evening before the focus group discussion. Reasons for missing the scheduled focus group were assessed and included a death in the family, a last minute work schedule conflict, unexpected visitors from out-of-town, not feeling comfortable having a conversation in English, and forgetting.

[5]Details on attendance, including reasons for drop-out or missing classes, are available upon request to first author.

Running head: IMPACT OF A HIP-HOP DANCE PROGRAM

"Bigger than Hip-Hop?"

Impact of a Community-Based Physical Activity Program on the Psychosocial and Physical Well-being of Youth Living in a Disadvantaged Neighbourhood

Beaulac, J., B.A. [1]

Kristjansson, E., Ph.D[12]

School of Psychology, University of Ottawa[1]

Institute of Population Health, University of Ottawa[2]

Abstract

Youth from low socio-economic, minority, and other disadvantaged groups tend to be less physically active and to have poorer health than other youth. With this in mind, a community-academic partnership was formed and a new hip-hop dance program for youth was implemented in a multicultural, disadvantaged urban community in Ottawa. This study sought to assess the extent to which this new program resulted in improved psychological, social, and physical well-being. 95 youths between 11 and 16 years of age participated in one of two 3-month sessions, the first in the winter and the second in the spring. A girls-only and co-ed format were offered both sessions. A mixed methods approach was used that included a quantitative survey with all of the youths, interviews with 14 youth participants, focus groups or telephone interviews with 12 parents, and a focus group and survey with program personnel. Quantitatively, a significant effect was found for improved hip-hop dance skills; however, issues of statistical power and attrition problems probably minimized other quantitative findings. The qualitative findings were more promising and suggested young people benefited from this program. The youths, parents, and/or personnel described benefits across eight main areas, including dancing and other related skills, behaviours (e.g., physical activity, watching television), overall health, physical well-being, psychological well-being, relationships, respect, and school performance. Overall, the findings suggested that the intervention was a promising program for the promotion of youth well-being; however, future research needs to confirm the benefits of the program for the pilot community and other communities. In addition, this study highlighted important program elements that led to the perceived benefits. These lessons could be applied to other prevention and promotion programs targeting urban disadvantaged communities.

"Bigger than Hip-Hop?" Impact of a Community-Based Physical Activity Program on the Psychosocial and Physical Well-being of Youth Living in a Disadvantaged Neighbourhood

Participation in physical activity is important for the positive development and well-being of young people. It is associated with improved physical and psychological well-being (Biddle, Gorely, & Stensel, 2004; Calfas & Taylor, 1994; Hansen, Stevens, & Coast, 2001; McAuley, 1994; Schmalz, Deane, Birch, & Krahnstoever Davison, 2007; Steptoe & Butler, 1996; Strong et al., 2005; Task Force on Community Preventive Services, 2002), lower rates of delinquency, involvement in risky behaviours, and substance abuse, increased prosocial activities and educational progress, and higher educational aspirations (Eccles & Baber, 1999; Holland & Andre, 1987; Jones & Offord, 1989; Youniss, Yates, & Su, 1997). Effective promotion of physical activity is considered critical for youth development, given its vast benefits.

Childhood and adolescence are key times to intervene with physical activity programmes, as it is during these time periods that long-term health behaviours such as physical activity and dietary patterns begin to be developed. Adolescence may be a particularly important time to intervene given its significance in the formation of self-identity, growth, and independence. It is also a period of increased stress (Fardy et al., 2005). Unfortunately, young people tend to become significantly less active during this period (Aaron, Storti, Robertson, Kriska, & LaPorte, 2002) and a large proportion of children and adolescents are not sufficiently physically active to experience health benefits (Craig & Cameron, 2004; Stone, McKenzie, Welk, & Booth, 1998; Wharf Higgins, Gaul, Gibbons, & Van Gyn, 2003). In Canada, only 36% of adolescents aged 13-17 are considered active, compared to 49% of younger school-aged children (Craig, Cameron, Russell, &

Beaulieu, 2001). This is a cause for concern as patterns of physical activity in youth are significantly related to adult levels of physical activity (Biddle & Mutrie, 2001; Gordon-Larsen, Nelson, & Popkin, 2004; Stone et al., 1998). It is also of great concern given the current obesity epidemic as physical inactivity is a risk factor for the development of obesity (Klebanoff & Muramatsu, 2002; Salmon, Booth, Phongsavan, Murphy, & Timperio, 2007).

The problem of physical inactivity is even greater for young people who are socially or economically disadvantaged (Active Healthy Kids Canada, 2007; Burton, Turrell, & Oldenburg, 2003; Kristjansdottir & Vilhjalmsson, 2001; Taylor, Baranowski, & Young, 1998). For example, data from the 2003 Canadian Community Health Survey indicated that low income youth, immigrant youth, and First Nations youth had a much higher risk (30%, 21%, and 29% respectively) of being physically inactive than more advantaged youth (Mo, Turner, Kreski, & Mo, 2005). Not only are socially or economically disadvantaged youth more likely to be physically inactive but they also tend to have poorer health, live in more stressful environments, and are at higher risk for numerous negative outcomes, particularly for those young people living in disadvantaged neighbourhoods (Crews, Lochbaum, & Landers, 2004; Gonzales, George, Fernandez, & Huerta, 2005; Grant, Behling, Gipson, & Ford, 2005).

The discrepancy in physical activity rates between advantaged and disadvantaged youth is an example of a social inequality in health behaviours. It is critically important to intervene to reduce such inequalities in health and to conduct research on whether or not interventions actually work in improving the health of those who are socio-economically disadvantaged. The causes of socio-economic differences in health are complex and deeply rooted in social, cultural, and other contextual factors, as well as individual and

interpersonal factors (Wilkinson, 1996). To date, most research has focused on individual-level factors related to health behaviours; however, research is increasingly supporting the contribution of environmental factors to health behaviours. For instance, access to recreational equipment, facilities, programs, and other opportunities have been linked to participation in physical activity for youth (Klebanoff & Muramatsu, 2002; Norman et al., 2006; Romero, 2005; Sallis, 1994). Too often, these resources are unevenly distributed between advantaged and disadvantaged neighbourhoods, leaving socially or economically disadvantaged young people with reduced access to resources (Quinn, 1999; The Canadian Council on Social Development, 2001).

Comprehensive approaches targeting a combination of individual and environmental factors are needed, such as a social ecological framework (Biddle et al., 2004; Giles-Corti & Donovan, 2002; Sallis, 1994). Despite this, health promotion and intervention efforts have generally neglected the role of the social and physical environment (Giles-Corti & Donovan, 2002; Lévesque, Guilbault, Delmormier, & Potvin, 2005; Schooler, 1995). Individual-level approaches have been met with only limited success (Sallis & Owen, 1997), particularly for disadvantaged populations (Gauvin, 2003; Gepkins & Gunning-Schepers, 1996; Yancey, Ory, & Davis, 2006). Many interventions actually neglect the health of disadvantaged populations. It is becoming increasingly apparent that interventions need to go beyond individual behaviour change to target multiple levels of influence (Brodersen, Steptoe, Williamson, & Wardle, 2005). The Task Force on Community Preventive Services (2002) has strongly recommended that physical activity interventions for adolescents focus on improving access to physical activity and strengthening social networks. An intervention

that follows these recommendations within the context of a disadvantaged community would be consistent with a social-ecological framework.

Communities are one setting for physical activity programs that allow for the consideration of multiple levels of influence when targeting behaviour change (Pate, Trost, Mullis, Sallis, Wechsler, & Brown, 2000). However, most intervention studies involving young people to date have focused on school-based curricular interventions (Marcus et al., 2006; Salmon et al., 2007; Stone et al., 1998). Overall, the evidence on the effectiveness of these interventions for adolescents is inconclusive, while interventions that combine school-based interventions with the community or family have demonstrated strong support (van Sluijs, McMinn, & Griffin, 2007). Two such studies that have demonstrated positive outcomes include the CATCH (Child and Adolescent Trial for Cardiovascular Health) program and SPARK (Sports, Play, and Active Recreation for Kids) (Nader et al., 1999; Sallis et al., 1997).

The evidence on the effectiveness of physical activity interventions for adolescents in community settings is very limited and thus inconclusive (Biddle et al., 2004; Jago & Baranowski, 2004; Pate et al., 2003). A recent review of controlled trials reported only one physical activity intervention study that took place in a community setting, two studies that targeted lower SES adolescents, and no studies that targeted ethnic minority adolescents (van Sluijs et al., 2007). In contrast, there are some non-experimental studies. One example, Daughters and Mothers Exercising Together, involved a 12-week family-based physical activity program offered in the community that targeted female youth between the ages of 11 and 17 and their mothers, including a significant minority of Hispanic participants. Significant improvements were found for sport competence, physical condition, and strength

and muscularity for mothers and daughters when comparing pre- to post-intervention (Ransdell, Dratt, Kennedy, O'Neill, & DeVoe, 2001). Another example is by Resnicow and colleagues (2000), who investigated a six-month community-based physical activity and nutrition intervention involving overweight African American adolescent women from inner-city public housing developments. A pre-post comparison between high and low intervention attenders found statistically significant differences in nutrition-related outcomes and perceived social support favouring high attenders. Overall, the evidence suggests that community-based physical activity interventions for adolescents are probably effective in increasing physical activity and improving the physical health of adolescents. Particularly limited are any type of study that has explored the effectiveness of community-based physical activity interventions for promoting psychological and social aspects of well-being, and for lower-income and culturally diverse adolescents (Duda & Allison, 1990; Stone et al., 1998; Salmon et al., 2007; van Sluijs et al., 2007). In order to effectively respond to the problem of physical inactivity and its consequences for disadvantaged young people, we need to investigate approaches to promote physical activity, including community-based interventions.

The Present Study

With this in mind, a community-academic partnership was developed to respond to an identified need for innovative, pro-social, structured, relevant, and accessible physical activity programs in South-East Ottawa, a lower-income, multicultural, and resource-poor urban community in Ottawa, Canada. Prior to implementing a new community-based physical activity program, an intervention conceptualization phase was conducted. In brief, a hip-hop dance program offered by Culture Shock Canada, a non-profit organization that uses

hip-hop dance as a tool to promote youth well-being, was identified as a particularly relevant physical activity program for disadvantaged young people. The first reason in support of this program is that it is a structured voluntary activity (SVA), a leisure activity organized by caring adults that is intrinsically motivating, requires engagement in the activity, and involves significant effort. Such activities have demonstrated benefits for positive youth development, such as improved physical skills, emotional functioning, and initiative (Larson, 2000; Larson & Seepersad, 2003).

The second reason in support of this program is that hip-hop dance is arguably an age-appropriate and culturally-relevant intervention for adolescents living in disadvantaged urban contexts. Hip-hop's roots are in black urban American culture; however, today "it has evolved into a cultural form that transcends race, color, and gender..." (Wilkins, 1999, pp. 108). Despite some hip-hop being viewed as a negative influence for youth, hip-hop is hugely popular among young people today, and, therefore, represents an important opportunity for intervention. Hip-hop does not require any special equipment and is a non-competitive form of dance that is suitable for people of all abilities (Marsh & Peart, 1988). Importantly, hip-hop dance allows young people the freedom to create movement that suits their own style.

Another reason in support of this program is that hip-hop dance also has potential for fostering positive social involvement, a critical factor implicated in the promotion of physical activity and well-being among young people (Roth, Brooks-Gunn, Murray, & Foster, 1998). In addition, previous research has demonstrated physical activity interventions with a hip-hop component to be an appealing and effective intervention for socially and economically disadvantaged children and adolescents (Fitzgibbon, Stolley,

Dyer, VanHorn, & KauferChristoffel, 2002; Flores, 1995). Finally, the developmental phase of this project confirmed that a hip-hop dance program would appeal to young people in the target community (see Beaulac, Bouchard, & Kristjansson, in press for more details).

Previous physical activity intervention research has suffered from methodological flaws and poor reporting (Salmon et al., 2007). In an attempt to overcome some of the weaknesses of past studies, this project adopted the RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, Maintenance) as it evaluates interventions along multiple dimensions, including impact at the individual- and organizational-level. Consequently, this framework is compatible with the social-ecological model and is more able to assess generalizability and potential public health impact (Estabrooks & Gyurcsik, 2003; Glasgow, Vogt, & Boles, 1999). The purpose of this paper is to investigate the reach, effectiveness, and short term maintenance of the intervention. The primary objective of this paper is to describe the perceived impact of a weekly community-based hip-hop dance program on the psychological, social, and physical well-being of adolescent participants, in addition to identifying the intervention elements linked to the perceived changes. Effectiveness was evaluated both immediately after the intervention and at a short-term follow-up period. The reach of the intervention was assessed by comparing the youths who completed and the youths who did not complete the program. Other findings related to reach and maintenance, in addition to implementation, are reported elsewhere (see Beaulac, Olavarria, & Kristjansson, 2008).

Method

Participants

The target population for this study was lower-income or otherwise disadvantaged young people. Therefore, the intervention was implemented in a lower-income, disadvantaged, and multicultural community in the south-east area of the City of Ottawa, Canada. A needs assessment and survey of health indicators of South-East Ottawa indicated that this area is socially and economically disadvantaged, as evidenced by a high percentage of immigrant and visible minority youth and a higher incidence of poverty compared to the general population in Ottawa. The target neighbourhoods have a higher proportion of youth compared to other areas in Ottawa. Furthermore, the overall health of young people in South-East Ottawa is poorer (Social Planning Council of Ottawa, 2005).

Ninety-five young people participated in the hip-hop dance program and completed the quantitative outcome measure pre-intervention (67 from session 1 and 28 from session 2); four questionnaires from the first session were spoiled and not included in the analysis. Therefore, the total baseline sample included 91 participants. Post-intervention, 48 youths completed this same measure (36 from session 1 and 12 from session 2); however, six of these youths did not attend six or more of the hip-hop classes and were excluded from the outcome analysis. The total post-intervention sample included 42 participants. In addition, a follow-up assessment was conducted with the first session participants. Eleven youths from the first session completed both post-intervention and follow-up measures and have been included in an exploratory analysis.

Inclusion criteria

All youth living in the target community were invited to participate if they met the inclusion criteria, which were confirmed orally or with a brief screening questionnaire (see Appendix A). Inclusion criteria comprised: 1) between the ages of 11 and 16 years; 2) no planned move from South-East Ottawa for the duration of the study; 3) no previous participation in a Culture Shock Canada hip-hop program; 4) fluency in English; and, 5) participation in the research portion of the program. Adolescents at high-risk for cardiovascular diseases and other heath problems were included as long as they reported being able to participate in moderate intensity physical activity. Ineligible adolescents were linked to other community resources by the South-East Ottawa Community Health Centre (SEOCHC) health promoter for youth.

Recruitment

Recruitment began two months in advance of the program start date and included the distribution of an information flyer to partnering organizations and to nearby public and Catholic intermediate and secondary schools, community outreach activities, and on-site registration at Heron Road Community Centre (see Appendix B). Youth were recruited by the researcher, the SEOCHC youth health promoter, and the SEOCHC program youth coordinator through outreach activities that included a community information tour to main community social housing sites, one public high school, and one shopping centre, which were all within the target community of South-East Ottawa. This tour gave interested youth and/or their parent/guardians an opportunity to ask questions related to the program and research. Every attempt was made to appeal to both male and female adolescents during

recruitment. For instance, outreach was conducted by a young adult male and females of diverse ethnicities.

Registration packages were distributed during the community information tour; young people and their parent/guardians were asked to complete the assent and consent forms then or to return the forms to a community partner (see Appendix C for original registration package; see Appendix D for revised session 2 assent and consent form). Registration packages were also made available for young people to pick up at SEOCHC and Heron Road Community Centre and were mailed to interested youth/parents upon request. In addition, registered youths were encouraged to invite friends. A second registration period involving similar although less intensive means took place prior to the start of the second program session.

Intervention

This intervention was developed based on a thorough review of the literature, focus group discussions with youth and parents (see Beaulac, Bouchard, & Kristjansson, in press), and ongoing conversations with community partners. The hip-hop dance model that was used was based on the youth program model developed by Culture Shock Canada and supplemented with principles of positive youth development. Emphasis was placed on improving hip-hop dance skills but also on fostering positive and supportive relationships with peers and adult role models (Kahne et al., 2001; Roth et al., 1998). Furthermore, factors related to youth participation and to retention were considered in the development of this intervention (e.g., emphasizing progress and mastery rather than perfection; Anderson-Butcher, 2005).

The intervention took place in a dance room at a community recreation centre in a disadvantaged neighbourhood of South-East Ottawa and was offered at no cost. Given that the intervention conceptualization study indicated that female youth may have preferred a girls-only format, whereas boys and parents may have preferred a mixed girls and boys format (see Beaulac, Bouchard, & Kristjansson, in press), both types of formats were offered. The winter session ran for thirteen weeks (November 2006 to February 2007), and the spring session ran for twelve weeks (April to June 2007). New hip-hop routines were to be taught during every odd-numbered class (except for the final class for session 1), with even-numbered classes used to improve and integrate the previously taught choreographed routines. Choreography was song-based; however, a variety of music was used in teaching the routines and an attempt was made to select youth-appropriate hip-hop music. The winter session paused for two weeks over the Christmas holidays, and the spring session paused for one week over March Break. Both sessions ran for 1 hour and 15 minutes once weekly on Tuesday evenings (see Appendix E).

The frequency of the hip-hop dance classes was not ideal in terms of amount of physical activity (Blair, LaMonte, & Nichaman, 2004); however, all community partners felt very strongly that a greater frequency would limit participation. Furthermore, findings from the intervention conceptualization study (see Beaulac, Bouchard, & Kristjansson, in press) supported this frequency. Once weekly is also consistent with typical community recreation programming, and thus more ecologically valid. Program instructors and staff conveyed the expectation that it was important for youth to attend the classes on a weekly basis, as this type of encouragement has been shown to lead to more regular participation (Little & Lauver, 2005).

As a result of the intervention conceptualization study, parents/guardians and siblings were not permitted to attend the program beyond the first class. However, showcase performances for parents, siblings, friends, and other community members were held one week after the final class for both sessions. In addition, a community-wide showcase including all Culture Shock Canada youth outreach programs, their semi-professional dance troupes, and hip-hop dance troupes from several other Canadian and American cities took place in July, 2007, after both sessions had finished. All the youths were invited to participate in this showcase. Involvement of the participants in the final showcase performance, including invitations to the first session youth, two preparation classes, and the July showcase, all took place beyond the research stage of this project.

The intervention was taught by two qualified Culture Shock Canada hip-hop dance instructors who have experience teaching and working with lower-income and culturally diverse youth. One instructor was a black female and one instructor was a white male. The style of instruction was planned to be enthusiastic and firm, but fair. A youth coordinator was intended to provide additional on-site assistance to the instructors and youth participants; however, the youth coordinator was often providing transportation assistance or otherwise absent (see Beaulac, Olavarria, & Kristjansson, 2008). As a result, the first author, who was present most classes to monitor the implementation of the program, provided assistance when necessary. Every attempt was made to keep the instructors and staff blind to the specific study hypotheses; however, it was not possible to blind them to the overall goals, as the project represented a collaborative effort.

In an effort to improve intervention integrity, the proposed intervention was delivered according to a structured intervention manual (Beaulac, 2006). Consistency of

program delivery was further ensured by having the same sequence of hip-hop dance routines and activities taught each class across the two formats (co-ed and girls-only) and during the two sessions (session 1 and 2). In addition, the fidelity and quality of program implementation was monitored and is reported elsewhere (see Beaulac, Olavarria, & Kristjansson, 2008).

Study Design

Ethics approval was obtained from the University of Ottawa prior to this study commencing. Initially, we had planned for a randomized control design; however, due to a lower sample size than anticipated and significant community resistance to randomization, we used a pretest-postest design. A three-month follow-up period was included for session 1 to allow for the sustainability of any intervention benefits to be investigated. It was not feasible to do the same for the second session due to timing (the youths would have been on summer holidays).

The participants who missed a dance class received a phone call from the youth coordinator or lead researcher assessing the reasons for missing the class, providing assistance with seeking solutions to missing a class, and reminding them of the next scheduled class (see Appendix F). The youths who dropped out of the project entirely were asked about their reason(s) for discontinuing, either in person or by phone. All of the participants received a debriefing letter at the end of the study period (see Appendix G).

Empirical evidence and community experience indicate that providing compensation to disadvantaged populations is critical for their involvement in research and intervention programs. Therefore, a number of evidence-based strategies were used to promote greater youth participation (Chinman, Imm, & Wandersman, 2004). The free hip-hop dance classes

were the main compensation for participating in the research study. In an effort to encourage regular participation in the program, two draws for prizes were held during each session for each format. The participants who attended at least five of the first six classes were entered into the first draw to win two activity passes (e.g., rock climbing gym) and a compact disc, and those missing no more than one of the second half of six or seven classes were entered into the second draw to win an MP3 player. Finally, transportation assistance was provided in the form of a ride in the SEOCHC van or bus tickets to those participants most in need of transportation.

As compensation for completing the study assessments, the participants received a water bottle with the program logo at time 1, a t-shirt with the program logo at time 2, and, in the case of the first session participants, a choice of two stationery items (e.g., journal, photo album, address book) at time 3. The youths participating in a qualitative interview were entered into a draw with a chance to win a $20 gift certificate to the music or sports store of their choice. Snacks and beverages were also provided at all assessment time points.

Measures

Mixed methods were used to evaluate the study outcomes in an effort to maximize on the strengths of both analytic approaches and to corroborate findings (Johnson & Onwuegbuzie, 2004). Adolescent participants were asked to complete the following measures: 1) demographic information (1 time: pre-intervention: see Appendix H); 2) a battery of self-report measures assessing psychological, social, and physical well-being, which took approximately 30 minutes to complete (2-3 times: pre- and post-intervention for both sessions, and follow-up for session 1: see Appendix I); and, 3) open-ended qualitative interviews post-intervention (for 14 youth from session 1; see Appendix J). The youths were

reminded of upcoming assessment classes one week in advance either in class or by phone (see Appendix K).

Demographic Information Questionnaire

A questionnaire based on national surveys such as the National Longitudinal Survey of Children and Youth (NLSCY) was used to gather information on age, sex, race/ethnicity, religion, number of years living in Canada, household characteristics, and socio-economic status (SES). The SES measures comprised parent education and the family affluence scale II (FAS II: Boyce, Torsheim, Currie, & Zambon, 2006). The FAS II consists of four questions related to material wealth that has demonstrated more reliable and accurate responses from youth than questions of family income (Batista-Foguet, Fortiana, Currie, & Villalbí, 2004; Boyce et al., 2006; Currie, Elton, Todd, & Platt, 1997). The questions include 1) having an unshared bedroom; 2) family car, van, or truck ownership; 3) frequency of going away on holidays during the past 12 months; and, 4) computer ownership. A composite score of the four FAS-II items was calculated and the participants were placed along a three-point ordinal scale (low affluence = 0,1,2; middle affluence = 3,4,5; high affluence = 6,7,8,9: Boyce et al., 2006).

Outcome Measures

Hip-hop dance. Perceived hip-hop dance skills were assessed by a single item on a 5-point Likert scale (1 = poor to 5 = excellent)

Self-perception. Self-perception was assessed with seven subscales from the Adolescent Self-Perception Profile – Revised (SPPA-R: Wichstrøm, 1995): a 45-item 4-point Likert measure (1 = describes me very well, 4 = describes me very poorly). This measure assesses global self-worth in addition to eight domains related to adolescents' self-

perceived competencies. The seven subscales comprised school competence, social acceptance, athletic competence, physical appearance, behavioural conduct, close friends, and global self-worth. This revised scale has higher reliability and validity for adolescents 13 to 20 years of age than the original version (Wichstrøm, 1995). More specifically, internal consistency for all scales of the SPPA-R, except for behavioural conduct and job competence, which were not included in the measure's validation, were reported to be between .69 and .87. Satisfactory factorial and construct validity has also been reported.

Quality of life. Health-related quality of life was assessed by means of the Pediatric Quality of Life Inventory Teen Report (Varni, 1998), a 5-point Likert scale (1 = never, 5 = almost always), made up of four scales: physical functioning, emotional functioning, social functioning, and school functioning. The youth participants were asked to rate how much of a problem they had in the previous month on 23 items (e.g., "I have low energy," "I feel sad or blue," "Other teens tease me," "I have trouble keeping up with my schoolwork"). This scale is a reliable and valid measure (Varni, Seid, & Rode, 1999; Varni, Seid, & Kurtin, 2001). Internal consistency for the total scale score has been reported to be .88.

Injuries. In order to evaluate the potential for adverse effects of adolescents' participation in this program, the youth participants were asked to report on injuries requiring medical attention, including the number of injuries and whether any of the injuries were related to the hip-hop dance program.

Behavioural problems. The American version of the Strengths and Difficulties Questionnaire (SDQ: Goodman, 2000) contains 25 items asking across five scales: conduct problems, hyperactivity-inattention, emotional symptoms, peer problems, and prosocial behaviour. The youth participants responded to how true each item was for the them along a

3-point Likert scale (not true, somewhat true, certainly true). The time frame given is typically six months but, for the purpose of this study, was modified to three months. Some examples of items include, "I usually do as I am told," "I have one good friend or more," and "I am often accused of lying or cheating." Scale totals and a total difficulties score (including all scales except for prosocial behaviour) were calculated. This measure is standardized and has been used extensively in numerous countries (Vostanis, 2006). Internal consistency of the total difficulties scale has been reported as .83 (Bourdon, Goodman, Rae, Simpson, & Koretz, 2005) and as between .46 and .77 for the five subscales (Bourdon et al., 2005; Goodman, Meltzer, & Bailey, 2003). It has also demonstrated discriminant validity between community and psychiatric samples (Goodman et al., 2003).

Physical activity and sedentary behaviours. The PACE+ Adolescent Physical Activity Measure (Prochaska, Sallis, & Long, 2001) was used to assess youth participants' participation in physical activity outside of time spent in the hip-hop program. Physical activity was defined as any activity that increases their heart rate and makes them get out of breath some of the time. Examples of physical activity provided included running, fast walking, rollerblading, biking, dancing, skateboarding, swimming, soccer, basketball, and football. The participants were asked to add up all the time they spend in physical activity each day, not including their time in the hip-hop program, and how many days they were physically active for a total of at least 60 minutes per day over the past 7 days. They were then asked to report on their physical activity during a typical week. This measure was developed to be consistent with national US guidelines for youth participation in moderate physical activity. Canadian guidelines for youth are similar (Public Health Agency of Canada, 2002). Test-retest results suggest that this measure is reliable (ICC = .79, $\kappa = 61\%$).

This measure was also validated by accelerometer (Prochaska et al., 2001). At the end of the questionnaire, participants were asked how honestly they answered the questionnaire: very honestly, somewhat honestly, or not very honestly.

Qualitative interviews. One-on-one, face-to-face interviews were conducted with 14 participants from the first session, chosen purposefully to reflect the diversity of the participants in this intervention (see Appendix J). All the young people who were approached to participate in the interview initially agreed; however, two interviewees later cancelled due to other commitments. The final group of interviewees included seven participants from the girls-only format and seven participants from the co-ed format (3 male, 4 female).

These interviews aimed to gain a more in-depth view of the perceived impact of the hip-hop program by allowing the participants to describe their experience in their own words. The participants were asked questions such as 'Tell me how the hip-hop dance program has affected you?', 'What did the classes do for you?' and 'What about the hip-hop dance classes do you think made the difference?' In addition, program acceptability was assessed by asking questions such as 'What would you change about the program to make it better?' The interviews took place at the Heron Road Community Centre, a community house, or at a local library within two weeks following the end of the program.

Focus groups. Three focus groups were conducted during March and April, 2007, after the first program session had been completed; one focus group was completed with program personnel, and two focus groups were conducted with the parents/guardians of the youths involved in the program. The primary objective of the focus groups was to assess program implementation from the perspective of program personnel and parents/guardians

(see Beaulac, Olavarria, & Kristjansson, 2008). A secondary objective was to assess the perceived impact of the program. In brief, the focus group with program personnel included the four individuals who were most involved in the new hip-hop program, namely, the two dance instructors and two health promoters for youth. The parent focus groups included one father, three mothers, and one grandmother, three of whom were connected to youth from the co-ed group and three from the girls-only group. Additional telephone interviews were conducted with seven parents (four from the co-ed group and three from the girls-only group). All discussions were in English, except for one telephone interview which was held in French.

Personnel survey. A 9-item survey was developed to assess program implementation and perceived impact from the perspective of program personnel. In brief, the survey was completed at the final class for both sessions by five separate personnel members, two of whom completed the survey for both sessions (see Beaulac, Olavarria, & Kristjansson, 2008).

Analysis

Quantitative data were first prepared for analysis by double entering 10% of data to check for accuracy of data entry. Subsequently, the data were screened for normal distribution and other problems of concern for the planned statistical method. Missing values were coded as missing. The outcome analysis included those youths who attended at least six hip-hop dance classes and who completed the post-intervention assessment measures. Outcome data were treated as continuous data.

The first analysis involved t-tests to compare the similarity of study groups across sessions (i.e., winter/spring session) and formats (i.e., girls-only/co-ed). In addition, an

attrition analysis investigated for differences in baseline characteristics between the youths who completed the program as compared to those who dropped out (Shadish, Cook, & Campbell, 2002).

Subsequently, the effectiveness of the intervention on increasing physical activity and improving well-being was assessed through a repeated-measures 2 x 2 mixed model ANOVA [time (pre, post), & family affluence (low, med, high)]. Separate ANOVAs were run for each outcome variable (e.g., quality of life, participation in physical activity) while controlling for number of classes attended. Normally, a Bonferroni correction would be applied where necessary to limit the family-wise error rate to .05; however, due to small sample size and thus low power, this correction was not made. An exploratory follow-up analysis comparing pre-intervention scores to three months post-intervention scores was also conducted for the winter session youths. Statistical and clinical significance, in addition to effect sizes was considered. The findings were deemed clinically significant when a minimum of a one standard deviation change in score was found between assessment periods, such as from pre-intervention to post-intervention. Moreover, small effect sizes (i.e., ES = .2) were considered significant worthy of comment, even if they were not statistically significant.

Qualitative interviews were recorded using a digital recording device and professionally transcribed verbatim. Brief field notes on impressions, key points, and expected and unexpected findings were taken during and after each interview. A content and theme analysis was then conducted using a grounded theory approach, which drew from Strauss and Corbin (1998) by using a constant comparative approach of analyzing themes, categories, and participants, and by beginning with an inductive process of identifying

themes from the data. The analysis also followed the five stages of the framework approach as outlined by Pope, Ziebland, and Mays (2000). Specifically, the analysts first familiarized themselves with the data. This stage involved listening to the digital recordings of the interviews and reviewing the field notes in the case of the lead reviewer, and reading the transcripts in the case of both reviewers. Preliminary themes and ideas were noted during this stage. Stage two involved the identification of a thematic framework or an initial coding. During this stage, four interviews were randomly selected, two from the girls-only group and two from the co-ed group, to identify initial key themes. Data from the interviews were "indexed" or separated into single meaningful units or discrete chunks of manageable information. Two independent reviewers, one of whom conducted all the interviews, established themes as they emerged from the data, and subsequently, as they related to the objectives and questions of this study. The themes were noted by hand on hard copies of the transcripts, including no code, one code, or multiple codes. Attention was given to consensus as well as disagreement. The two reviewers then discussed their identified themes and reached a consensus on the final themes. At this stage, an initial draft codebook was developed, as proposed by Hruschka and colleagues (2004).

Subsequently, all other interviews were prepared for content and theme analysis by indexing the remaining transcripts. These transcripts were then reviewed for the established themes by two reviewers following the initial codebook. At first, there was a practice round involving four interviews until over 80% interrater reliability was achieved. Following this, four more interviews were coded by the two reviewers and the final two interviews were coded with one reviewer only. The order of coding the interviews was selected randomly, alternating between the girls-only and co-ed interviewees. Attention was also given to new

themes and the codebook was revised as necessary. The two reviewers discussed and reached consensus throughout the analysis. An interrater agreement check for the reviewers' level of agreement on themes was conducted at each stage of the analysis.

Stage four involved charting, such that data were re-organized by theme and into larger categories. Finally, the charts were used for mapping and interpretation that involved exploring the scope and particularities of the content and identified themes. Attention was given to the nature of individual themes and associations between themes. Themes were then compared across the girls-only and co-ed formats, and an attempt was made to capture both similarities and differences across the two groups. Quotations were selected from the transcripts to illustrate the themes and were chosen to capture both the general sense and striking or unusual responses of interview participants. Focus group data were analyzed in a similar fashion, the main difference being that abridged rather than fully transcribed transcripts were used (see Beaulac, Olavarria, & Kristjansson, 2008).

Results

Quantitative Findings

Participant Characteristics

Forty-two youths with a mean age of 12.8 completed the intervention and study. Most of the participants were female (88.1%), while 11.9% were male. A measure of family affluence appeared to overestimate affluence, as many youth participants were known to be living in social housing. Nonetheless, the youths were socially and ethnoculturally diverse (see Table 1 for the demographic characteristics of participants who started and completed the intervention).

Table 1. Demographic Characteristics of the Youths Starting and Completing the Intervention

	Baseline		Completers	
Variable	N	%	N	%
Race/Ethnicity				
Arab/West Asian	25	27.5	6	14.3
Black	21	23.1	12	28.6
White	20	22.0	11	26.2
Mixed	8	8.8	0	0
Other	16	17.6	13	31.0
Religion				
Christianity	39	42.9	20	47.6
Islam	32	35.2	10	23.8
No religion	11	12.1	5	11.9
Other	8	8.8	7	16.7
Years in Canada				
Since birth	56	61.5	26	61.9
More than 10 years	6	6.6	5	11.9
5-10 years	13	14.3	2	4.8
Less than 5 years	16	17.6	9	21.4
Youth lives with				
Both birth parents	56	61.5	24	57.1
Single birth parent	29	31.9	16	38.1
Birth parent + step parent	4	4.4	0	0
Other	2	2.2	2	4.8
Family Affluence Scale				
Low	5	5.5	4	9.5
Medium	53	58.2	22	52.4
High	33	36.3	16	38.1

Intervention Process

As mentioned previously, the fidelity and quality of program implementation are reported elsewhere (see Beaulac, Olavarria, & Kristjansson, 2008). In brief, the youths attended on average 7.61 out of the 13 hip-hop dance classes offered during the winter session and on average 7.29 out of the 12 hip-hop dance classes offered during the spring session. In terms of attrition, 33 (49%) of the youths from the winter session and 12 (43%)

of the youths from the spring session did not complete the program, with a higher proportion of the male youth discontinuing. Overall, there was a high level of youth satisfaction; however, there were some important implementation concerns and the intervention was only partially implemented as planned (e.g., consistency of program duration and transportation assistance, high attrition).

Intervention Outcomes

When asked how honestly they responded to the outcome questionnaire, most of the youths reported very honestly (85.7% at baseline, 93.3% at post-intervention).

Baseline Analysis. When comparing baseline characteristics of the participants in the winter and spring sessions, only two significant differences were found across outcome variables: the winter session participants reported higher levels of physical activity; $t(88) = 3.28, p < .005$ for level of physical activity during a typical week and $t(88)=-3.92, p < .001$ for level of physical activity during the past seven days. When comparing baseline characteristics of the girls-only to the co-ed formats, only one significant difference was found out of seventeen outcome variables. Specifically, the co-ed group reported a higher perceived level of hip-hop dance skills than the girls-only group [$t(87) = -2.603, p = .01$]. Given the small sample size and highly similar baseline characteristics, we combined sessions and formats in the same analysis (see Table 2).

The next analysis compared the baseline characteristics of program completers and non-completers and revealed two significant differences. Completers tended to have higher scores on the peer problems scale [$t(89) = 2.23, p = .03$] and lower scores on quality of life [$t(87) = -2.35, p = .002$], suggesting that the youths with fewer problems may have been more likely to drop out of the program.

Table 2. Baseline Characteristics of the Youths Completing the Intervention

Variable	N	Range	Mean	SD
Hip-Hop Skills	42	1-5	3.24	1.39
Participation in Physical Activity				
PA Typical Week	41	0-7	4.54	2.15
PA Past 7 Days	41	0-7	4.46	2.20
Quality of Life	40	40-100	86.98	13.64
Self-Perception				
School Competence	42	1-3	2.07	.46
Social Acceptance	42	1-4	2.10	.43
Athletic Competence	41	1-3	2.34	.53
Physical Appearance	42	1-3	2.60	.59
Behavioral Conduct	42	1-3	2.05	.44
Close Friends	42	1-3	2.05	.44
Global Self-Worth	41	1-3	2.07	.35
Strengths and Difficulties				
Emotional Symptoms Scale	42	0-8	2.48	2.05
Conduct Problems Scale	42	0-5	1.52	1.58
Hyperactivity Scale	42	0-9	2.90	2.44
Peer Problems Scale	42	0-7	1.57	1.74
Prosocial Scale	42	0-10	7.90	1.86
Total Difficulties	42	0-24	8.48	5.84

Note. Winter and spring sessions, and girls-only and co-ed formats, combined.

Pre-Post Analysis. Findings from the main analysis (i.e., a 3 groups [family affluence (low, med, high)] by 2 times [pre, post]) repeated-measures ANOVAs, showed one significant within group intervention effect of time on hip-hop skills in the expected direction [Wilks's Lambda $F(1,38) = 15.00$, $p < .001$, multivariate $\eta^2 = .283$]. In addition, two effects of time approached significance; the prosocial scale in the expected direction [Wilks's Lambda $F(1,38) = 3.24$, $p < .10$, multivariate $\eta^2 = .079$] and the conduct problems scale in the unexpected direction [Wilks's Lambda $F(1,38) = 3.03$, $p < .10$, multivariate $\eta^2 = .074$]. No other effects of time were statistically or clinically meaningful (see Table 3).

Table 3. Pre-Post Comparison of the Youths Completing the Intervention

Variable	N	Partial Eta Squared	*P-Value*
Hip-Hop Skills	42	.283	.000
Participation in Physical Activity			
PA Typical Week	41	.069	.106
PA Past 7 Days	41	.066	.113
Quality of Life	40	0	.975
Self-Perception			
School Competence	41	.002	.774
Social Acceptance	41	.015	.461
Athletic Competence	39	.004	.726
Physical Appearance	42	.015	.452
Behavioral Conduct	42	.005	.667
Close Friends	42	.041	.208
Global Self-Worth	41	.050	.170
Strengths and Difficulties			
Emotional Symptoms Scale	42	.035	.247
Conduct Problems Scale	42	.074	.090
Hyperactivity Scale	42	.001	.828
Peer Problems Scale	42	.046	.186
Prosocial Scale	42	.079	.080
Total Difficulties	42	.005	.676

Patterns of change across time were not significantly related to family level of affluence. In addition, patterns of change across time tended not to be significantly related to attendance except for amount of physical activity in a typical week [Wilks's Lambda $F(1,37) = 4.22, p < .05$, multivariate $\eta^2 = .102$] and hip-hop skills [Wilks's Lambda $F(1,38) = 4.87, p < .05$, multivariate $\eta^2 = .094$].

Qualitative Findings

Two sets of practice rounds in coding two interviews using the draft codebook achieved 62.5% and 89% agreement, respectively. Subsequently, an official inter-rater reliability check using the finalized codebook obtained a 90% level of agreement.

The analysis revealed six key themes (see Table 4). Themes identified from the parent and personnel focus groups and personnel survey were mapped onto this codebook. The findings are discussed in terms of key themes, and differences between the girls-only and co-ed participants are emphasized where relevant.

Table 4. Interview Themes

Themes	**Sub-themes**
1. Experiences of the Youths in Class	a) Experience overall b) Opportunity c) Program fit d) Hip-hop dancing/music
2. Design of Program	a) Program planning b) Program location c) Program structure d) Program incentives e) Choreography f) Single-sex vs. co-ed option g) Program timing
3. Showcase Performance	
4. Staff and Instructors	a) Liked/disliked b) Skilled c) Diverse d) Connection e) Contributed to experience f) Discipline
5. Hip-Hop Future Plans	
6. Perceived Outcomes	a) Awareness of changes b) Change in hip-hop/dancing and other related skills c) Change in behaviour d) Change in health overall/physical well-being e) Change in psychological well-being f) Change in relationships g) Change in respect for diversity h) Change in school performance i) Factors contributing to changes

Experiences of the Youths in Class

Experience overall. Almost all young people indicated that their overall experience in this program was positive and fun, despite negative encounters for some youths. Participants described the typical sentiment when saying "I thought the hip-hop class was awesome" and "It was fun and it was a good experience because I always wanted to (...) learn how to dance". Other youths were even more enthusiastic, one indicating that "It was perfect, everything in every single way." In addition, almost half specifically mentioned that the group experience of the program was good, one saying "I had fun with the group (...) I actually miss the group right now." While a couple youths noted that the cohesion of the groups increased over time, one suggested that the youths remained in separate groups or cliques throughout the program, similar to how they exist at school.

Unfortunately, negative experiences were described by half of young people interviewed, such as being bullied or being bothered by other youths (e.g., boys trying to get girls' attention in the case of the co-ed format). One indicated that "There were a lot of mean girls", while another expressed "I never expected that she would just start bullying me out of nowhere but I guess that may be a positive change too because I understood that I shouldn't care about what people say about me." The staff and two parents also perceived that some youths had negative experiences.

Other negative experiences were the result of youth disruptions (e.g., behavioural problems) which indirectly affected the youths, as described by one when saying "kids around me didn't want to learn, which really did impact everybody." The parents and staff agreed that there were youth disruptions during the program, but felt that they did not result in any negative consequences other than wasted class time. This issue was also raised a great

deal in relation to staff disciplining youth and will be discussed within the context of that theme. Finally, it is important to note that only two young people indicated that they were injured as a result of participation in the hip-hop class; however, no participants reported discontinuing the program as a result of injury.

Opportunity. The young people saw this program as providing them with an opportunity, for some an opportunity that they would otherwise not have had. All youths interviewed emphasized the importance of learning a new skill, or for some youths, expanding on their existing dance skills. Many young people also described the class as an opportunity to be physically active. One expressed this sentiment when saying "I was actually working my body instead of actually staying off my body." The youths emphasized the importance of this opportunity, one saying "Physical activity is something youth should be encouraged to do." Some viewed the program as something fun to do and a distraction from their problems, one saying "Coming here is positive (...) and it'll keep them (youth) out of trouble for like an hour and 15 minutes." It also gave them a chance to show their skills, one expressing "Show everything you can do and just not be afraid of anything."

Meeting new people and/or being exposed to diversity was another key opportunity expressed by half of the young people that were interviewed. "I like being with different people I don't really know, like in getting to know them more, making friends." Finally, a few expressed their appreciation for being presented with the opportunity to participate in this program, one saying "Just the fact that you and the University of Ottawa organized this just made me appreciate it so much more."

Program fit. Most of the youths suggested that the program fit themselves and the other young people well, only one indicating that the fit was not good due to the young age

of most of the participants. Some youths also described a positive and respectful class environment, which they felt was inclusive, non-judgemental, and/or open to diversity. "Well like if I would dance and I would do something wrong I felt that nobody was gonna laugh at me." Another indicated, "We're all the same, we're like brothers or sisters, we're all a family here."

Hip-hop dancing/music. Not surprisingly, the dancing itself was a key element of the program enjoyed by most of the youths, some indicating that they found hip-hop to be relevant or cool for their age and culture. "I mean, it's like who doesn't love dancing?" In particular, young people were attracted to hip-hop dance. "I see it on TV and hip-hop rap videos (...) so it made me think that it's pretty cool"; "Everyone wants to like go scuba diving or bungee jumping and I want to do those things too but one of the things I wanted to do is have classes for dancing like something to do with rap or hip-hop." A few also indicated that they liked the music, "Like we actually got to listen to music we kids actually listen to instead of having to go by all these rules." Importantly, hip-hop was viewed as something any youth could do:

> For hip-hop the dance moves are more like stuff I'm used to (...) – in ballet you kind of have to be flexible and (...) for tap-dancing you'd have to wear specific shoes (...) but in hip-hop (...) it's all the way you want to, it's sort of freestyle, and you don't have to be really, really good or really flexible or anything like that.

Design of Program

Half of the young people interviewed indicated that they thought the planning of the program was good and that no changes were needed, one going so far as to say "I think they did (...) a study on it because they did really good on what the ages would be, what would

be appropriate, what they (youth) would tend to like." In addition, a few youths in the co-ed format commented on the location of the program being appropriate, with no youths commenting otherwise.

Age range was an important aspect of the program structure. Quite a few young people described the age range of 11 to 16 as appropriate, one indicating "It feels really good being with people around my age." On the other hand, a few suggested that the range included youths who were too young, too old, or that the range was too broad. Another significant element mentioned by several participants was the social aspect of the program structure.

The program incentives were also a key aspect of this program. Half of the young people interviewed commented on the significance of program incentives ranging from the free cost of the class, transportation assistance, prizes, and food. "Getting a free program like this in the community (...) it rarely happens." Another echoed this comment saying "The fact I didn't have to pay I felt that was really rewarding." Several expressed that the incentives were encouraging, one emphasizing that "(prizes) give you something to work for." A couple youths suggested changes such as offering more incentives.

Another obvious design issue was the choreography. The majority of the youths reported that they liked the choreography, some indicating that they enjoyed the variety and different styles. "Everything was like a dramatic change between different songs and it was really cool." Another indicated that "There were dances that you could all shine in." Most described the level of challenge as appropriate even if difficult at times, one explaining "As long as you attended all the classes, didn't miss anything, they were just right." A few participants had some suggestions for how to improve the choreography such as learning

breakdancing or specific dance moves, increasing the level of challenge, and encouraging more youth input into the choreography.

When the young people were asked what they thought of the option of a girls-only or co-ed format, the main idea expressed was that they liked the option and that there were pros and cons to each class. The youths in the co-ed group expressed this sentiment in particular, on the one hand indicating the strength of the co-ed format as providing different points of view, at the cost of additional problems due to the presence of both sexes. For instance, one female youth indicated "A lot of the guys didn't take it as serious as the girls seemed too, and (...) it seemed like they were there to get the girls" at the same time saying "The guys tend to have different (...) points of views than the girls (...) and it was actually good to hear their points of view too."

A number of the youths also commented on the timing of the program, including the class length, duration, and frequency. Several wanted the program to be longer in duration, ranging from 20 classes to a year. "I think it should be longer, like because it feels so short, feels like we just started." Others felt that the duration was appropriate.

Showcase Performance

Although the showcase performance could be viewed as an aspect of the program design, the participants emphasized the importance of this element to such a high degree that it warrants a separate theme. Most young people enjoyed participating in the showcase and appreciated the opportunity to show off their skills despite feeling nervous performing in front of others, with only a couple indicating that they were not comfortable with the idea of dancing in front of a crowd. One expressed her excitement when saying "It felt good that I can show people how good I am and my mom was there." Another described surprise at how

many people came to watch, saying "It felt great for me because everyone was there and all the seats were filled so it felt really nice that at least someone does want to watch something like this (...)." A couple commented on the showcase being better than expected, while a couple described the class as unprepared to dance in the showcase. Some youths felt that the showcase could be bigger or that there could be more showcases throughout the program.

Staff and Instructors

The young people had a great deal to say about the staff and instructors. The majority described liking the staff, indicating that they found them supportive and encouraging: "Sometimes they say like you can do it (…) just those words are powerful." Another emphasized that "(Instructors) judge everyone equally on their talent." However, a few youths indicated they disliked a certain staff member or instructor.

Instructor teaching style was seen as positive by many young people, including both those who liked and disliked staff. The youths liked the variety and quality of the instruction: "It seems like we had advanced dance teachers." The youths described reasons why they liked the teaching style, one describing that one instructor "gave everyone options like do you want to do it fast or slow or with music or start all over (…) and sometimes if I didn't remember I would ask her and she'd do it again so that's how I'd remember too." Another described the instructors as "able to help us get the steps down."

The young people also indicated that they liked the fact that the instructors were diverse: "I liked having a boy and girl together instead of just the girl." In addition, the youths described appreciating the youthfulness of the instructors, one saying "I don't know if they did it on purpose but the way they dressed made them seem like they were

appropriate for teaching us because a lot of the times dance instructors are old people and you're like these people can't dance."

Several youths described feeling connected to the staff, one expressing "I felt comfortable going to her and asking her about the dance if I didn't know what to do." Some participants indicated that they felt connected to both instructors while others related more to one than the other. For instance, one described feeling more connected to the younger female instructor, saying, "She seemed more like I guess you could say one of us. She got along with the other kids in (the program) too."

Overall, half of the youths interviewed felt that the staff contributed positively to their experience, such as positive role modeling or boosting their mood. On the other hand, several described negative experiences with the staff. One important issue was staff discipline, half describing inappropriate discipline and/or suggesting important changes. For instance, some youths described inappropriate behaviours by the personnel in class, one expressing that "Sometimes the (personnel) sort of got mad easily." A key concern presented was that discipline often took place in front of the entire class and that this method was perceived to be inappropriate. One youth strongly expressed her concern around this issue when saying "I'm not gonna listen to you (personnel) if you're gonna yell at me in front of the class." The typical response of young people who were not directly implicated in the disciplining was described well by one youth when saying "(personnel) talked a lot, made all those speeches, it was so long and annoying – I got tired of it." As a result of the frequency and method of disciplining, the youths described discipline as taking considerable class time and impacting negatively on them. "I don't know why (personnel) had to waste

that much time with the class." Another saying, "Why is (personnel) wasting (...) 20 minutes of the class, why doesn't (personnel) just talk to us by ourselves?"

Hip-Hop Future Plans

All but one youth interviewed described having plans to continue with hip-hop dance, some through another class, others more informally. A couple youths even expressed an interest in pursuing hip-hop dance as a job (e.g., dance instructor). The sole young person who did not plan to continue described this class as an important experience but that he/she is now looking to try a different activity. Variety was also a key issue expressed by the youths wanting to continue with hip-hop; a few indicated that they wanted exposure to a new hip-hop group or different choreography. For instance, one said "I would like to come again, do more different stuff." Others expressed wanting to just continue with the current program, one saying "I think people will enjoy being here, and I hope if there's like room I'd like to come again."

Perceived Outcomes

Awareness of changes. The majority of young people expressed some uncertainty around individual effects. Nonetheless, all the youths, parents, and personnel described some perceived positive changes as a result of youth participation in the program, both spontaneously and with further probing. Most young people reported changes both inside and outside of the hip-hop class, such as changes at home or at school, a couple indicating that others had also noticed changes in themselves. "I think it started with dance and then expanded", one explained. Two parents indicated that they saw immediate changes in their adolescents when they started the program. Although the staff members also indicated

positive changes, they suggested that changes were harder to detect, commenting on the short length of the program and limited time spent with the youths.

The young people and parents described perceived changes across seven main areas, including dancing and other related skills, behaviours, health overall, physical well-being, psychological well-being, relationships, and respect. In addition, the youths described perceived changes in an eighth area, school performance. Program personnel described similar changes, except that they did not mention changes in behaviours or health overall and expressed concern about the subjectivity of their observations. The broad perceived impact of this program was articulated well by a youth when she expressed "People say dance doesn't really help but it really does and in a broader way physically, emotionally and mentally and in other ways."

Hip-hop/dancing and other related skills. Consistent with the quantitative findings, the most common reported change by the youths was improvement in hip-hop dancing and/or other related skills, reported by all but one youth. In addition, most parents and all staff from both sessions indicated that the program led to benefits in terms of increased hip-hop dance skills and, in some cases, helped the youths with their other activities. This point was clearly expressed by one youth when saying "It's kinda like taking a diamond in the rough and polishing it up. You still got the diamond, just that it's more cut and clean."

Behaviours. In terms of behaviours, most young people also reported an increase in participation in physical activity, with the remaining youths indicating that this program helped them stay active. "I noticed that I was actually doing lots of exercise instead of being lazy and stuff"; another said "Now, I'm more active." Several parents mentioned an increase in motivation to be active and remain engaged in activities even beyond hip-hop dance.

However, dancing was central in the reported increase in physical activity, one youth indicating "I like to just turn on my radio and just dance now", another explaining that "As soon as we get home the next day inside the community we'd be (...) performing it (dance routines)." In addition, almost half of the parents reported an actual increase in their youth's physical activity as a result of practicing the choreography outside of class. As an unintended benefit, some parents also reported an increase in the level of physical activity in siblings, since the participants shared their skills as they practiced at home.

In addition, it appears that participation in this program led to many youths trying new activities and/or to a transfer of skills to their other activities. For instance, one reported that "It made me get out more", while another expressed that "I did it and then it seemed a lot easier than I thought it would be so then it gave me a bit more confidence to try something new so I decided that I'd try something new and what's the worst that could happen?" Only one reported that participation in this activity took away time from their involvement in another recreational activity.

Some youths also described a change in other behaviours, several reporting decreases in such behaviours as watching TV or getting into trouble. For instance, one said that "Before I'd always be on the computer...well lately since the dance class I haven't really been watching TV all that much (...) now I like to dance for free time." Another expressed a similar change when saying "I never used to like to try something new. I just liked to stay on the couch and watch TV but now I feel like I can try something new." In terms of other behaviours, some parents indicated that the youths became more committed to their weekly chores, read more, played fewer video games, or watched less television. In

contrast, one youth expressed an increase in negative behaviour (e.g., acting out) in response to being bullied in the class.

Health overall. A few young people described an improvement in their health overall, one indicating "Before I had the dance class, sometimes I'd get sick a lot (...); for some reason I'm not really sick a lot anymore." Another described taking better care of her health, saying "I really started looking at myself like I'm doing this so I might start doing this too (...) so since I'm doing hip-hop I guess I could start taking care of my health more." A couple of parents also commented that their youths began to make better nutritional choices at home.

Physical well-being. Many youths described more specific changes to their physical health. For instance, quite a few indicated that participation in this program had improved their fitness, one saying "I'm more fit now and I can do sports even better", while another said "It kept me fit. It was also fun at the same time so my favourite exercise ever." Others substantiated their claims, one saying "At the beginning (...) it was harder because I was sweating more and getting tired easier and at the end of it (...) it was easier to do and I didn't get tired anymore (...), so I think I got more in shape." Some staff and parents also suggested improved fitness in the youths, one parent commenting "They were coming out sweating. That was a good work-out for kids." In addition to improved fitness, some young people also described increased strength and energy levels, as described by one when saying "I felt (...) stronger after the hip-hop classes" and "I have more energy than I used to have." The parents also reported an increase in energy and weight loss for their adolescents. Only a couple participants indicated no change in physical well-being.

Psychological well-being. A high proportion of young people, several parents, and all staff reported psychological benefits; changes were noted in the level of shyness, self-confidence, mood, and self-discipline. The most common benefit, reported by almost all of the youths, was improved self-confidence: "Before I was like it's useless. I probably wouldn't be able to do it that well. Now I'm gonna try really hard at it and give it my all and maybe try to get into it (sport team)." Others reported "Now I put myself out there" and "I think it made my self-esteem higher." One parent commented "It improved her self-confidence, showed her that she was capable of doing a lot more than she thought". Many staff commented that the youths' improved self-confidence was reflected in youths increased comfort in dancing, performing in front of others, and in interacting with peers. Many young people suggested that gaining a sense of accomplishment was a factor that contributed to improved self-confidence in this program, and that participating in this program was important for their self-identity. "You feel like you accomplished something." Another expressed, "I felt more like I was doing more as a person."

A related change was reduced shyness, also described by some youths as increased openness. Approximately half of the young people and a few parents reported this improvement, one youth saying "I'm not the shy person anymore (...) I'm a little bit more open." Others echoed this feeling one youth saying "This hip-hop thing improved me (...) because I was shy before" and "It really helped me to become (...) a little less shy and gave me a bit more confidence in a lot more ways." Only a couple reported no change in this area.

Half of the young people, and slightly more of the co-ed youths, reported improved mood, while a few girls-only youths reported uncertainty or no change in mood. One reported "I'm just happier about myself, and I think that's the most important thing that I got

out of this hip-hop class." "It (hip-hop class) made me happier", expressed another. A few parents also reported improved mood in their youths.

A few young people and some parents also described improved self-discipline and goal setting. This change was articulated well by one youth when saying "I learned to be more disciplined because there were rules at the hip-hop (class) and then even if those rules were not cool I tried to follow those rules because I know they're appropriate rules."

Relationships. Another important area of change mentioned by many youths, several parents, and staff was changes in relationships, such as changes in social network and improvements in peer/sibling/parent/teacher relations. The most common change in relationships expressed by all but one youth was an increase in relationships, as described by one when saying "It made you learn to be friends with everyone." Young people reported meeting new people and making new friends that provided them with the opportunity to share skills with their peers, receive positive feedback, and stay connected beyond the intervention. "I met a lot of new people here, and I still talk to some of them a lot too." Several parents and some staff indicated that the youths made more friends, one parent also indicating that it led to an increase in the youth's social skills.

Several young people and some parents also described an increase in positive parent-child interactions that involved sharing new skills and receiving positive feedback from parental figures. "After every class I'd show her (mother) every dance that I learnt." A parent expressed, "She's always talking about hip-hop. If she doesn't talk, she dances." A few youths also described an improvement in teacher relations. "I just stopped giving him (a teacher) attitude, and then he started becoming nicer." Another explained in more detail saying "I learned something at the hip-hop place that listening to your elders actually makes

you more clever than not listening, so at school I decided to try it and it actually worked." In addition, one staff member also reported an increase in leadership skills for some youths who had taken an active role in the class. Finally, the youth participants reported an expansion in the diversity of their social networks, one describing:

> It was good because I got to see different people, and I got to see that there's more – because my friends and me are kind of all the same and we're all in a shell and we need to break out of that shell and see different people.

Respect for diversity. In addition to improvements in relationships, a few youths also reported important changes in their respect for diversity. "In hip-hop I learned how to respect everyone's different the way they dance, the way they think, the way they act." Another said "The important thing I learnt from this class is like we're all unique, we all have our different good things and bad things and just to be yourself and let out the person in you." The staff also indicated that the program had helped the youths to be more respectful toward others and increased the youths' awareness of issues of diversity by exposing them to difference. "We create opportunities to impact on peoples' well-being just by the very virtue of being someone different (...) and to share that with them. It's part of a collective village of people trying to raise these children," one staff member said. Two parents also believed that exposure to diversity had benefited their youths with regard to respect and understanding.

School performance. Finally, several youths, and in particular the participants in the girls-only group, also expressed that they noticed improvements in their school performance as a result of the program, such as improved homework completion and grades. One

expressed this change when saying "I was actually getting good marks instead of getting lower marks."

Some staff also commented on the likely longer-term outcomes for the youths as a result of their participation in the program, suggesting that the initial effects of this program would encourage further youth participation and leadership within the community, improved school performance, and decreased participation in negative social activities. The staff agreed that these benefits were not yet evident at the end of the program.

Factors contributing to changes. When questioned about the process of change taking place, some young people had ideas about what factors contributed to these changes. A couple youths reported that being involved in the research contributed to benefits, while several youths emphasized the importance that practicing and regular attendance had on achieving benefits from the program. In addition, many of the key elements of the program (e.g., learning something new, dancing, connecting with staff, making friends) were highlighted.

Discussion

This newly implemented community-based physical activity 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 the study hypotheses except for a statistically significant improvement in perceived hip-hop dance skills. In contrast, a surprising trend was found for increased conduct problems. This finding warrants some attention, as negative effects of interventions are often not measured or reported (Estabrooks & Gyurcsik, 2003; Glasgow et al., 1999). If this finding is valid, how might we explain it? That a trend in the positive direction was also found for improved

prosocial behaviours suggests that it is likely not the hip-hop intervention as a whole that resulted in this negative trend, but rather more specific problems may have been present. One possible process factor that may be related to this finding is the inconsistent disciplining and staff turnover that took place during this intervention (Beaulac, Olavarria, & Kristjansson, 2008). Such factors have been linked to poorer program quality and impact, in addition to promoting aggression and related behaviours (Guerra et al., 2006; Mahoney, Larson, Eccles, & Lord, 2005).

The qualitative findings were stronger and suggest that this hip-hop dance intervention led to a number of perceived psychological, social, behavioural, and physical benefits for the youths. 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 (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004; Eccles & Baber, 1999; Kahne et al., 2001; McAuley, 1994; Steptoe & Butler, 1996; Task Force on Community Preventive Services, 2002); however, that a few youth reported improved school performance was somewhat surprising given the short duration of the program. It is important to note that overall, the staff described fewer benefits of the program as compared to the youths and parents. The reason for this

difference may be that the staff only interacted with the youths within the context of the program, and for some staff, this interaction was only occasional. Importantly, very few negative perceived impacts were reported, the most important being minor injuries for two youths and an increase in negative behaviour for one youth that was described as a result of being bullied in the class.

In addition to illustrating the perceived impacts of participation in this intervention, the qualitative findings suggest that the youths' overall experiences were positive and that the youths plan to continue with hip-hop dance or other similarly active pursuits. Key factors related to the successes and weaknesses of this program were also highlighted that were highly consistent with the literature on effective youth programming. Specifically, the design of the program was viewed as accessible and relevant for the target population, two critical factors present in positive youth development programs (Task Force on Community Preventive Services, 2002; The Canadian Council on Social Development, 2001). In addition, the opportunities that this intervention provided young people were important in leading to the reported benefits, such as the opportunity to dance, be active, learn something new, and to meet new people and/or be exposed to diversity (Anderson-Butcher, 2005; Klebanoff & Muramatsu, 2002). The inclusion of a showcase performance was an important component of the program in that it provided the youths with a goal to work toward and an opportunity to show their skills in front of family and friends. One challenge of including a showcase performance, however, was balancing the importance of working toward a goal without creating an atmosphere of competition. Research has shown this balance to be important for achieving positive outcomes, particularly for female youth (Larson &

Seepersad, 2003; Marsh & Peart, 1988; The President's Council on Physical Fitness and Sports, 1997).

Staff and instructors were another critical program element. The finding that staff and instructors were perceived to have impacted the youths was expected as the benefits of participating in physical activity programs do not take place without human intervention; caring adult leaders are critical to youth experiencing benefits, particularly for the psychosocial effects (Ewing, Gano-Overway, Branta, & Seefeldt, 2002). Many of the young people reported connecting with and liking the staff and their teaching styles. In contrast, negative experiences were described by half of youths interviewed, including dislike of a specific staff member or concerns about management of the other youth participants (e.g., bullying, youth disruptions). The issue of appropriate and consistent adult management warrants attention. Effective adult monitoring of youth programs involves carefully balancing the need to provide direction with youth freedom, and improvement in this area would likely lead to greater program impact (Larson et al., 2004; Quinn, 1999). Somewhat unexpectedly, some youths also commented on the positive impact of their involvement in the research.

Explaining the Different Qualitative and Quantitative Findings

This study found largely non-significant main effects for intervention outcomes, yet qualitative findings suggested significant changes from pre to post intervention. Why the discrepancy? This question presents an insolvable dilemma. However, the different findings may have something to do with differences in validity between the two methods. While quantitative research is concerned with internal and external validity, qualitative research tends to be concerned with the credibility and transferability of findings.

One potential explanation for the largely non-significant quantitative findings is the small sample size and insufficient power to detect quantitative change (Kazdin, 2003). Furthermore, as suggested by Guerra and colleagues (2006), it is also important to investigate factors that moderate the effect of an intervention. It is possible that this intervention may have been more beneficial for certain groups of youth (e.g., female youth, more aggressive youth, youth coming from more supportive homes, younger youth, Muslim youth). Unfortunately, the small sample size and preliminary nature of this study did not permit adequate examination of this possibility. Future research ought to consider that interventions may work more for certain groups of people and under only certain conditions rather than concluding that programs work or do not work in absolute terms.

An alternative explanation in support of the qualitative findings is that change was assessed using different methods and that the qualitative method permitted participants to respond in their own words, whereas quantitative methods required participants to endorse fixed responses that may not have sufficiently fit their experiences. It has been suggested that epistemologically, conducting interviews is an appropriate data generation tool when "what you want to know about may be rather complex, or may not be clearly formulated in your interviewee's minds in a way which they can simply articulate in response to a short standardized question" (Mason, 1996, p. 40).

Another potential explanation is that the intervention was not implemented as intended, and therefore, that the findings are a result of a type III error (Domitrovich & Greenberg, 2000; Kazdin, 2003). Inconsistencies in program implementation were reported during both sessions including program duration, staff, and transportation inconsistencies, high attrition, unmet program objectives, and adult management of youth behaviours (see

Beaulac, Olavarria, & Kristjansson, 2008). It is possible that these implementation issues, compounded with insufficient power, affected the potential to uncover significant quantitative findings.

A related issue is the low dosage of the intervention. The literature and evidence from this study strongly suggests that the ideal length of a physical activity program should be longer than three months (Roth et al., 1998), one review suggesting nine months as a minimum length for a positive youth development program (Catalano et al., 2004). The issue of frequency is less clear. To experience optimal health benefits, a higher frequency would be demanded (Blair et al., 2004); however, other factors need to be considered such as youth interest in participating in this one activity more than once weekly. We would argue that promoting youth involvement in diverse recreational activities, including regular physical activity, is preferable (Bates, 2006; Strong et al., 2005). It is also important that community input be sought in planning the timing of such programming.

Strengths and Limitations

The mixed design was an important strength of this study. Strengths particular to the qualitative portion of this study include the representation of diverse participants, the high level of reliability found between the two independent raters, and the inclusion of parent, personnel, and youth perspectives on intervention impact (Johnson & Onwuegbuzie, 2004; Mays & Pope, 2000). In addition, fourteen participants appeared to be sufficient to achieve thematic saturation as no new themes emerged during the analysis of the final few interviews. Although selection effects are a possible threat to the credibility of the interviews, this does not seem to be a likely limitation as participants were selected to

represent the diversity of participants, including young people that we suspected would provide both positive and negative feedback on the intervention.

The consideration of community needs and external validity are also important strengths (Benoit, Jansson, Millar, & Phillips, 2005; Green & Glasgow, 2006). This project involved the community in the development of the new intervention; however, greater involvement could have been sought at all stages, including the planning and execution of the evaluation. Such an approach would be consistent with community-based participatory research, and tends to be more relevant for culturally diverse communities (Yancey et al., 2006).

The non-experimental design that was necessary due to recruitment difficulties and community demand is an important limitation (Cardona & Joshi, 2007). As a result, we can not attribute causality, or, therefore, impact. In addition, findings relate only to young people who completed the intervention. Trochim (2005) describes four phases of evaluating interventions, the current study probably representing an early phase-two study. The phases include: 1) an exploratory or formative phase; 2) a non-experimental effectiveness phase; 3) a controlled experimental phase; and, 4) an ongoing monitoring of effective interventions phase. If a phase-one study had been conducted instead of a phase-two study, it would have likely provided the opportunity to identify more relevant outcome measures, which may have improved the construct validity of this study. Although the planned randomized-control trial was premature, in order to be able to make causal conclusions regarding this or another physical activity intervention, future research should attempt more rigorous designs once earlier phases have been explored. Such research would be consistent with a mature phase-two design using a quasi-experimental method or a phase-three design, such as a multi-site

project using cluster randomization. Alternatively, future research might want to consider using a single-subject design in evaluating the potential effectiveness of similar interventions.

We had also intended to explore the maintenance of these benefits at a three-month follow-up period; however, only 11 of 67 of the youths from first session completed this assessment time point. As this follow-up, of necessity, occurred at the end of the scholastic year, competing priorities were likely a factor in the low follow-up response rate. In addition, attrition from the intervention and research was high at all phases of this study, with 47% of the youths discontinuing participation in the intervention. Problems with attrition have been found in similar studies and have been reported as typical of community-based physical activity interventions for youth and disadvantaged populations (Jago & Baranowski, 2004; Resnicow et al., 2000; Stone et al., 1998; Taylor et al., 1998). Nonetheless, this high level of attrition signifies insufficient program exposure and thus impact, biasing the findings toward young people who were more motivated to continue the intervention. Analyses suggest that completers significantly differed from non-completers on peer problems and quality of life; these differences, in addition to any unmeasured differences may have affected the findings. As a result of small sample size and high attrition, we were also not able to adequately explore potential differences in perceived impact by program format (co-ed vs. girls-only) or participant sex. Clearly, future research on these questions is warranted.

A number of issues could, if addressed, improve youth retention and potentially increase the impact of the intervention (Catalano et al., 2004; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). Specifically, bullying and other youth disruptions took away

from the program. Compounding this, inappropriate and inconsistent adult management appears to have affected youth morale and may have also contributed to attrition. Young people also suggested other program improvements, including extending the duration of the program. Implementation issues that may have affected the impact of this intervention are discussed in more detail elsewhere (see Beaulac, Olavarria, & Kristjansson, 2008).

The self-report nature of this study is another limitation. It is not possible to rule out the possibility that demand characteristics contributed to the findings, however, special efforts were made to counteract social desirability by emphasizing that responses would not be linked to individuals and by inviting negative responses. In addition, the researchers did not deliver the intervention and program staff did not have access to the research data. Although most quantitative measures were psychometrically sound, there were a number of difficulties related to linguistic, cultural, and behavioural issues; these issues have been reported in other research involving low-income and culturally diverse communities (Cardona & Joshi, 2007). For instance, many of the participants in this study did not speak English as their first language, and 38.5% were born in another country. These issues highlight an important question – was the inclusion of this study's quantitative research measures a barrier to low-income, cultural diverse youths' participation and retention in this intervention? Future researchers working with culturally diverse youth ought to also consider different methods of administering questionnaires (e.g., orally in youths' first language; Sonderegger & Barett, 2004) and other cultural adaptations to the research methodology (Cardona & Joshi, 2007); however, funding constraints may prohibit this option.

To date, most interventions targeting disadvantaged populations have focused on a single cultural group (Taylor et al., 1998); however, this does not represent the reality or ideal for physical activity programming. A significant strength of this study was its focus on a culturally diverse and disadvantaged community. Importantly, this study included multiple proxy measures of youth level of SES – parent level of education and the family affluence scale (FAS II: Boyce et al., 2006). As expected, a significant proportion of the youths reported not knowing parent level of education (Boyce et al., 2006; Ensminger et al., 2000; Wardle, Robb, & Johnson, 2002). Consistent with other research (e.g., Currie et al., 1997), the FAS had a high response rate, suggesting that this type of scale has promise as an estimate of SES. However, the FAS appears to have over-estimated family level of affluence, as many youth participants scored in the mid to high range of affluence despite the fact that many were known to be living in social housing. The usefulness of the FAS could be improved with more frequent revisions to take into account changes in what is considered "normal" (e.g., car and computer ownership). It likely also needs to be adapted for specific contexts, which would then not allow comparison across different contexts. For instance, family car ownership might be a more relevant indicator of family affluence in a European context as compared to a Canadian context. Another measure that has been used as a proxy for adolescent SES is adolescents' educational aspirations (e.g., Friestad, & Klepp, 2006); however, other research suggests material resources as a more accurate measure (von Rueden et al., 2006). Given continued difficulties in measuring youth SES, the use of multiple indicators is advisable (Lien, Friestad, & Klepp, 2001). Another related issue is the measurement of race and/or ethnicity, which some researchers argue is not conceptually valid as a fixed category as it encourages an overreliance on biological

explanations for difference. An alternative is to explore race and/or ethnicity as social constructs and measure the multiple and interactive nature of them with other socio-demographic factors (Anand, 1999; Vissandjee, Hyman, Spitzer, Apale, & Kamrun, 2007).

Implications

The community-based hip-hop dance program may be an effective and relevant physical activity program for lower-income and culturally diverse urban youth. Future research needs to confirm the benefits of this program for this and other communities. Although we can not speak on the generalizability of these findings, there are important implications related to transferability. For instance, this study revealed important elements in physical activity programming for youth that were consistent with positive youth development theory and with the intervention conceptualization study (see Beaulac, Bouchard, & Kristjansson, in press). Specifically, young people stressed the importance of this program in providing them with an opportunity to learn something new and to be active (Anderson-Butcher, 2005; Klebanoff & Muramatsu, 2002). Developing relationships was also emphasized, both in terms of connecting with adult role models and meeting new peers (Quinn, 1999). Some youths also highlighted the importance of being exposed to diversity.

In addition, there are some important lessons that can be applied to the development of other similar interventions. The type of activity, hip-hop dance, was described as a fun and relevant activity by many young people. It was also viewed as an inclusive and accessible activity. Hip-hop dance may not be relevant for all communities and its relevance may change over time. Consideration of community input is critical for effective program design, implementation, impact, and sustainability (Green, Daniel, & Novick, 2001; Israel,

Schulz, Parker, & Becker, 1998). Finally, this study demonstrates the importance of considering contextual factors in developing interventions.

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Appendix A

Youth Participant Screening Form

Please answer Questions 1 to 12. The researchers will keep your answers PRIVATE. No one from your home, school, hip-hop program, or community will ever see what you write, so please answer honestly.

1. When were you born? _____ (month) _____ (day) _____ (year)

2. How old are you? _____ years old

3. Do you live in South-East Ottawa?
   - ☐ Yes
   - ☐ No

4. Will you be moving outside of South-East Ottawa before July 2007?
   - ☐ Yes
   - ☐ No

5. Have you ever participated in a *Culture Shock Canada* hip-hop dance program?
   - ☐ Yes
   - ☐ No

6. If female, are you pregnant or do you plan on becoming pregnant before July 2007?
   - ☐ Yes
   - ☐ No

7. Are you able to participate in physical activity that makes you work up a sweat and makes your heart beat faster?
   - ☐ Yes
   - ☐ No

8. Do you agree to come to this program every week for 13 weeks plus a final performance?
   - ☐ Yes
   - ☐ No

9. This new hip-hop dance program is being studied. If you agree to participate in this new program you will also be expected to complete a short survey throughout the year. Are you o.k. with this?
   - ☐ Yes
   - ☐ No

10. Do you read and understand English well enough to complete surveys asking you questions about your health and participation in physical activity?
    - ☐ Yes
    - ☐ No

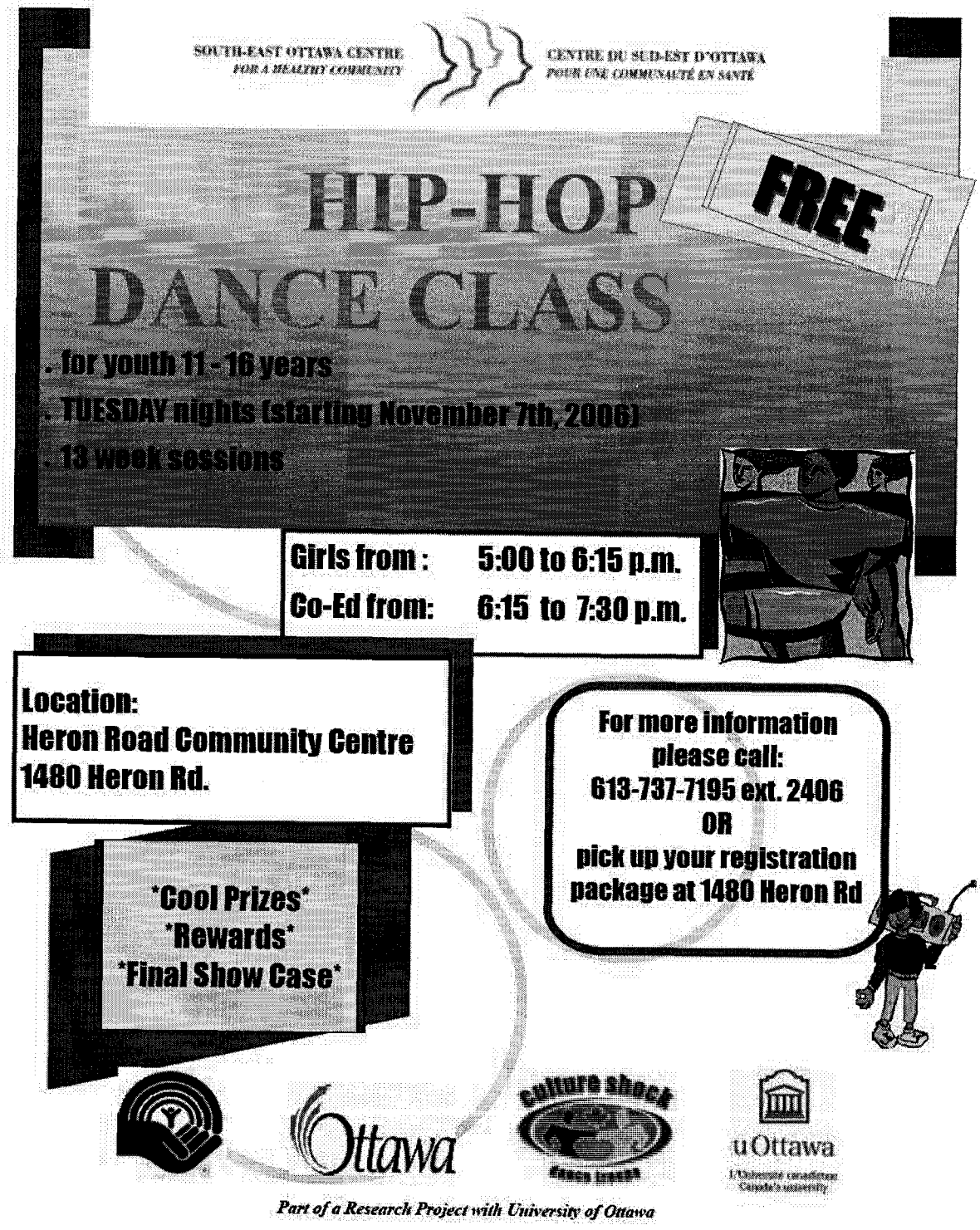
11. Is there anyone else that you live with who is between the ages of 12-16 (e.g., sister/brother) and wants to participate in this project?
    - ☐ Yes
    - ☐ No

        ☐ If yes, please write their names _____
        _____

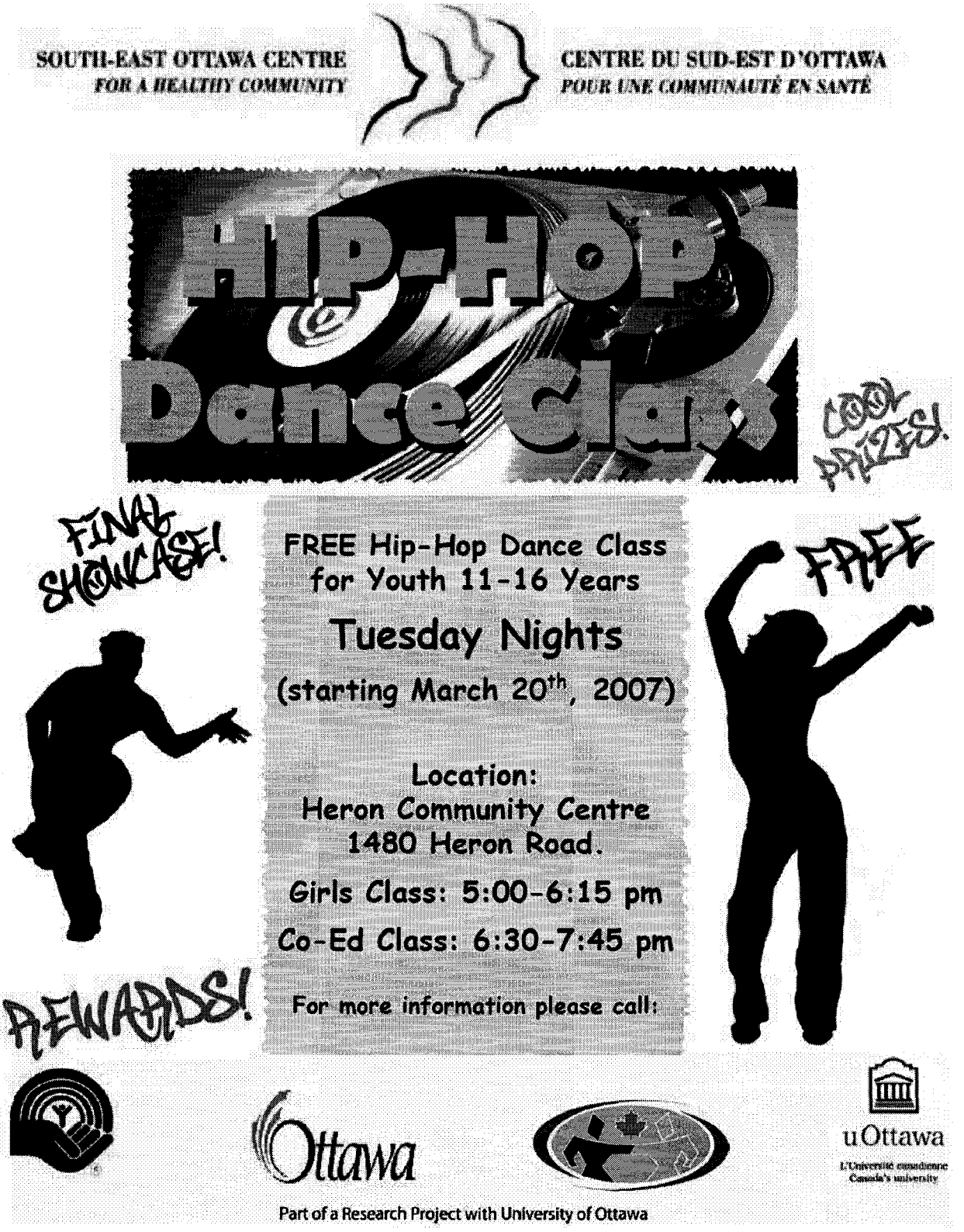
2. If female, would you prefer a girls only or co-ed hip-hop dance program?
   - ☐ Girls only (Tuesdays 5:00 – 6:15 pm)
   - ☐ Co-ed (Tuesdays 6:15 to 7:30 pm)

Appendix B

Information Flyer: Session 1



Information Flyer: Session 2



Appendix C

Registration Package

Important Notes

FIRST RESEARCH CLASS:

-If you choose the girls only program, you need to come to the Heron Road Community Centre on **Tuesday November 7th 5:00 to 6:15 pm** for the first research class. If you miss this class, you will not be able to participate in the hip-hop dance program unless you ask for another time to complete the first survey package with the researcher. **If you have not already handed in a registration form, please bring a signed form along with you.**

-If you choose the co-ed program, you need to come to the Heron Road Community Centre on **Tuesday November 7th 6:15 – 7:30 pm** for the first research class. If you miss this class, you will not be able to participate in the hip-hop dance program unless you ask for another time to complete the first survey package with the researcher. **If you have not already handed in a registration form, please bring a signed form along with you.**

SUBMIT REGISTRATION FORM TO:

- South-East Ottawa Community Health Centre
  600-1355 Bank Street

OR

- Heron Road Community Centre
  1480 Heron Road

ID#:_____

Date:_____

ASSENT AND CONSENT FORM

Title of Project: Hip-Hop Dance Project

Researchers from the School of Psychology, University of Ottawa:
Elizabeth Kristjansson, PhD 562-5800, ext. 2329 kristjan@uottawa.ca
Julie Beaulac, doctoral student

Purpose and description of the Research:
A free hip-hop dance program for youth ages 12 to 16 years will take place at Heron Road Community Centre during 2006-2007. This new program is being studied by the University of Ottawa, in partnership with South-East Ottawa Community Health Centre, Culture Shock Canada, and Heron Road Community Centre. We want to look at the benefits, if any, of participating in the hip-hop dance program. The length of the project is around 8 months, from November 2006 to June 2007.

If you agree to participate in this project, you will be asked to come to 16 weekly 75-minute hip-hop dance and research classes. You will also be asked to fill out surveys about you, your participation in physical activity, your health, and your relationships. You may also get to participate in a conversation with a researcher about what you think about the hip-hop classes.

If you choose to participate in this project, there are two different program start dates: November and March. A draw will randomly put you into one of the two groups. Sisters/brothers or other youth who live with you will be put into the same start date. If you are female, you will get to choose between a girls-only program and a co-ed program. The girls-only program will be on Tuesday evenings 5:00 to 6:15 pm and the co-ed program will be on Tuesday evenings 6:15 to 7:30 pm. The November and March programs will be almost the same. The benefit of being in the November program is that you will get to start the program earlier. For both programs, you will be expected to participate in this project from November 2006 to June 2007. You will find out which group you are in on November 7th, 2006 at the end of the first research class. At that time you will get an information package telling you the dates and expectations for your group.

Group 1:

- This group's weekly hip-hop classes will be from November 14th to February 20th, with the end of program performance showcase planned for February 27th. The program will break for two weeks over Christmas holidays. If you are put into this group, we will ask you not to practice or teach the hip-hop routines to youth in Group 2.

Group 2:

- This group's weekly hip-hop classes will run from April 3rd to June 19th, with the end of program performance showcase planned for June 26th.

All Participants:

- Participation is from November 2006 to June 2007
- You will be expected to fill out surveys at three different times by coming to Heron Road Community Centre the weeks of November 7th 2006, March 6th 2007, and June 26th 2007. The surveys will take you about 1 hour each time.
- You will also be asked to fill out a short survey at the end of your last hip-hop class on what you thought of the classes (10 minutes).
- Some of you will also get to have a short conversation with a researcher on what you thought about the hip-hop classes (30 minutes) after your last class. You would have this conversation at either the Heron Road Community Centre or a community house, whatever is easiest for you. The conversation can also be on the phone, if you can not have the conversation in-person.

Potential Harms, Injuries, Discomforts or Inconveniences:

We do not think that there will be any problems or injuries by participating in this project and we will do what we can to minimize any problems so that you can enjoy your participation in this project. There is a small chance of injury in the participation of physical activity: for example, your muscles may be sore because of doing more physical activity. There will be a youth coordinator at all program group activities who will make sure youth are safe during this project.

Your participation in this project also means that some time will be taken up in coming to the hip-hop classes and filling out of surveys and an interview. You may find some questions uncomfortable but you will always have the choice to not answer what you do not want to answer. You can also always ask to stop or delay your participation in this project. But, the research is part of the hip-hop program, so doing the surveys and other research is required if you want to keep coming to the hip-hop classes.

Potential Benefits:

You may or may not benefit from this project yourself. But, you will get to participate in free hip-hop classes and in a final performance showcase. The hip-hop classes may also make you feel better in some way. By participating in the research, you will also help us better understand the benefits of this new physical activity program, and may help us improve programs for youth like yourselves.

Confidentiality:

Your identity and any personal information you give will remain confidential. Only the researchers working with Elizabeth Kristjansson will see the surveys and other information you give us for this study and it will be locked and kept safely at the University of Ottawa for 5 years; audiotapes used for the interviews will be kept for 2 years. An ID number will

be given to you and that number will be used to separate your information from other participants. The dance instructor, youth coordinator, and any other staff will not see any research we get from you during this study. All information you give us will be used for research purposes only and the results of the study will be written in a way that protects your identity and the identity of anyone that you talk about.

Voluntary Participation:

Participation in this research project is voluntary. That means that you do not have to participate and if you choose to participate, you can stop participating at any time or to refuse to answer any questions. If you choose to stop participating, all information you give us until the time you stop will be used and you will not have the opportunity to continue participation in the hip-hop classes.

Compensation for Participation in Project:

All hip-hop classes will be free. There will also be two draws for prizes during your program to encourage you to come to the classes every week. Youth missing no more than one of the first six classes will be put into the first draw and youth missing no more than one of the second half of seven classes will be put into the second draw. Prizes will be physical activity-related products or other youth-friendly items.

As compensation for filling out the research surveys, you will get a t-shirt with the program logo and other physical activity-related products worth about $5-10 at each of the three research classes. If you participate in a short conversation with a researcher you will be put into a draw with a chance to win a small prize worth about $20. There will also be snacks and beverages at all three research classes. You will get the compensation (e.g., t-shirt) after filling out each survey.

Finally, bus tickets will be handed out by the youth coordinator to as many youth needing them to get to the classes or showcases as possible, however, there will not be enough to give to all youth so they will be given to youth most in need of bus tickets.

Consent:

By signing this form, I agree that:

1. The study has been explained to me. All my questions were answered.
2. The possible harms and the benefits (if any) of this study have been explained to me.
3. I understand that I have the right not to participate and the right to stop at any time.
4. I am free now, and in the future, to ask any questions about the study.
5. I have been told that all information will be kept confidential.
6. I might be quoted but my name will not be used and no information that would identify me will be released or printed.

Acceptance: I, _____*(Name of participant)*, agree to participate in the above research study. I understand that regular attendance is important and agree to come to all hip-hop and research classes for my group, regardless of whether I end up in Group 1 or Group 2.

- Please check the program you want; girls only or co-ed (male and female youth together)?
  - ☐ Girls only (Tuesdays 5:00 – 6:15 pm)
  - ☐ Co-ed (Tuesdays 6:15 to 7:30 pm)

- In addition, I consent to being contacted for future research. At that time, I can choose to not participate in the research: Yes No

- I would like to get a summary of results at the end of the study: Yes No

There are two copies of the consent form. One copy is mine to keep.

Please **CLEARLY** write your name, mailing address, and phone number so that the researcher and program staff can contact you with information on the project.

Address	Phone Number
E-mail	Date
Participant's Name	Participant's Signature
Researcher's Signature	Date

Parent or Guardian:

I, the parent/guardian of_____ (*Name of participant*) give permission to this youth to participate in the above mentioned research study and to being contacted for future research.

Parent/Guardian signature	Date

If you have any questions about the study, you can contact Dr. Elizabeth Kristjansson at:
University of Ottawa, School of Psychology
145 Jean-Jacques Lussier St. Ottawa, ON K1N 6N5
Phone: (613) 562-5800 ext. 2329 Fax: (613) 562-5147
Email: kristjan@uottawa.ca

If you have any questions regarding the ethical conduct of this study, you can contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 159, (613) 562-5841 or ethics@uottawa.ca

AUDIOTAPING ASSENT AND CONSENT FORM

Title of Project: Hip-Hop Dance Project

Researchers from the School of Psychology, University of Ottawa:
Elizabeth Kristjansson, PhD 562-5800, ext. 2329 kristjan@uottawa.ca
Julie Beaulac, doctoral student

I consent to be audiotaped during my conversation with a researcher about what I think of the hip-hop classes, if I am interviewed during this research project. The audiotapes will be kept safe and private by the researchers at the University of Ottawa for two years and then destroyed or erased. Only the researchers working with Elizabeth Kristjansson will have access to this data and your name will not be on these audiotapes. I understand that I am free to participate in this study and that if I agree to participate I am free to stop participating at any time.

There are two copies of the consent form. One copy is mine to keep.

_____ _____
Participant's signature Date

_____ _____
Researcher's signature Date

Parent or Guardian:
I, the parent/guardian of_____, give permission to this youth to be audiotaped during his/her participation during the interview, if he/she is interviewed during this research project.

_____ _____
Parent/Guardian signature Date

If you have any questions about the study, you can contact Dr. Kristjansson at:
University of Ottawa, School of Psychology
145 Jean-Jacques Lussier St. Ottawa, ON K1N 6N5
Phone: (613) 562-5800 ext. 2329 Fax: (613) 562-5147
Email: kristjan@uottawa.ca

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Appendix D

ID#:_____
Date:_____

ASSENT AND CONSENT FORM

Title of Project: Hip-Hop Dance Project

Researchers from the School of Psychology, University of Ottawa:
Elizabeth Kristjansson, PhD 562-5800, ext. 2329 kristjan@uottawa.ca
Julie Beaulac, doctoral student

Purpose and description of the Research:
A free hip-hop dance class for youth ages 11 to 16 years will take place at Heron Road Community Centre. This new class is being studied by the University of Ottawa, in partnership with South-East Ottawa Community Health Centre, Culture Shock Canada, and Heron Road Community Centre. We want to look at the benefits, if any, of participating in the hip-hop dance class. The length of the project is around 3.5 months, from March 27th to June 26th 2007.

If you agree to participate in this project, you will be asked to come to 16 weekly hip-hop dance and research classes.

If you choose to participate in this project:
- Participation is from March 27th to June 26th 2007
- You will be expected to fill out surveys at two different times by coming to Heron Road Community Centre the weeks of March 27th and June 26th 2007. The surveys will take you about 1 hour each time and will ask about you, your participation in physical activity, your health, and your relationships.
- Your 13 weekly 75-minute hip-hop classes will run from March 27th to June 12th, with a showcase on June 26th.
- You will also be asked to fill out a short survey at the end of your last hip-hop class on what you thought of the classes (10 minutes).
- If you are female, you will get to choose between a girls-only program and a co-ed program. The girls-only program will be on Tuesday evenings 5:00 to 6:15 pm and the co-ed program will be on Tuesday evenings 6:30 to 7:45 pm.

Potential Harms, Injuries, Discomforts or Inconveniences:
We do not think that there will be any problems or injuries by participating in this project and we will do what we can to minimize any problems so that you can enjoy your participation in this project. There is a small chance of injury in the participation of physical activity: for example, your muscles may be sore because of doing more physical activity.

There will be a youth coordinator at all program group activities who will make sure youth are safe during this project.

Your participation in this project also means that some time will be taken up in coming to the hip-hop classes and filling out of surveys. You may find some questions uncomfortable but you will always have the choice to not answer what you do not want to answer. You can also always ask to stop or delay your participation in this project. But, the research is part of the hip-hop program, so doing the surveys and other research is required if you want to keep coming to the hip-hop classes.

Potential Benefits:
You may or may not benefit from this project yourself. But, you will get to participate in free hip-hop classes and in a final performance showcase. The hip-hop classes may also make you feel better in some way. By participating in the research, you will also help us better understand the benefits of this new program, and may help us improve programs for youth like yourselves.

Confidentiality:
Your identity and any personal information you give will remain confidential. What that means is that only the researchers working with Elizabeth Kristjansson will see the surveys and other information you give us for this study and it will be locked and kept safely at the University of Ottawa for 5 years. Your name will not be on the surveys, only an ID number that will be used to separate your information from other participants. The dance instructor, youth coordinator, and any other staff will not see any research we get from you during this study. All information you give us will be used for research purposes only and the results of the study will be written in a way that protects your identity and the identity of anyone that you talk about.

Voluntary Participation:
Participation in this research project is voluntary. That means that you do not have to participate and if you choose to participate, you can stop participating at any time or to refuse to answer any questions. If you choose to stop participating, all information you give us until the time you stop will be used and you will not have the opportunity to continue participation in the hip-hop classes.

Compensation for Participation in Project:
All hip-hop classes will be free. There will also be two draws for prizes during your program to encourage you to come to the classes every week. Youth missing no more than one of the first six classes will be put into the first draw and youth missing no more than one of the second half of six classes will be put into the second draw. Prizes will be physical activity-related products such as passes for laser quest or other fun activities, CDs, and MP3 players.

As compensation for filling out the research surveys, you will get a reward worth about $5 each after filling out each survey. You will get a water bottle with the program logo at the first research class, and a t-shirt with the program logo at the second research class. There will also be snacks and beverages at the two research classes.

Finally, bus tickets will be handed out by the youth coordinator to as many youth needing them to get to the classes or showcases as possible, however, there will not be enough to give to all youth so they will be given to youth most in need of bus tickets.

Consent:

By signing this form, I agree that:

1. The study has been explained to me. All my questions were answered.
2. The possible harms and the benefits (if any) of this study have been explained to me.
3. I understand that I have the right not to participate and the right to stop at any time.
4. I am free now, and in the future, to ask any questions about the study.
5. I have been told that all information will be kept confidential.
6. I might be quoted but my name will not be used and no information that would identify me will be released or printed.

Acceptance: I, _____*(Name of participant)*, agree to participate in the above research study. I understand that regular attendance is important and agree to come to all hip-hop and research classes.

- Are you able to get to Heron Road Community Centre for this class?
  Yes No

- In addition, I give permission to being contacted for future research. At that time, I can choose to not participate in the research:
  Yes No

- I would like to get a summary of results at the end of the study:
  Yes No

There are two copies of the consent form. One copy is mine to keep.

Please **CLEARLY** write your name, mailing address, and phone number so that the researcher and program staff can contact you with information on the project.

_____	_____
Address	Phone Number
_____	_____
E-mail	Date
_____	_____
Participant's Name	Participant's Signature
_____	_____
Researcher's Signature	Date

Parent or Guardian:

I, the parent/guardian of_____ (*Name of participant*) give permission to this youth to participate in the above mentioned research study and to being contacted for future research.

_____ _____

Parent/Guardian signature Date

If you have any questions about the study, you can contact Dr. Elizabeth Kristjansson at:

University of Ottawa, School of Psychology
145 Jean-Jacques Lussier St. Ottawa, ON K1N 6N5
Phone: (613) 562-5800 ext. 2329 Fax: (613) 562-5147
Email: kristjan@uottawa.ca

If you have any questions regarding the ethical conduct of this study, you can contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 159, (613) 562-5841 or ethics@uottawa.ca

Appendix E

Project Timelines

Activity	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
Intervention Prep													
Submit and Receive Ethics													
Recruitment													
Baseline Assessment						7				27			
Intervention – Group 1						14, 21, 28	5, 12, 19	9, 16, 23, 30	6, 13, 20				
Post-Assessment										6			26
Follow-up Period													
Intervention – Group 2											3, 10, 17, 24	1, 8, 15, 22, 29	5, 12, 19
Follow-up Assessment													26
Showcase									27				26

Appendix F

Telephone Script for Missed Hip-Hop Dance Classes

If no answer, youth coordinator will leave brief description of the content of this script and say: Please call us back at 613-737-7195 if you have any questions or need assistance getting to the classes.

- Hi, this is _____ calling from South East Ottawa about the hip-hop dance project. How are you today?

- I am calling about the hip-hop dance class that you missed_____ (indicate date missed).

- Assess reasons for missing class **(make a note of reason on attendance form)**

- Are you having any problems getting to Heron Road Community Centre for the classes?

    - **If yes,** help find a solution to transportation problems
        - If you need help getting to the classes in the future, just call 613-737-7195 and we will try to help you find a way to get there

    - **If no,** continue with script

- Are you still interested in coming to the classes?

    - **If no longer interested/available.** No problem. If you decide you would like to participate in hip-hop dance classes again, another program will be offered in the summer that is not connected to research. Even though you do not wish to come to the hip-hop dance classes, you can still come to the research classes. If this interests you, you would be compensated for your time completing questionnaires as you were during the first research class. Would you like to come to the research class?

        - **If yes.** Great. The next research class is _____ (indicate time). The researcher will call you and remind you of the class one week before each research class. Have a great day.
        - **If no.** No problem. Have a great day.

    - **If yes.** Great (continue with script)

- It is important to come to every hip-hop dance class
    - Don't forget that you will also get a chance to win prizes if you attend classes regularly
    - It is also important to attend regular so that you can be prepared for the final showcase performance
- Do you have any other questions?
    - **If yes,** respond to questions
    - **If no,** Thank you and see you at the next class _____ (indicate date and time of next hip-hop dance or research class).
- **If you have any questions about this program, please call me at 613-737-7195 Ext. 2406**

Appendix G

Debriefing Letter

Title of Project: Hip-Hop Dance Project

Researchers from the School of Psychology, University of Ottawa:
Elizabeth Kristjansson, PhD 562-5800, ext. 2329 kristjan@uottawa.ca
Julie Beaulac, doctoral student

This project wanted to respond to the need for new, positive, structured, and accessible physical activity programs for adolescents that considers their diverse needs and interests. Participation in physical activity is important for adolescent well-being, but many adolescents do not have enough opportunities to participate in programs in their communities. Our hope in studying this hip-hop dance program was to look at the physical, psychological and social benefits for diverse adolescents, by having you respond to research questions before you began the hip-hop dance classes and then again after you finished the hip-hop dance classes. We hope that your participation in this project has lead to benefits for you personally, and that you continue to have the opportunity to take part in other similar programs in your community. The findings from this project may help improve other new and existing physical activity programs in Ottawa and in other urban areas across Canada.

We would like to reassure you again that confidentiality is guaranteed. We also want to thank you for your participation in this study. You have provided us with much valuable information. We hope that your participation in this project was a positive experience for you.

If you have any questions about the study, you can contact Dr. Elizabeth Kristjansson at:

University of Ottawa, School of Psychology
145 Jean-Jacques Lussier St. Ottawa, ON K1N 6N5
Phone: (613) 562-5800 ext. 2329 Fax: (613) 562-5147
Email: kristjan@uottawa.ca

If you have any questions regarding the ethical conduct of this study, you can contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 159, (613) 562-5841 or ethics@uottawa.ca

Appendix H

Demographic and Information Questionnaire

1. How old are you? _____ years old (**please write #, e.g., 12**)

2. Sex (**CHECK ONE**)
   - ☐ Male
   - ☐ Female
   - ☐ Trans

3. How would you best describe your race/ethnicity (**CHECK ALL THAT APPLY**):
   - ☐ Arab/West Asian (e.g. Armenian, Egyptian, Iranian, Lebanese, Moroccan)
   - ☐ Black (e.g. African, Haitian, Jamaican, Somali)
   - ☐ Chinese
   - ☐ Filipino
   - ☐ Japanese
   - ☐ Korean
   - ☐ Latin-American
   - ☐ Native/Aboriginal people (e.g. North American Indian, Métis or Inuit/Eskimo)
   - ☐ South Asian (e.g. East Indian, Pakistani, Punjabi, Sri Lankan)
   - ☐ South East Asian (e.g. Cambodian, Indonesian, Laotian, Vietnamese)
   - ☐ White
   - ☐ Other (**please specify the ethnicity**) _____

4. What is your religion, if any? (**CHECK ONE**)
   - ☐ No religion
   - ☐ Buddhism
   - ☐ Christianity
   - ☐ Hinduism
   - ☐ Islam (Muslim)
   - ☐ Judaism
   - ☐ Sikhism
   - ☐ Other (**please specify the religion**) _____

5. How long have you lived in Canada? (**CHECK ONE**)
   - ☐ Since birth
   - ☐ More than 10 years
   - ☐ 5-10 years
   - ☐ Less than 5 years

6. What adult(s) do you currently live with most of the time (**CHECK ALL THAT APPLY**):
   - ☐ Birth father
   - ☐ Birth mother
   - ☐ Adoptive father
   - ☐ Adoptive mother
   - ☐ Step father
   - ☐ Step mother
   - ☐ Other (**please specify the adult**) _____

7. How many adults (19 or older) live at your home? _____ (**please write #, e.g., 2**)

8. How many youth (0-18 years old) live at your home (including yourself)? _____ (**please write #, e.g., 2**)

9. What is the highest level of education that your father or male guardian has completed? (**CHECK ONE**)
   - ☐ No schooling or some elementary (1 to 8 years)
   - ☐ Completed elementary
   - ☐ Some secondary
   - ☐ Completed secondary
   - ☐ Some post-secondary (university; community, technical or teacher's college; CEGEP)
   - ☐ Completed community college, technical college, or CEGEP
   - ☐ Completed university or teacher's college
   - ☐ Master's, Doctorate or professional degree (e.g., medical degree)
   - ☐ Other education or training
   - ☐ Don't know
   - ☐ Don't have a father or male guardian

10. What is the highest level of education that your mother or female guardian has completed? (**CHECK ONE**)
   - ☐ No schooling or some elementary (1 to 8 years)
   - ☐ Completed elementary
   - ☐ Some secondary
   - ☐ Completed secondary
   - ☐ Some post-secondary (university; community, technical or teacher's college; CEGEP)
   - ☐ Completed community college, technical college, or CEGEP
   - ☐ Completed university or teacher's college
   - ☐ Master's, Doctorate or professional degree (e.g., medical degree)
   - ☐ Other education or training
   - ☐ Don't know
   - ☐ Don't have a mother or female guardian

11. Does your family own or rent your home (**CHECK ONE**)?
    - ☐ Rent
    - ☐ Own

12. Does your family own a car, van or truck (**CHECK ONE**)?
    - ☐ No
    - ☐ Yes, one
    - ☐ Yes, two or more

13. Do you have your own bedroom for yourself (**CHECK ONE**)?
    - ☐ No
    - ☐ Yes

14. During the past 12 months, how many times did you travel away on holiday with your family (**CHECK ONE**)?
    - ☐ Not at all
    - ☐ Once
    - ☐ Twice
    - ☐ More than twice

15. How many computers does your family own (**CHECK ONE**)?
    - ☐ None
    - ☐ One
    - ☐ Two
    - ☐ More than two

16. During the past 30 days, how often did you go hungry because there was not enough food in your home (**CHECK ONE**)?
    - ☐ Never
    - ☐ Rarely
    - ☐ Sometimes
    - ☐ Most of the time
    - ☐ Always

Appendix I

Self-Report Battery

Instructions

- Thank you for agreeing to answer these questions. They ask information about you, your participation in physical activity, your health, and your relationships.
- Your answers will help us understand the benefits of this new hip-hop dance program in South East Ottawa.
- All your answers are confidential meaning that only the research staff will see your answers and your answers will not be connected to your name, only to your ID number
- The researchers will keep your answers PRIVATE. No one from your home, school, hip-hop program, or community will ever see what you write, so please answer honestly.
- Please answer **ALL** of the questions.
- There are no right or wrong answers.
- If you do not understand a question, please ask for help by raising your hand.
- If you want to change an answer, put a line through your first answer and then write your correct choice.

PedsQL

DIRECTIONS

On the following page is a list of things that might be a problem for you. Please tell us **how much of a problem** each one has been for you during the **past ONE month** by circling:

0 if it is **never** a problem
1 if it is **almost never** a problem
2 if it is **sometimes** a problem
3 if it is **often** a problem
4 if it is **almost always** a problem

There are no right or wrong answers.
If you do not understand a question, please ask for help.

*In the past **ONE month**, how much of a **problem** has this been for you …*

About My Health and Activities *(PROBLEMS WITH…)*	**Never**	**Almost Never**	**Some-times**	**Often**	**Almost Always**
1. It is hard for me to walk more than one block	0	1	2	3	4
2. It is hard for me to run	0	1	2	3	4
3. It is hard for me to do sports activities or exercise	0	1	2	3	4
4. It is hard for me to lift something heavy	0	1	2	3	4
5. It is hard for me to take a bath or shower by myself	0	1	2	3	4
6. It is hard for me to do chores around the house	0	1	2	3	4
7. I hurt or ache	0	1	2	3	4
8. I have low energy	0	1	2	3	4

About My Feelings *(PROBLEMS WITH…)*	**Never**	**Almost Never**	**Some-times**	**Often**	**Almost Always**
9. I feel afraid or scared	0	1	2	3	4
10. I feel sad or blue	0	1	2	3	4
11. I feel angry	0	1	2	3	4
12. I have trouble sleeping	0	1	2	3	4
13. I worry about what will happen to me	0	1	2	3	4

How I Get Along with Others *(PROBLEMS WITH…)*	**Never**	**Almost Never**	**Some-times**	**Often**	**Almost Always**
14. I have trouble getting along with other teens	0	1	2	3	4
15. Other teens do not want to be my friend	0	1	2	3	4
16. Other teens tease me	0	1	2	3	4
17. I cannot do things that other teens my age can do	0	1	2	3	4
18. It is hard to keep up with my peers	0	1	2	3	4

About School *(PROBLEMS WITH…)*	**Never**	**Almost Never**	**Some-times**	**Often**	**Almost Always**
19. It is hard to pay attention in class	0	1	2	3	4
20. I forget things	0	1	2	3	4
21. I have trouble keeping up with my schoolwork	0	1	2	3	4
22. I miss school because of not feeling well	0	1	2	3	4
23. I miss school to go to the doctor or hospital	0	1	2	3	4

PHYSICAL AND SOCIAL ACTIVITIES

These questions are about your physical and social activities. Please answer Questions 1 to 10.

Physical activity is any activity that increases your heart rate and makes you get out of breath some of the time.

Physical activity can be done in sports, playing with friends, or walking to school.

Some examples of **physical activity** are running, fast walking, rollerblading, biking, dancing, skateboarding, swimming, soccer, basketball, and football.

ADD UP ALL the time you spend in physical activity each day **(don't include your time in the hip-hop project at Heron Road Community Centre)**.

1. Over the **PAST 7 DAYS**, on how many days were you physically active for a total of at least **60 minutes** per day (**CHECK ONE**)?

O	O	O	O	O	O	O	O
0 days	1	2	3	4	5	6	7 days

2. Over a **TYPICAL OR USUAL WEEK**, on how many days are you physically active for a total of at least **60 minutes** per day (**CHECK ONE**)?

O	O	O	O	O	O	O	O
0 days	1	2	3	4	5	6	7 days

3. In your opinion, how would you say your hip-hop dance skills are? (**CHECK ONE**)
   - Excellent
   - Very good
   - Good
   - Fair
   - Poor

4. Thinking about the past week, how many hours **A DAY** did you usually watch television, including videos (**CHECK ONE**)?

_____ hour(s) & _____ minutes (**write # of hours & minutes, e.g., 1 hour & 30 minutes**)

5. Thinking about the past week, how many hours **A DAY** did you usually use a computer (for playing games, e-mailing, chatting, surfing on the internet) (**CHECK ONE**)?

_____ hour(s) & _____ minutes (**write # of hours & minutes, e.g., 1 hour & 30 minutes**)

6. Thinking about the past week, how many hours **A DAY** did you usually spend time doing school homework outside of school hours (**CHECK ONE**)?

_____ hour(s) & _____ minutes (**write # of hours & minutes, e.g., 1 hour & 30 minutes**)

7. Thinking about the past week, how many hours **A DAY** did you usually do hip-hop dance (**CHECK ONE**)?

_____ hour(s) & _____ minutes (**write # of hours & minutes, e.g., 1 hour & 30 minutes**)

8. During the **PAST THREE MONTHS**, how many times have you been injured seriously enough to require medical attention by a doctor, nurse or dentist?

_____ times (**write # of times, e.g., 0**)

9. Were any of the injuries related to your participation in the hip-hop classes at Heron Road Community Centre?
   - ☐ Yes
   - ☐ No
   - ☐ I have not been injured in the past 3 months

10. During the **PAST THREE MONTHS**, how many times did you go to a Future Shock or other hip-hop dance class (**Not including the Heron Road Dance Class**)?

_____ times (**write # of times, e.g., 0**)

SPPA - R

Here are some questions about how you think of yourself.
Please check **ONE** box for **EACH** question as to how well each statement describes you. *Please answer Questions 1 to 35.*

	Describes me very well	Describes me quite well	Describes me quite poorly	Describes me very poorly
1. I feel just as smart as others my age	❑	❑	❑	❑
2. I find it hard to make friends	❑	❑	❑	❑
3. I do very well at all kinds of sports	❑	❑	❑	❑
4. I am **not** happy with the way I look	❑	❑	❑	❑
5. I usually do what I know is right	❑	❑	❑	❑
6. I am able to make really close friends	❑	❑	❑	❑
7. I am often disappointed in myself	❑	❑	❑	❑
8. I am pretty slow in finishing my school work	❑	❑	❑	❑
9. I have a lot of friends	❑	❑	❑	❑
10. I think I could do well at just any new athletic activity	❑	❑	❑	❑
11. I wish my body was different	❑	❑	❑	❑
12. I often get in trouble for the things I do	❑	❑	❑	❑
13. I have a close friend I share secrets with	❑	❑	❑	❑
14. I don't like the way I am leading my life	❑	❑	❑	❑
15. I do very well at my classwork	❑	❑	❑	❑
16. I am very hard to like	❑	❑	❑	❑
17. I am better than others my age at sports	❑	❑	❑	❑
18. I wish my physical appearance was different	❑	❑	❑	❑

	Describes me very well	Describes me quite well	Describes me quite poorly	Describes me very poorly
19. I feel really good about they way I act	❑	❑	❑	❑
20. I have a close friend to share things with	❑	❑	❑	❑
21. I am happy with myself most of the time	❑	❑	❑	❑
22. I have trouble figuring out the right answers in school	❑	❑	❑	❑
23. I am popular with others my age	❑	❑	❑	❑
24. I don't do well at new outdoor games	❑	❑	❑	❑
25. I think I am good looking	❑	❑	❑	❑
26. I do things I know I shouldn't do	❑	❑	❑	❑
27. I find it hard to make friends I can really trust	❑	❑	❑	❑
28. I like the kind of person I am	❑	❑	❑	❑
29. I feel that I am pretty intelligent	❑	❑	❑	❑
30. I feel that I am socially accepted by people my age	❑	❑	❑	❑
31. I do not feel that I am very athletic	❑	❑	❑	❑
32. I really like my looks	❑	❑	❑	❑
33. I usually act the way I am supposed to	❑	❑	❑	❑
34. I don't have a friend that is close enough to share really personal thoughts with	❑	❑	❑	❑
35. I am very happy being the way I am	❑	❑	❑	❑

SDQ

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered **ALL** items as best you can even if you are not absolutely certain. Please give your answers on the basis of how things have been for you over the **LAST THREE MONTHS**.

	Not True	Somewhat True	Certainly True
1. I try to be nice to people. I care about their feelings	❑	❑	❑
2. I get restless, I cannot stay still for long	❑	❑	❑
3. I get a lot of headaches, stomach-aches or sickness	❑	❑	❑
4. I usually share with others, for example CD's. games, food	❑	❑	❑
5. I get very angry and often lose my temper	❑	❑	❑
6. I would rather be alone than with people of my age	❑	❑	❑
7. I usually do as I am told	❑	❑	❑
8. I worry a lot	❑	❑	❑
9. I am helpful if someone is hurt, upset or feeling ill	❑	❑	❑
10. I am constantly fidgeting or squirming	❑	❑	❑
11. I have one good friend or more	❑	❑	❑
12. I fight a lot. I can make other people do what I want	❑	❑	❑
13. I am often unhappy, depressed or tearful	❑	❑	❑
14. Other people my age generally like me	❑	❑	❑
15. I am easily distracted, I find it difficult to concentrate	❑	❑	❑
16. I am nervous in new situations. I easily lose confidence	❑	❑	❑
17. I am kind to younger children	❑	❑	❑
18. I am often accused of lying or cheating	❑	❑	❑
19. Other children or young people pick on or bully me	❑	❑	❑
20. I often volunteer to help others (parents, teachers, children)	❑	❑	❑
21. I think before I do things	❑	❑	❑
22. I take things that are not mine from home, school or elsewhere	❑	❑	❑
23. I get on better with adults than with people my own age	❑	❑	❑
24. I have many fears, I am easily scared	❑	❑	❑
25. I finish the work I'm doing. My attention is good	❑	❑	❑

SCHOOL

These questions are about your school attendance. Please answer Questions 1 to 3.

1. Are you in school now? (**CHECK ONE**)
   - □ Yes
   - □ No (If no, go to Family Q#1)

2. During the PAST ONE MONTH, about how many whole days of school have you missed? (**CHECK ONE**)
   - ☐ None
   - ☐ 1 to 5 days
   - ☐ 6 to 10 days
   - ☐ 11 to 15 days
   - ☐ 16 to 20 days
   - ☐ More than 20 days

3. During the PAST ONE MONTH, about how many times did you skip class(es) or school?
   (**CHECK ONE**)
   - ☐ 0 days
   - ☐ 1 day
   - ☐ 2 days
   - ☐ 3 days
   - ☐ 4 or more days

FAMILY

These questions are about how you feel you are getting along with your family. Please answer Questions 1 and 2.

1. During the PAST ONE MONTH, how well have you gotten along with your parent/guardian(s)? (**CHECK ONE**)
   - ☐ I do not have a parent/guardian
   - ☐ Very well, no problems
   - ☐ Quite well, hardly any problems
   - ☐ Pretty well, occasional problems
   - ☐ Not too well, frequent problems
   - ☐ Not well at all, constant problems

2. During the PAST ONE MONTH, how well have you gotten along with your brother(s)/sister(s)? (**CHECK ONE**)
   - ☐ I do not have any brothers or sisters
   - ☐ Very well, no problems
   - ☐ Quite well, hardly any problems
   - ☐ Pretty well, occasional problems
   - ☐ Not too well, frequent problems
   - ☐ Not well at all, constant problems

END OF SURVEY

Finally, can you tell me how honestly you think you answered this survey? (**CHECK ONE**)

- Very honestly
- Somewhat honestly
- Not very honestly

Thank you for your help!

Appendix J

Participant Qualitative Interview Guide

Introductions

Thank you for coming to this interview.

Over the next half an hour or so, I would like to talk to you about your personal experiences in the hip-hop dance program. This is your opportunity to share your experiences.

Review Confidentiality, etc.

- I will be recording our conversation so that I do not miss anything you say.
- Your identity and any identifying information you give will remain confidential. Only the researchers will have access to what you tell me today. The Dance instructor, youth coordinator, and anyone else will not have access to any research collected during this study.
- You are under no obligation to participate and if you choose to participate, you have the right to withdraw at any time or to refuse to answer any questions
- For participating in this short conversation, you will be entered into a draw with a chance to win a $20 gift certificate for somewhere like HMV.
- There are no right or wrong answers.
- Any questions re: interview, research, recorder?

Interview Questions:

1. Tell me what you thought about the hip-hop dance program?
2. What was it like being in a girls-only (or mixed girls and boys) class?
    a. What attracted you to this class compared to the mixed girls and boys (or girls-only)?
3. Tell me how the hip-hop dance program has affected you?
    a. What did the classes do for you?
    b. Could you give me some examples?
4. In the past 3 months, has your participation in physical activity changed in anyway?
    - If so, in what way? Increased? Decreased? Stayed the same?
    - How and why the change?

5. Do you think that the hip-hop dance classes had an affect or changed:
    a. Your hip-hop dance skills?
    b. The way you see yourself?
    c. How you feel physically?
    d. Your mood?
    e. Your relationships with others?
    f. School?
    g. How you behave or the things you do?

6. How did you notice the change(s)?

7. Did this class have any influence on you that you did not expect?
    a. Anything surprising?

8. Was there anything negative that resulted from your participation in these classes
    a. e.g., Injuries? Teasing?

9. How did you feel about having a showcase performance?

10. Did the program fit for you in terms of your age, religion, and cultural background?
    a. What about it fit for you?

11. What about the hip-hop dance classes do you think made it positive?
    a. What made the difference for you?

12. What did you like most about the hip-hop program?

13. What did you dislike about the program or what would you change to make it better?

14. Do you see yourself continuing with hip-hop?

15. Is there anything else you want to share about your experience in the hip-hop classes?

Summary

(Interviewer will give a brief summary)

Thank and debrief

Thank you so much for sharing your time and experiences with me. I have really enjoyed talking with you. This conversation along with the conversations with other youth will help me better understand the benefits and experiences of youth in this hip-hop dance program.

Appendix K

Evaluation Timelines

Week	Winter Session (1)	Spring Session (2)
Week 0	Baseline assessment	
Week 1	Receive hip-hop program	
Week 13	Hip-hop program ends Implementation assessment	
Week 14	Showcase	
Week 15	Post-intervention assessment Qualitative interviews	
Week 18		Baseline assessment
Week 19		Receive hip-hop program
Week 31		Hip-hop program ends Implementation assessment
Week 32	Follow-up assessment	Showcase Post-intervention assessment
Week 33	Prep for Final Showcase Final Showcase	Prep for Final Showcase Final Showcase

Author Note

Julie Beaulac and Elizabeth Kristjansson, Department of Psychology, University of Ottawa. Julie Beaulac conceived of the study concept and design, collected, analyzed, and interpreted the data, and drafted the paper. Elizabeth Kristjansson assisted with the interpretation of the data and critically revised the paper for important intellectual content. All authors gave final approval of the version to be published.

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Correspondence concerning this article should be addressed to Julie Beaulac, School of Psychology, 125 University, Montpetit Hall, room 416A, University of Ottawa, Ottawa, Canada, K1N 6N5, or through e-mail jbeau080@uottawa.ca

GENERAL DISCUSSION

The primary objective of this thesis was to investigate the perceived impact of a new community-based hip-hop dance intervention on the well-being of young people living in a disadvantaged, multicultural community. The intervention is an example of a structured voluntary activity that has been linked to positive youth development (Larson, 2000). In response to previous research highlighting the need to target a combination of individual and environmental constraints to participation in physical activity (Brodersen, Steptoe, Williamson, & Wardle, 2005; Giles-Corti & Donovan, 2002; Sallis & Owen, 1997), this project adopted a social-ecological framework. Attempts were made to remove some of the constraints to youth participation in physical activity by offering a free culture- and age-relevant program in an inclusive and non-competitive environment, by providing transportation assistance, and by including ongoing participation incentives. Improving access to physical activity programs that target disadvantaged adolescents represents an important direction in tackling physical inactivity and its negative health and social consequences (Task Force on Community Preventive Services, 2002).

Two studies were conducted for this thesis. The first study sought to conceptualize the new hip-hop dance intervention prior to its implementation, and verified the needs of the target community. The expectation was that this study would improve the implementation, likely impact, and sustainability of the intervention (Green, Daniel, & Novick, 2001; Israel, Schulz, Parker, & Becker, 1998). The second study consisted of the evaluation of the implementation and perceived impact of the new weekly community-based hip-hop dance program. The implementation evaluation was reported in the second paper of this thesis, and was expected to reveal the strengths and weakness of the new intervention. The focus of the

outcome evaluation, reported in the third paper, was on whether adolescents' participation in the intervention led to improved psychological, social, and physical well-being across a number of outcomes, in addition to identifying the intervention elements linked to these outcomes.

Summary of Findings

The first paper investigated the development of the new intervention. Three focus groups were held with parent/guardians and young people living in South-East Ottawa to better understand the needs, barriers, and facilitators related to youth participation in physical activity. The young people and parents were aware of the benefits to youth participation in physical activity (Trost, Owen, Bauman, Sallis, & Brown, 2002) but felt that existing programming was not sufficiently accessible or relevant in this community. Findings were consistent with a social ecological model of physical inactivity and with past research, supporting the need for physical activity programs to address contextual constraints to youth participation (Brodersen et al., 2005). This intervention-conceptualization study was critically important in informing program development and implementation, including decisions around offering co-ed and girls-only formats, program timing, recruitment methods, participation incentives, and transportation assistance. Findings also demonstrated the importance of involving the community in developing and implementing new programs.

The second paper investigated the implementation, reach, and maintenance of the hip-hop dance program at the setting level. In summary, the implementation findings provided valuable feedback on the strengths and weaknesses of this new community-based physical activity program for adolescents. Strengths of the implementation included the

accessibility and relevance of the program and the level of challenge in learning something new. In addition, the participants described a mostly positive/non-competitive environment and positive connections of the youths with their peers and the staff; however, this was an area that could also be improved. Not unlike other community-based programs for youth and disadvantaged populations (Jago & Baranowski, 2004; Marcus et al., 2006; Stone, McKenzie, Welk, & Booth, 1998; Taylor, Baranowski, & Young, 1998), almost 50% of the youths dropped out of the program. For instance, the Centre-Based Program for Families (Baranowski, Simons-Morton, & Hooks, 1990) had only a 20% participation rate. Improving the implementation of this program would likely improve youth retention and impact (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). Specifically, 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. Importantly, however, the youth participants in this program were reflective of the target population and reported overall satisfaction with the program. In addition, the young people, parents, and staff agreed that the program should be continued, with modifications. However, more resources would likely be needed to completely implement this program and its continuation will depend on securing additional funding. These findings highlight the need for evaluations of programs to investigate implementation in order to better understand what intervention elements are likely related to success and where improvements are needed (Taylor et al., 1998).

The goal of the third paper was to explore the perceived impact of the hip-hop dance program on the youth participants' psychological, social, and physical well-being. This

investigation involved a pretest-postest assessment of youth aged 11 to 16 who participated in a weekly girls-only or co-ed program format. The winter session included 13 classes, while the spring session included 12 classes and both ended with a showcase performance. Quantitatively there were only minor significant or close to significant effects, likely due to low statistical power, high attrition, low intervention dose, and implementation problems highlighted in the second paper. However, qualitative findings were more promising, and suggested the young people benefited from this program. Although the staff reported positive changes across a number of domains, overall they described fewer benefits of the program as compared to the youths and parents. We had intended to assess the maintenance of the program's impact at a follow-up period; however, the poor response rate did not permit investigation of this question. In addition, although no important differences in perceived impact were noted by socio-economic status or for the co-ed as compared to girls-only participants, further exploration of this latter issue is necessary. Importantly, the youths who completed the program tended to report more peer problems and lower quality of life, suggesting that the program retained the youths with more problems. Qualitative findings were also helpful in illustrating the young people's experience of the program and highlighting important intervention elements believed to be linked to the perceived outcomes, including the program design, showcase performance, and staff. Overall, the findings suggest that the hip-hop dance intervention is a promising program for the promotion of youth well-being.

Limitations to Thesis Research

This thesis research had a number of strengths, such as the consideration of youth, parent, and personnel perspectives in both the development and evaluation of the new

intervention, multiple methods, and the community-based nature of the evaluation. In addition, two major strengths of this thesis were the emphasis placed on external validity and the focus on a disadvantaged community. However, several limitations need to be acknowledged. First, an important limitation of the intervention study is the non-experimental design; as a result, we can not attribute causality, or, therefore, impact. A second significant limitation relates to the generalizability of the findings from the two studies. The intervention development study involved a small number of young people and parents from the target community, and therefore, their perceptions on the needs, barriers, and facilitators related to youth participation in physical activity may not be reflective of the community; however, findings did fit with existing research (Brodersen et al., 2005). For the intervention study, a high level of youth attrition from the program and research also raised concerns around the generalizability of the second study's findings. However, the reported psychological, social, and physical benefits of the intervention were consistent with the physical activity literature (Steptoe & Butler, 1996; Stone et al., 1998; Task Force on Community Preventive Services, 2002). A limitation common to both studies is the possibility that demand characteristics contributed to the findings; however, attempts were made to reduce the influence of social desirability. Additional limitations have also been discussed within the three papers of this thesis.

Implications for Physical Activity Programming and Policy

Increasing attention is being given to the promotion of physical activity among youth, as rates of participation among youth decline (Active Healthy Kids Canada, 2007) and physical health problems associated with physical inactivity such as obesity and diabetes rise (Klebanoff & Muramatsu, 2002; Salmon, Booth, Phongsavan, Murphy, &

Timperio, 2007). The opportunity for promoting psychological and social well-being among youth through the promotion of physical activity remains under-recognized. Moreover, lower-income and culturally diverse youth have rarely been consulted on their views of the burgeoning problem of physical inactivity and few studies have investigated the impact of community-based physical activity interventions to promote well-being among this or the general adolescent population (Jago & Baranowski, 2004; Marcus et al., 2006; Stone et al., 1998; Salmon et al., 2007). For these reasons, this thesis is an important contribution to the literature.

The first study explored the needs, barriers, and facilitators to youth participation in physical activity. A significant implication of this study was the importance of considering multiple levels of influence, and in particular, environmental constraints in promoting physical activity in disadvantaged communities. Moreover, the complexity of reasons for physical inactivity needs to be taken into account when allocating resources and planning new programs. The majority of physical activity promotion efforts have focused on health education and other individual-level factors (Giles-Corti & Donovan, 2002; Schooler, 1995); however, this study demonstrated that not only were the young people and parents in this one disadvantaged community well aware of the vast benefits of physical activity, they also had strong ideas on how to promote physical activity within their community that were consistent with the empirical evidence (Brodersen et al., 2005; Chaudhary & Kreiger, 2007; Gauvin, 2003; Sallis & Owen, 1997; The Canadian Council on Social Development, 2001). One of these ideas was the need for more accessible physical activity programming that was fun, safe, and relevant for young people within this community. This study also highlighted the significance of involving the community in the development of new interventions.

The second study investigated the implementation and perceived impact of a new community-based hip-hop dance program. The new program was demonstrated as one potentially effective and relevant physical activity program for a group of youths living in South-East Ottawa, a culturally diverse and disadvantaged community. Although regular physical activity is the ideal, the qualitative findings that a once weekly program was associated with improved well-being are consistent with the evidence that even small increases in participation among inactive populations are associated with benefits (Blair, LaMonte, & Nichaman, 2004). The suggested benefits of this program described by the youths, parents, and staff, support the need for physical activity programming to take a more holistic approach to health promotion.

Importantly, the use of qualitative and quantitative methods capitalized on the strengths of both methods. The use of qualitative methods was particularly important in capturing the meaning of physical activity and youth experiences in the intervention from culturally diverse perspectives (Hughes, Seidman & Williams, 1993). Although we can not speak on the generalizability of these findings, there are important implications related to physical activity programming for youth that were consistent with positive youth development theory. For one, this study supported the importance of fostering caring adult-youth connections and positive peer relations, two core components of interventions to promote positive youth development. In addition, the promotion of youth autonomy within leisure is another important implication. Physical activity promotion efforts involving youth would likely have greater impact if these core components were emphasized (Anderson-Butcher, Cash, Saltzburg, Midle, & Pace, 2003; Larson et al., 2004; Quinn, 1999; Rhodes, 2004; Roth, Brooks-Gunn, Murray, & Foster, 1998).

Two other factors that were revealed as critically important in both the development and intervention phase of this project were accessibility and relevance in physical activity programming. Hip-hop dance was reported as an appealing option in the first study and was later reported by the young people, parents, and staff as a highly relevant program for intervening with youth. Accessibility encompasses such factors as program cost, location, and transportation. The young people, parents, and staff all highlighted the importance of the free cost in increasing the accessibility of the program. The location of the newly implemented program also promoted participation – a community centre located in a high-density, lower-income, culturally diverse neighbourhood of South-East Ottawa. An alternative and important setting for promotion and prevention programs would be as an after school program (Wolfe, Crooks, Chiodo, & Huges, 2005). The school setting would have been attractive in that it could have enhanced accessibility and reduced some of the transportation burden. However, conducting research within the school setting can be challenging. Providing transportation assistance, another factor related to accessibility, appeared to facilitate youth involvement. Importantly, the new hip-hop dance program filled part of a void in this community that reported previously lacking an accessible and relevant physical activity program for youth. The implication for physical activity promotion is the need to consider these two critical factors in the development and implementation of physical activity and health promotion interventions more generally.

To date, most interventions targeting disadvantaged populations have focused on one specific cultural group (Taylor et al., 1998); however, this does not represent the reality or ideal for physical activity programming in a Canadian urban context. Another related implication was that despite a number of efforts to reduce constraints to youth participation,

some contextual constraints remained. Youth participation was affected, in particular, by poverty and its related consequences (e.g., unstable and poor housing arrangements, health problems for the youths and family members). It is important that community interventions attempt to reduce the constraints they can; it is also critical that funders, such as community and governmental organizations, understand that additional resources may be necessary to appropriately meet the needs of lower-income and culturally diverse young people (e.g., separate programs for male and female youth). Furthermore, strong evidence has been shown for multi-setting interventions in adolescents (van Sluijs, McMinn, & Griffin, 2007). Attempts should therefore be made to combine community-based physical activity interventions with interventions targeting other settings (e.g., school, home) as the problem of physical inactivity, health, and social problems is complex (Catalano et al., 2004). One Canadian example is the Kids in Shape (KIS) project, which has been modelled after Québec en Forme (QEF) to promote physical activity in lower income neighbourhoods by intervening at multiple settings (Parent, Harvey, Faubert, & Fallu, 2007). Health promotion efforts also need to come from multiple levels and across sectors, including collaborative partnerships (Biddle, Gorely, & Stensel, 2004; Chaudhary & Kreiger, 2007; Sallis, 1994).

Directions for Future Research

This thesis explored physical activity in the context of a diverse and disadvantaged community, the second study investigating a hip-hop dance program on youth well-being. Overall, the findings suggest that this intervention was effective at promoting psychological, social, and physical well-being among the youth participants. The next step will be to confirm these findings and determine causality through a more rigorous experimental design. It will also be important for future research to confirm the benefits of other

community-based physical activity programs. In particular, future research is needed to better understand the psychological and social benefits of such programs for youth, and especially for culturally diverse and disadvantaged young people (Biddle, 2000; Marcus et al., 2006; Scully, Kremer, Meade, Graham, & Dudgeon, 1998). One outcome that warrants more investigation for structured voluntary activities such as the one studied in this thesis is initiative, a key factor implicated in positive youth development (Larson, 2000). In addition, the longer-term impact of these programs needs investigation. It has been suggested that for the true maintenance of an intervention's impact and sustainability, a follow-up period of two years is ideal (Glasgow, Vogt, & Boles, 1999).

Although heterogeneity of samples can pose problems for internal validity, the trade-off is often at the expense of generalizing results to a more diverse target population. It is critical that future research include diverse and disadvantaged populations, as these populations represent a significant proportion of the Canadian population for which there is no adequate explanation for research neglect (Duda & Allison, 1990; Gill, 1993; Kazdin, 2003). Some issues that will be important to consider in involving these populations are the appropriateness of particular quantitative measures, method of administering measures, and language and setting of interviews. In order to evaluate the possible moderating factor of socio-economic status or other socio-cultural factors, it is critical that researchers ask participants these questions and report on any differences along these characteristics (Entwisle & Astone, 1994; Guerra, Boxer, & Cook, 2006). Moreover, it will be important that future research carefully balance the research agenda with the needs and interests of communities so as to not continue the history of under-involvement and distrust of disadvantaged populations in research.

It will also be important for future research investigating the efficacy or effectiveness of a physical activity program to evaluate the program along additional dimensions (Glasgow et al., 1999). RE-AIM (Reach, Effectiveness, Implementation, Maintenance, Adoption) is an example of a model that considers multiple dimensions and was used for this thesis. For instance, the implementation findings illustrated the strengths and weaknesses of the hip-hop dance program. There is an expanding literature on key elements of effective physical activity programming for youth; however, more implementation research is needed within the context of effectiveness or efficacy research in order to better understand how interventions work and why a particular intervention may not be effective, particularly related to diverse and disadvantaged communities. One factor that will be critical to explore is the relevance of programming across different contexts. The use of such a comprehensive approach is likely to lead to a better understanding of the program and to improved dissemination of effective interventions.

Conclusion

The purpose of this thesis was to provide a better understanding of the needs, barriers, facilitators, implementation, and perceived impact of community-based physical activity programming on the psychological, social, and physical well-being of youth living in a disadvantaged, multicultural community. The findings demonstrated promise for the importance of a hip-hop dance program on youth well-being and of involving communities in developing new programs. The intervention-conceptualization study provided support for adopting a social ecological framework to understanding physical inactivity among youth, highlighting the importance of considering both environmental and individual level factors in the promotion of physical activity. The intervention study suggested promise in offering

weekly physical activity programming for youth living in a disadvantaged community. The benefits linked to this brief program imply that longer-term community-based physical activity programming is a promising practice in the promotion of psychological, social, and physical well-being among young people. An important implication of the implementation findings is that core elements be considered in the implementation of similar programs, including fostering caring adult-youth connections, positive peer relations, and youth autonomy, in addition to ensuring high program accessibility and relevance. Promoting physical activity is important for positive youth development, and efforts to do so should consider the implications of this thesis.

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(Introduction and General Discussion)

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Appendix A

Program Logic Model