



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

Unequal Opportunities, Unequal Outcomes

Physical Activity Beliefs and Behaviours in Low Socioeconomic Status (LSES) Mothers in Canada



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Executive Summary

Women in the 19–50 year-old age group make up almost one-half of the population of women in Canada. These women are coping with the competing demands of motherhood, childcare responsibilities and work outside the home. All of these are factors which may in part be responsible for the increasing rates of overweight and obesity also seen in this age group of women.

It is well known that a sedentary lifestyle plays a significant role in the health of Canadian women, in particular, the risks of overweight and obesity, diabetes, and cardiovascular disease. A sedentary lifestyle is a health concern in the low socioeconomic status (LSES) population of Canadian women, and in particular mothers, yet there is a paucity of research on physical activity levels, beliefs and behaviours of this population. To help understand and address this issue, CAAWS has undertaken a two-year project (2007 to 2009) to determine physical activity levels of low socioeconomic status (LSES) mothers using a women-specific physical activity survey tool; and to identify barriers and antecedents that prevent and limit participation of low socioeconomic status mothers in physical activities within their communities.

Goal:

The overall goal of this study is to increase the awareness of the importance of physical activity for LSES mothers among multi-sectoral stakeholders on a national basis and strengthen the physical and social environments to support physical activity for low socioeconomic status mothers.

Objectives:

- To identify barriers and antecedents that prevent and limit participation of low socioeconomic status (LSES) mothers in physical activity within their communities;
- To determine physical activity levels of LSES mothers using a women-specific physical activity survey tool;
- To identify solutions and best practices to increasing physical activity and sport for LSES mothers;
- To develop resources for multi-sectoral practitioners that will help to improve accessibility, availability, and affordability of physical activities for LSES mothers.

Summary of the Findings

A) LSES Mothers

Meaning of Physical Activity to LSES Mothers

The themes of physical movement and overall health emerged in the focus group discussions with the LSES mothers. Physical movement included daily living activities, childcare, on-the-job activities, as well as leisure-time physical activities and exercise. Health included both mental and physical health, with a focus on stress reduction, time for oneself, improved self-esteem, weight loss, improved energy levels and healthy aging. Social acceptance and/or inclusion were a third key theme that emerged in the Aboriginal and immigrant, multicultural women's focus groups.

Trends in Physical Activity Throughout the Lives of LSES Mothers

Sports and exercise participation tended to be highest throughout the school years – high school being the key time when sport activity was at the highest levels for many of the mothers. Household chores and childcare were ranked as the biggest contributors to LSES mothers' daily physical activity throughout adult years. Walking was the most common form of exercise noted in the adult years.

Physical Activity Levels of LSES Mothers

LSES mothers who also worked outside the home had consistently higher levels of physical activities than those mothers who were not employed. Household and caregiving activities, activities of daily living, and sports and exercise activities were similar in working and non-working mothers. The differences in overall physical activity levels were due to the addition of occupational physical activities.

LSES Mothers' Barriers to Being Physically Active

The women identified many different barriers that kept them from being physically active including external, internal, and impacting issues.

External issues:

- Climate – both winter and summer weather;
- Accessibility to transportation – cost and availability of transportation to programs and/or facilities as well as the challenges of using public transportation if it is available;
- Infrastructure of the built environment impacting upon safety and accessibility of physical activity options for LSES mothers and their children;
- Low availability of affordable options, discounts and subsidies for LSES mothers,
- High cost of being physically active – childcare costs and physical activity program costs including clothing and/or equipment.

Internal issues:

- Body weight and body image concerns as barriers to physical activity;
- Feeling of guilt for being active and/or wanting to be active and leaving family and childcare responsibilities to someone else;
- Lack of priority and importance of physical activity for women's mental and physical health;
- Lack of confidence in physical abilities for sport and other physical activities;
- Lack of physical activity and sport skills, and unsure of how to acquire these skills;
- Too intimidated to learn a new physical activity or sport skill set or to venture into completely new territory;
- Low self-esteem and the tendency of mothers to put everyone else's needs ahead of their own physical activity time;
- Life transitions – the wide range of physical, emotional, and stage-of-life changes that occur when women become mothers.

Other impacting issues included:

- Benefits – understanding the benefits of all types of physical activity for LSES mothers so that a greater variety of physical activity programming efforts are realized;
- Health – the mental and physical health impacts of physical activity on body weight as well as the inherent risks of diabetes, breast cancer, and heart disease;
- Childcare – the availability of childcare that is affordable and accessible to LSES mothers;
- Isolation – moving to a new province/territory or country contributes to a feeling of isolation;
- Spousal support – husbands not supporting their wives' desire to be physically active;
- Women friends – to share childcare responsibilities and to be physical activity partners;
- Infrastructure – lack of instructors who understand cultural needs; high costs of programs; stigma associated with qualifying for financial assistance.

Supporting Issues for Physical Activity Amongst LSES Mothers

- Supportive neighborhood environments – opportunities for neighbors to come together and be physically active in a welcoming, comfortable and culturally appropriate, local environment;
- Physical activity champions – physically active LSES mothers role models as encouragement and motivation to participate, as well as encouragement from family and friends;
- Partners – partnerships between municipal and non-traditional partners to allow for greater access to physical activities for the mothers and their families; and
- Partner networks – many individual organizations working together as a team to increase physical activity opportunities.

B) Physical Activity Promoters

Physical Activity Promoters' Beliefs and Perceptions

In five focus groups, female physical activity promoters (e.g., women working in public and community health, municipal recreation, community associations, sport organizations, provincial/territorial organizations, government agencies, women's shelters, and Aboriginal organizations) discussed their "situated knowledge", biases, experiences, perceptions, and ideas for improving access to physical activity for LSES mothers. Their views on physical activity were shaped from their own personal experiences and these could have an impact upon the ultimate message that they convey in their work life with respect to physical activity support. The women confirmed that there is the potential for conflicting messages being conveyed from physical activity promoters with respect to the established guidelines for health versus fitness benefits of physical activity and exercise. The general perception amongst these women was that LSES mothers did little sports and exercise. Many of them thought that the LSES mothers engage in more daily physical activities involving household tasks, childcare and occupational physical activities, rather than active leisure time physical activities and/or regular exercise programs.

Physical Activity Promotion for LSES Mothers

At the individual level, physical activity promoters felt that they took advantage of opportunities to consistently promote the benefits of physical activities to LSES mothers. They were confident in their abilities to advise LSES mothers about the levels of physical activity requisite for health benefits, as well as to help with physical activity goal setting, planning and overcoming their many barriers to physical activity. At the population level, physical activity promoters did not regard themselves as very influential in the general physical activity levels of LSES mothers.

"We need, as professionals, to find ways not only to promote the benefits of physical activity but to offer programs that benefit women in terms of affordability and accessibility."
- Public health nurse,
Ottawa

C) Proposed Solutions

The A⁴ Approach

Community based **Assessment – Accessibility – Availability – Affordability** of physical activity in the respective community is a simple approach to define and develop locally relevant physical activity strategies.

Assessment

- Assess current knowledge of physical activity promoters
- Assess physical activity status and behaviours of LSES mothers

Accessibility – Availability – Affordability

- Develop a business case
- Develop simple physical activity promotion resources
- Develop a web-based workshop delivery for physical activity promoters

The success of this approach would be enhanced via partner networks working together as a team to increase physical activity opportunities.

D) Policy Recommendations

There are three basic principles that appear to be important for the development of effective social policy that would support the participation of LSES mothers in physical activity to enhance their psychosocial well being. These are participation opportunities, tailored programming, and community partnerships.

Introduction

The integrated research and surveillance agenda of the Integrated Pan-Canadian Healthy Living Strategy (HLS)^[1] details specific recommendations for increased research to understand and address the determinants of healthy eating, physical activity and their relationship to healthy weights in different sub-groups of the Canadian population, including gender and age. Up to one-third of premenopausal women in Canada are overweight and the highest rates are in those women approaching the menopausal transition (26.1% of 25–34 year-olds; 27.6% of 35–44 year-olds; 33.8% of 45–54 year-olds)^[2].

Marginalization of women with less education and low socioeconomic status is embedded with the increasing rates of overweight and obesity in Canada. Lack of physical activity and poor eating habits both play major roles in the burgeoning obesity crisis and other chronic health conditions, which affect low socioeconomic status and minority populations in Canada at a much greater rate than that of their higher socioeconomic status counterparts. The epidemiological study of socioeconomic status suggests that education and not income is the key influencer of health through lifestyle behaviors such as physical activity^[3]. This is consistent with the findings of the third National Health and Nutritional Examination Survey in the USA (NHANES, 1988–1994) where higher levels of physical inactivity were observed among those women with less education regardless of income level^[4]. Little attention has been paid to the role of gender and this neglect is a detriment to a better understanding of socioeconomic differences in health between men and women^[5]. The National Population Health Survey (NPHS) confirmed the important role of socioeconomic factors (e.g., income, education, occupation, family structure and social support) for explaining women’s health, particularly when looking at individual behaviours such as physical activity^[6].

Women’s lives are shaped by race, ethnicity, stage of life, household, and caregiving responsibilities, and work life issues. The conditions in which women work and live affect their health^[7]. In 1994/95, lone mothers reported worse health status than mothers in two-parent families. They scored substantially higher on distress scales, had higher rates of chronic illness, and were three times more likely to consult health care practitioners for mental and emotional health reasons^[8]. A growing body of evidence indicates that socioeconomic status (SES) is also a strong predictor of health. There are multiple pathways by which SES may affect health (e.g., access to quality health care services, psychosocial processes, physical and social environments), including its impact upon physical activity behaviours and eating habits.

It is well known that a sedentary lifestyle plays a significant role in the health of Canadian women, in particular, the risks of overweight and obesity, diabetes, and cardiovascular disease. This sedentary lifestyle is the result of the interaction of individual characteristics and psychosocial processes with environmental constraints and opportunities. The prevalence of overweight and obesity is affected by lifestyle habits as well as by gender, aging, ethnicity and socioeconomic status (SES), with women, aging, Aboriginal and low SES all being population subgroups with higher prevalence of overweight and obesity. Special concerns include subgroups of the population, specifically women with children and in particular those women of low socioeconomic status who may have limited opportunities to be physically active and maintain a healthy diet.

Of note is the impact of culture and ethnicity on participation in physical activity, specifically for Aboriginals and multicultural immigrants to Canada. When Aboriginal people arrive in the urban environment the impact is great. Racism and discrimination are barriers to the participation of Aboriginal women in physical activity. Most new immigrant women arrive in good health and experience an increased risk of poor health status over time due to financial hardship, work and resettlement related stress, inadequate social support, changing health behaviours, and cultural, economic and systemic barriers to appropriate health services^[8].

"I think the most terrible experience for an Indian person in the urban setting is racism in the community. That diminishes your self-esteem, confidence, and everything else. You experience racism every day in the stores and everywhere else on the street. All the other groups discriminate against you".¹

A sedentary lifestyle is a health concern in the low socioeconomic status (LSES) population yet there is a paucity of research on physical activity levels, beliefs and behaviours of this population. Further research in sustainability of higher levels of leisure time physical activity is also needed if we are to better understand how to achieve and maintain a healthy body weight in women. Retrospective studies of leisure time participation in sport and exercise by women as well as activities of daily living (household care, childcare, occupational) may be one way to help us to better understand sustainability of higher levels of physical activity. The physical activity involved in all of these components is an important component of a healthy lifestyle, effectively promoting personal health and well being and preventing and or controlling the progression of disease. Numerous studies have identified determinants and influencers of physical activity in women; however, these studies have focused on recreational activity and have not considered the determinants of activity in other domains, such as caregiving, household activity or occupational activity, nor how these activities may influence exercise behaviour. Exclusion of housework and caregiving activities from physical activity surveys may convey a message that participation in these activities is unimportant, a bias which health professionals may inadvertently promote in their targeted program and policy development to reduce the social and economic barriers to physical activity experienced by population groups at greater risk of inactivity.

A Portrait of Women and Family Status in Canada^[9]:

- **Women outnumber men in the Canadian population**

In 2004, there were 16.1 million females in Canada, representing 50.4% of the overall population that year.

- **The majority of the female population in Canada is urban residents**

In 2001, 80% of all women lived in an area classified as urban. In fact, the majority of women, 64%, lived in an urban area with a population of at least 100,000.

- **There are more immigrant women from Asia, Middle East, and Africa**

In 2001, there were a total of 2.8 million foreign-born females living in Canada in 2001, making up 19% of the country's total female population in Canada. Well over half (58%) of all female immigrants living in Canada in 2001, came from Asia, including the Middle East. There have also been substantial increases in the number of female immigrants coming from Africa as well from both the Caribbean and Central and South America.

¹ Royal Commission on Aboriginal Peoples, Volume 4, Perspectives and Realities

- **Visible minority women, particularly Chinese women are a vibrant component of Canadian cities**
In 2001, over 2 million women, identified themselves as being members of a visible minority, making up 14% of the total female population in Canada. Chinese women make up over a quarter of this population. Visible minority women congregate in metropolitan areas in Canada. In 2001, 62% of all females in a visible minority in Canada resided in Toronto or Vancouver. In fact, 37% of all female residents of both cities were part of a visible minority.
- **Aboriginal women make up 3% of the total female population in Canada**
In 2001, just under a half million women, reported they were one of North American Indian, Métis, or Inuit. Aboriginal women in Canada experience lower incomes and are less often employed than other women in Canada. Off-reserve Aboriginals aged 19–50 living in Ontario and the Western provinces were more likely to be overweight/obese in comparison to non-Aboriginals^[10].
- **There are more single mother families than ever before in Canada**
In 2001, 48% of women aged 15 and over were partners in a husband-wife family, down from 56% in 1981. Single mothers in Canada are more likely than other women to experience employment and income difficulties; however the share of single mothers with jobs has risen dramatically over the last three decades. In 2004, 68% of female lone parents were employed, up from just under 50% in 1976.
- **Employment levels of women with very young children have increased dramatically**
By 2004, 65% of all women with children under age 3 were employed, more than double the figure in 1976. Similarly, 70% of women whose youngest child was aged 3 to 5 worked for pay or profit in 2004, up from 37% in 1976.
- **More women are working in Canada but they are more likely to work part-time**
In 2004, women accounted for 47% of the employed workforce in 2004, up from 37% in 1976. In 2004, 27% of the total females in the workforce were part-time employees, compared with just 11% of employed men. Indeed, women currently account for about seven in 10 of all part-time employees, a figure that has not changed appreciably since the mid-1970s.
- **Women generally earn less than men and single women make up a disproportionate share of the population in Canada with low incomes**
In 2003, the average annual pre-tax income of women aged 15 and over from all sources was \$24,400, just 62% the figure for men. In 2003, 31% of unattached women aged 16 and over had incomes below the after-tax Low-Income Cut-offs, while this was the case for 28% of their male counterparts.
- **Single mothers have relatively high rates of low income**
In 2003, 38% of all families headed by lone-parent mothers had incomes that fell below the after-tax Low Income Cut-offs. In comparison, this was the case for 13% of male lone-parent families and just 7% of non-elderly two-parent families with children. In 2003, 43% of all children in a low-income family were living with a single female parent, whereas these families accounted for only 13% of all children under age 18 that year.
- **Women make up the highest population of poverty in Canada**
Single parent mothers under 25 have a poverty rate of 91.3% and single parent mothers with children under 7 have poverty rates as high as 80.7%^[10]

Goal, Purpose & Objectives of the Research

Goal

The overall goal of this project is to forge new connections and create synergy among local, regional, and provincial health and physical activity networks and promoters to identify barriers and antecedents that prevent and limit participation of LSES mothers in physical activity within their communities. A primary goal of this project is to strengthen the physical and social environments to support physical activity for LSES mothers and their families. By involving low-income women and inter-sectoral professionals who work with these women, a concrete knowledge base for the development of integral resources and programming will be developed. The interactive nature of the project will increase partnerships and develop inter-sectoral collaborations that will address specific determinants of health or combinations of determinants. The main determinants of health that will be addressed through this project are: social support networks, social environments, personal health practices and coping skills, health services and gender.

Purpose

The purpose of this project is to increase the capacity of multi-sectoral stakeholders in promoting the importance of physical activity and sport to mothers of low socioeconomic status, to work with the mothers to reduce the barriers to their participation in physical activity and to strengthen their physical and social environments to support physical activity and sport.

Objectives:

The **primary objectives** of this project are to:

- Determine physical activity levels of low socioeconomic status (LSES) women using a women-specific physical activity survey tool; and
- Identify barriers and antecedents that prevent and limit participation of low socioeconomic status women in physical activities within their communities using focus group discussions with these women and the female physical activity promoters (e.g., community health promoters, public health nurses, physical activity professionals) who work with them.

The **secondary objectives** of this project are to:

- Identify solutions and best practices to increasing physical activity and sport for mothers of low socioeconomic status;
- Develop resources for multi-sectoral practitioners and mothers that will assist in increasing participation in physical activity and sport;
- Increase the awareness around the importance of physical activity for mothers among multi-sectoral stakeholders on a national basis; and to
- Evaluate the current and future impacts of the project in increasing physical activity opportunities for mothers with low socioeconomic status.

Key research questions:

- How physically active are low socioeconomic status mothers?
- What do “physical activity and exercise” mean to low socioeconomic status mothers and the physical activity promoters who work with them?
- What are the barriers (personal, social, physical, political, fiscal, environmental, etc.) to physical activity that low socioeconomic status mothers and the physical activity promoters that work with them face?
- What are the physical activity biases for general health and well-being that physical activity promoters may inadvertently promote in their targeted programs for LSES mothers?
- How can physical activity promoters, community members, and organizations better promote opportunities for low socioeconomic status mothers to participate in physical activities in their communities?

Methods and Procedures

Data Collection

Environmental Scan

A call for best and promising programs for LSES women/mothers was sent out by CAAWS to identify communities across Canada that are actively involved in physical activity programming for LSES mothers. The environmental scan targeted physical activity, health and government networks through local, regional, provincial and Canada-wide email list servers and physical activity conferences. This was used to develop a network of community stakeholders from which potential focus group sites in three regions across Canada (East, Central, West) were identified.

Focus Groups

Location and composition:

There were eleven focus groups held in three of the six regions of Canada (Table 1). Six focus groups were held with LSES mothers and 5 were held with female physical activity promoters working with LSES mothers such as public health nurses, dietitians, recreation programmers, social service workers, directors of community centers/shelters, counselors, etc.

Recruitment

Local site coordinators were hired to recruit LSES mothers and physical activity promoters in each identified focus group location. This study recruited urban living LSES mothers and female physical activity promoters who work with LSES mothers in the urban setting.

Recruitment Criteria of LSES mothers:

- At least one child less than 14 years of age at home;
- Not be currently limited in their physical abilities due to illness, injury, or disability;
- Must be able to read and comprehend the project pamphlet and consent form (French or English) OR have a translator do this with them;
- Those participating in the focus groups must be able to converse in English or French or have a translator with them;
- Must be able to attend the scheduled focus group date and time.

Table 1. Composition of Focus Groups

LSES Mothers' Focus Groups	
Alberta (West)	<ol style="list-style-type: none"> 1. French = 5 LSES immigrant participants (2 Caucasian from Quebec and 3 from French countries in Africa) 2. Multicultural = 12 immigrant participants (1 Lebanese (Muslim), 3 Asian, 2 Indian, 2 Caribbean, and a mix of other cultures)
Halifax (East)	<ol style="list-style-type: none"> 3. Aboriginal (Mi'kmaq) = 7 participants
Ottawa (Central)	<ol style="list-style-type: none"> 4. Multicultural = 8 participants (mainly from Muslim countries) 5. Francophone = 7 participants (1 Lebanese (Muslim), 1 Black African, 1 Caribbean, 4 Franco-Ontarian) 6. Pilot Anglophone = 3 participants – Caucasian young mothers under 25 years of age
Physical Activity Promoters' Focus Groups	
Alberta (West)	<ol style="list-style-type: none"> 1. Francophone = 4 participants (Alberta Francophone sports federation, Social worker at the Francophone immigrant center, Manager of the Francophone resource center of Calgary, Social worker of the Francophone resource center) 2. Multicultural = 4 participants (Catholic Family Services Early Childhood Programs Supervisor; Calgary Immigrant Services Manager and East Indian Health Promoter), Calgary Health Region (Chinese Public Health Dietitian)
Halifax (East)	<ol style="list-style-type: none"> 3. Aboriginal Mi'kmaq = 3 participants (Social workers)
Ottawa (Central)	<ol style="list-style-type: none"> 4. Francophone = 8 participants (two Parks and Recreation coordinators for LSES initiatives, one social worker, one program manager, two community health promoters – one from early years centre, 1 public Health nurse, 1 multicultural Community Health Worker) 5. Anglophone = 6 participants (1 Park and Rec. manager supporting Women Alive, 2 Public Health Nurses, 1 Community Health Centre Nurse, 1 early years staff, 1 Aboriginal Health Promoter)

The specific recruitment screening questions are listed in the Appendix: *"MIM Focus Group Recruitment Strategy for LSES Mothers"*. Female physical activity promoters involved in physical activity programming and/or policy development for the LSES population in the potential focus group communities were contacted by phone, email, or in person by the local site coordinator to request their participation in the health professional focus group. The specific recruitment screening questions are listed in the Appendices: *"MIM Recruitment Strategy for Physical Activity Promoters"*.

Note: The Appendix is available to download electronically on the Mothers in Motion web site.

Kaiser Physical Activity Survey (KPAS) Tool

Physical activity levels of low socioeconomic status (LSES) mothers were determined using the women-specific Kaiser Physical Activity Survey (KPAS) tool. This tool was selected because it assesses activity in several domains. This tool is designed to be self-administered, however focus group coordinators completed the questionnaire with each participant to ensure that those mothers of low literacy level understood each question. Domain specific activity was documented for sports and exercise, active living, household/caregiving, and occupational physical activities. The KPAS tool is available in the electronic Appendix.

Procedures

Step 1. Two pilot focus groups (2–3 LSES mothers; 2–3 physical activity promoters) were undertaken in the City of Ottawa to determine time needed for each component. This included completing the survey tools, preparing a list of appropriate physical activities to include on the Kaiser Physical Activity Survey (KPAS) tool for the LSES mothers, and ensuring that the pre-determined focus group questions were appropriate for generating discussion and identifying barriers and antecedents that prevent and limit participation of LSES mothers in physical activities.

Step 2. We worked with community members, local, regional, provincial and national organizations engaged in women’s health, physical activity, and/or healthy eating to identify focus group coordinators in each of the three regions (East, Central, West) throughout Canada. Local site coordinators recruited eligible participants and formed a focus group of LSES mothers and another focus group of physical activity promoters who met the specific recruitment criteria. All participants, including those involved in the pilot focus groups, signed a consent form to participate in the focus group sessions. One copy of the consent form was left with the participant and one copy was retained by the focus group coordinator and delivered in a sealed envelope to Elizabeth Mansfield. See electronic Appendices: *“MIM Recruitment Strategy for Physical Activity Promoters; MIM Recruitment Strategy for LSES Mothers; MIM Contact Information for Focus Group Participants; MIM Focus Group Coordinators Roles and Responsibilities; MIM Information and Consent Form for Physical Activity Promoters; MIM Information and Consent Form for LSES Mothers”*.

Step 3. Five focus groups consisting of a minimum of three LSES mothers discussed their “situated knowledge”, experiences, perceptions, and ideas for making physical activity more accessible and equitable to low socioeconomic status women in their respective community. The main purpose of focus group based physical activity research is to draw upon respondents’ attitudes, feelings, beliefs, experiences and reactions in a way in which would not be feasible using other methods, for example observation, one-to-one interviewing, or questionnaire surveys. Focus groups have the potential to generate attitudes, feelings and beliefs that may not surface in individual interviews with these LSES mothers or in the typical community observational or health survey research done at both provincial and national levels. The focus groups aim to identify barriers and antecedents that prevent and limit participation of low socioeconomic status mothers in physical activities within their communities through discussions with these women and the physical activity promoters (e.g., community health promoters, public health nurses, physical activity professionals) who work with them. Specific focus group questions are outlined in the electronic document *“MIM Focus Group Questions for LSES Mothers”* found on the Mothers in Motion web site.

Step 4. In five additional focus groups, a minimum of three physical activity promoters discussed their “situated knowledge”, biases, experiences, perceptions, and ideas for improving access to physical activity for low socioeconomic status women. Specific focus group questions are outlined in the electronic document *“MIM Focus Group Questions for Physical Activity Promoters”*. Each focus group lasted approximately two hours. Focus groups were recorded to assist with gathering information. Digital audio recordings are stored with study documents in a locked file and will be destroyed one year after completion of the study.

Step 5. Focus group coordinators in each region recruited a convenience sample of LSES mothers to participate in an interviewer-led questionnaire, the KPAS tool. Each questionnaire took approximately 30 minutes to complete. Translators accompanied those women whose mother tongues were neither French nor English. Completed KPAS tools were sent to the study coordinator for data analysis. All received KPAS tools are stored with study documents in a locked file and will be destroyed one year after completion of the study.

There were no honorariums for participation in the focus groups and/or physical activity survey research however provision for the participants in the focus group sessions included:

- Transportation to and from the group session (bus fare/taxi fare);
- Childcare support for the duration of the session on site.

At the end of the LSES mothers’ focus group session, each LSES mother received a \$25 food voucher for use at the local grocery store. Each LSES mother who completed the physical activity survey tool received a \$10 food voucher for use at the local grocery store.

Data Analysis

The focus group information contained in this report is based on responses we received using a set of focus group questions that were repeated in each of the following focus groups:

- **Low socioeconomic status (LSES) mothers (6 focus groups)**

The mothers who participated in the focus groups ranged from 19–45 years of age. There was participation from Anglophone, Francophone, Aboriginal, immigrant, and multicultural women. All mothers had at least one child less than 14 years of age living at home with them.

- **Health and Physical Activity Promoters (5 focus groups)**

The physical activity promoters consisted of women working in public and community health, municipal recreation, community associations, sport organizations, provincial/territorial organizations, government agencies, women’s shelters, and Aboriginal organizations.

Summaries of each of the focus groups were compiled using notes taken during the sessions and listening to the tape recordings. These summaries are available to view and/or download on the Mothers in Motion web site. ETHNOGRAPH text analysis software was used to assist in the organization of the data. Summaries were read through several times, initially while listening to the digital recordings to determine common themes and to develop an organizing framework. Using this framework, text sections from the summaries were organized under the section headings and read through again to determine sub-themes. Once the sub-themes were determined, the text was coded and the key findings written.

Seventy-one women recruited from within the focus group sites in Canada completed the KPAS tool. The KPAS tool was to be completed by the focus group coordinators with each participating mother. Yet, one third of these surveys contained missing data (24/71). Incomplete surveys can

thus only be attributed to the coordinators not filling in the tool properly with their clients; however the reasons for this are not known. Those KPAS tools that were missing data were not included in the final analyses. Distributions of demographic variables (age, BMI) were characterized by means and standard deviations. Activity was assessed using both domain-specific and total activity levels reported by KPAS respondents. This tool used categorical responses regarding frequency of domain-specific activities to create four semi-continuous activity indices (sports/exercise, active living, occupational, household/care giving).

About This Report

The next section provides a summary of the key findings and recommendations from a series of focus groups with LSES mothers and physical activity promoters. Key questions were asked to determine:

- What “physical activity and exercise” means to low socioeconomic status mothers and the physical activity promoters who work with them;
- The barriers (personal, social, physical, political, fiscal, environmental, etc.) to physical activity that LSES mothers and physical activity promoters face;
- The physical activity biases for general health and well-being that physical activity promoters may inadvertently promote in their targeted programs for LSES mothers; and
- How physical activity promoters, community members and organizations may better promote opportunities for LSES mothers to participate in physical activities in their communities.

The focus group findings are structured under these categories:

- Internal issues or influencers;
- External issues or outside influences;
- Impacting issues;
- Supporting issues; and
- Tools and resources.

In as many places as possible, we have tried to use the participants’ words to emphasize points.

For a list of the questions asked during each focus group, please see the electronic Appendices. We have included the summarized raw data from each focus group we conducted to allow readers to see what was specifically said in each community and to compare what was said in one part of Canada with another. Submissions of best and promising practices for physical activity programming for LSES mothers are also available to download electronically from the Mothers in Motion web site. The final section of the report consists of a summary of all the proposed solutions from the focus group participants followed by a recommendations section as well as implications for next steps.

Findings: What We Heard

Over a two-month period, February–March 2008, we had the opportunity to speak with low socioeconomic status mothers as well as with female physical activity promoters from across Canada working within the LSES communities. The following is a summary of what we heard. In all sections, we have tried to present a full story of the issues brought forward from the perspectives of the mothers (i.e., immigrant, multicultural, Aboriginal, Francophone, and Anglophone mothers) and female physical activity promoters (e.g., women working in public and community health, municipal recreation, community associations, sport organizations, provincial/territorial organizations, government agencies, women’s shelters, and Aboriginal organizations). In many sections, you will also see quotations to help emphasize a point by using the actual words of the women. Additional points can be found to support these findings in the Appendices within the focus group summaries.

Part A — Mothers’ Focus Groups

As children, LSES mothers participated in a broad range and variety of physical activities. This diminished with aging and motherhood, particularly in those women from cultures within which there was a high degree of cultural inacceptance for women to be involved in sport and exercise. When these mothers were asked what activities they would like to try, their list became more diverse and included many of the physical activities that were not part of their culturally acceptable physical activities such as running, cycling, skating and team sports such as soccer.

When talking about barriers to physical activity we found numerous similarities amongst the different groups of women. These included low accessibility of programs to LSES mothers, lack of childcare, few available physical activity programs that fit into the schedules of LSES mothers, affordability of physical activities (e.g., program costs, equipment/clothing costs, childcare costs), poor weather, and transportation issues (e.g., facility not on bus route). While these barriers came forward from each of the focus groups, they had the biggest impact upon Aboriginal and multicultural immigrant women, in particular those who could not speak English.

Additional differences amongst the focus groups of mothers were related to internal barriers such as lack of energy, guilt, priorities, cultural acceptance, and body weight/body image. These barriers came forward from each of the focus groups but the impact they had on the immigrant, Aboriginal and multicultural women was much more debilitating. In many cases, putting their health as a priority and the associated guilt they felt with respect to taking time for themselves to be active, without their children, caused them the most struggle.

Meaning of Physical Activity and Exercise to LSES Mothers

We asked LSES mothers to define what physical activity and exercise meant to them. Overall, physical movement and health emerged as the key meanings of physical activity and exercise in the focus group discussions with the LSES mothers.

Physical movement included daily living activities, childcare, on-the-job activities, as well as leisure time physical activities, including group sports, exercise and traditional physical activities such as dancing.

*“Activity,
movement, action, body, good
health, cardio, staying in shape,
muscle mass, silhouette, firmness,
energy, weight loss.”*
- African-Canadian Francophone
mother, Alberta

The mothers categorized some physical activities as those that they have no choice but to do. These were physical activities of daily living including household chores such as cleaning, food shopping and childcare. They did indicate that they have a degree of control over the energy expenditure of some of these activities i.e., when shopping they can decide to carry their own groceries or they can ask for help, and they can opt to take the stairs or to use the elevators in the shopping malls.

"I would say just move parts of your body. Physical activity includes activity that is part of our daily life. Activity around the household – mopping the floor, cleaning, cooking, washing, looking after the baby, feeding her, changing diapers, pushing the stroller, walking, washing, lifting."
– Immigrant mother, Calgary

Many of the mothers felt that exercise included activities that increase the heart rate such as sports. Both exercise and sport had positive and negative aspects with respect to the reasons for doing them (e.g., weight loss vs. weight gain; fun vs. risk of injury).

The mothers stressed the important role of physical activity for weight loss.

"When I was school-age or teenager, I never thought about losing weight. When I got pregnant, I gained lots of weight. Now I think 'oh my god, how can I lose the weight?' That's the thing working all the time in my mind. So I do physical activity more, like walking."
– Immigrant mother, Calgary

"It's more important than anything – to lose weight anytime!"
– Muslim mother, Ottawa

"Exercise – whatever you can get. I'm waiting until the weather changes so I can walk more... Healthy eating and exercise, they go together. I don't watch what I eat but I like to go out there and do exercise to lose the weight."
– Immigrant mother, Ottawa

The mothers felt that the health benefits of physical activity embraced both the mental and physical aspects.

"It's mind and body. When you walk, you have more energy – it's a feel good thing. Sometimes when you're not fit, you may go in depression."
– Immigrant mother, Ottawa

"It's a basic need; not a desire, but a need."
– Francophone mother, Alberta

Mothers talked about this "feeling good" aspect of being active, as well as the opportunity to have time for oneself. They also stressed the need to be active in order to be healthy and feel good, rather than the desire to be active.

This supported their beliefs about the importance and necessity of exercise for dealing with disease/chronic conditions.

"Some people have conditions – heart, diabetes, high cholesterol, high blood pressure or backache. They have to exercise."
– Muslim mother, Ottawa

Social acceptance was a third key theme that emerged in the Aboriginal and immigrant, multicultural women's focus groups.

Trends in Physical Activity Throughout the Lives of LSES Mothers

We asked the LSES mothers to create a pictograph of their personal levels and types of physical activities (e.g., daily activities, recreational and leisure time activities, exercise and sport, and household/childcare and occupational activities) over their lifespan. The pictographs created by the women varied. Some women indicated that they were active when they were younger but just as many told us they were not. Many of the currently less-active women told us that they had been quite active when they were younger and were trying to figure out why they stopped because it was something that they had previously enjoyed.

Each LSES mother participating in the focus groups created a timeline of physical activity levels throughout her life. Walking emerged as the predominant contributor to physical activity levels in many of the mothers. Sports and exercise participation tended to be highest throughout the school years — high school being the key time when sport and exercise activities were at the highest levels for the majority of the mothers. Transition times in life were both barriers to and motivators of physical activity amongst girls and women. For all the mothers, life changes that occurred with the transition into motherhood impacted upon their levels and types of habitual of physical activities. Some women told us that they became active when they had their children and started to do things as a family.

“If you have kids, you have to teach them. They study at home and they need more activity – playing together, riding bicycles, walking, dancing, yoga, swimming, shopping, walking the malls, traveling.”
– Immigrant mother, Calgary

Other mothers felt that the age of their children can be a barrier for certain types of physical activity.

“I have a two year-old daughter – it is very hard to do the yoga thing with her because she doesn’t like the yoga... my other daughter, she’s just four years-old so she can’t play soccer or something like this.”
– Immigrant mother, Calgary

Many of the women told us that having a family resulted in the end of their own physical activities such as involvement in sport and other physically active leisure time pursuits. Motherhood meant that childcare and family responsibilities took top priority. Mothers ranked household chores and childcare as the biggest contributors to their daily physical activity levels throughout their adult years. Specifically, household chores activity levels increased from low to medium as these LSES mothers transitioned from being children to young women. Household physical activities such as housecleaning become the largest component of daily energy expenditure reported by most of the women once they become mothers/wives. Childcare physical activity tended to start in adolescence when young girls began to share the responsibility for looking after their siblings; this and occupational activity (e.g., first jobs) were the second most important contributors to daily physical activity levels as they transitioned into young adulthood.

Barriers to Physical Activity for LSES Mothers

Table 2. Identified Barriers to Participating in Physical Activity and Sport for LSES Mothers

Internal Issues	External Issues	Impacting Issues
Fatigue	Built environment	Family expectations/influence
Culture	Costs	Spousal support
Racism/discrimination	Climate	Childcare
Bodyweight/ image	Subsidies	Health
Skill level	Marketing	Isolation
Priority	Transportation	Benefits
Guilt		Life transitions

Internal Issues for Physical Activity

Fatigue

Mothers frequently pointed out a lack of energy prevented them from being more physically active. Motherhood and the requisite increase in family responsibilities (i.e., household chores and childcare) also took up most of their time and energy leaving little motivation for other physical activities.

Culture

Daily physical activities of motherhood such as household chores, childcare, and shopping are well accepted culturally on a universal basis. Yet there was a strong message of cultural inacceptance of sport which limited some women’s physical activities, particularly those that were considered too masculine.

“...I know back home, all my brothers know how to bike. I never learned. Even if we wear pants, we don’t even know how to ride bikes because this was wrong.”
– Immigrant mother, Ottawa

Body Image/Body Weight

Mothers were concerned about how they looked and this limited their participation in sports. This preoccupation with body image occurred typically as teenagers – typically the time when women first had to show their bodies in changing rooms or at the swimming pool. Women want to avoid social exclusion by wearing the wrong thing and they often do not even want to enter a fitness facility because they do not have the same clothing as everyone else or are overweight. Issues that emerged with body weight included: breast size, such as having a large chest which made it difficult to find supportive clothing (e.g., bra); poor sport skill development; and not having the appropriate clothing (i.e., “swimsuit does not fit me”).

“Here I come and I’m just in big sweater and pants, and then I don’t feel comfortable next time I go to the group because I feel like I stick out.”
– Aboriginal mother, Halifax

“Once I became a teenager I had cramps every time... because I didn’t want to mess up my hair, I didn’t want to change in front of the girls.”
– Aboriginal mother, Halifax

Personal and Systemic Racism and Discrimination

Multicultural immigrants arrive in the urban environment in good health and often experience an increased risk of poor health status over time due to inadequate social support, changing health behaviours, and cultural, economic, and systemic barriers to appropriate health services. Unilingual Francophone immigrants discussed discrimination by language in Calgary as a key issue.

“The problem is that I don’t speak English, just French. You can find people who speak Chinese or Arabic, but not French. Not around here.”
- Francophone mother, Western Canada

A difficult aspect of urban life for Aboriginal and immigrant, multicultural women is the personal and systemic discrimination, bias, exclusion, lack of support and recognition, negative attitudes and alienation.

“Right now, I’m a diabetic. My sugars are very high and I’m trying to get my sugars down. My husband is trying to get me back to the gym. I don’t want to go back to the gym because that means I have to watch all these people again.”
- Aboriginal mother, Halifax

Racism in the community diminishes women’s self-esteem and confidence. This impacts upon their perceived levels of trust and community support. Mothers’ sense of trust in the community where physical activity programs/efforts are offered is important to their motivation to be physically active. Aboriginal women attending private fitness centres in their city did not feel this community trust and support. This made it somewhat uncomfortable and daunting for them to commit to a regular program of physical activity, despite significant health issues that would be controlled with regular activity. Being together as a band brings a sense of security for their nativeness, which they deemed important for a supportive environment for physical activity.

“When I say my band, nobody asks me what instrument I play.”
- Aboriginal mother, Halifax

Skills

The lack of women sport and physical activity programs, unfamiliarity with sport specific skills and/or operation of exercise equipment (e.g., treadmill) were barriers to being physically active for many of the mothers.

“Some of us don’t know how to swim, so we let the kids go in the pool and then watch while they’re swimming.”
- Muslim mother, Ottawa

Priority

Mothers noted that the priority for physical activity was low on their list of things to do. The many family responsibilities and resultant lack of time to accomplish much for themselves were barriers for many of these women. When the opportunity arose for free time without kids, mental relaxation was the priority.

“Free time from the kids – we can read some books, listen to music or watch movies.”
- Immigrant mother, Calgary

For other mothers, physical activity is and always has been a priority, a result of their parents making physical activity a priority while they were growing up.

“My parents got involved along with us, especially when we were in school, even preschool. I’m trying to do the same with my children. Exercise was always very important in my family.”
– Francophone mother, Ottawa

Guilt

The low priority given to physical activity could have something to do with the guilt that they feel and/or that is imposed upon them by their families, even when the mothers want to be physically active to improve their health.

“I tell the kids I’m going to lose weight. I never lose weight. All your energy goes to the kids, only them, not the mom. They say ‘You are mom, why you going to lose weight? You’re not a good mom anymore – you just think about yourself, you’re selfish!’”
– Muslim mother, Ottawa

Family Expectations

The mothers also discussed how traditionally their families have high expectations of them, creating difficulties for them when they want to take time for themselves.

“Back home we always provide as a mom – give, give, give. Expectations as a mom are very high. If you say ‘I want to go to school. I want to exercise’, there is an issue.”
– Muslim mother, Ottawa

External Issues for Physical Activity

Outside influencers of LSES mothers’ physical activity habits, attitudes and behaviours were related to availability of physical activity programs that fit into mothers’ schedules, cultural and socioeconomic needs.

Built Environment

Several mothers mentioned safety concerns about the neighbourhoods within which physical activity programs were located.

Young mothers living in Ottawa felt that the outdoor parks in their downtown neighbourhoods are rundown, unsafe or closed to access with a stroller. Dirty needles, cigarettes, cracks pipes can also be found, limiting the accessibility for mothers with young children looking for safe places to play together.

“...even with the community around here, you don’t trust to walk at night... a lot of the places I wouldn’t go out by myself...”
– Aboriginal woman, Halifax

Costs

Overall cost of physical activity was the leading barrier revealed by LSES mothers. Costs of programs, equipment, clothing and childcare were all contributors.

“...when we want to register our kids or even me and my husband, a family, it’s too expensive...”
– Multicultural mother, Calgary

For those Muslim women wanting to swim, the cost of their special swim clothing was a barrier.

“Clothing is expensive because we don’t wear the swimming suits…”
– Muslim mother, Ottawa

Francophone mothers in Calgary who were originally from Quebec indicated that geographical location within Canada was a barrier with respect to costs for physical activity programs and/or services.

“I think it depends on the city where you live. In Calgary, everything is expensive. The cost of living is higher, and we have to pay for all services. In Quebec, you can go to the public swimming pool in summer for free.”
– Francophone mother, Calgary

Climate

The Canadian climate and different seasons were also factors in determining the types of physical activities that women chose to participate in. While immigrant women from warm countries had difficulty embracing the cold temperatures of the winter, they were more active in the summer, playing with their kids, going to the park and swimming pool.

“In the summer, you can do soccer but in the winter, you stay at home.”
– Immigrant mother, Ottawa

For many of the mothers the cold in winter limited access to activities in the parks, and the snow banks made walking dangerous and challenging. In particular, the lack of snow removal in the winter was an issue for those women with young children. The height of the snow banks often became a challenge when trying to go over with stroller.

Subsidies

Low-cost or subsidized physical programs were not always accessible or available for LSES mothers.

“If you get into the last minute club, it helps you. If nobody registers for that particular course, then we get in for free and that helps a lot. If there are spaces left, then they give them to us – sometimes one day a week.”
– Muslim mother, Ottawa

“There are some, but you have to be below the poverty level to have access.”

Many of these programs were only accessible if the LSES mothers were impoverished.

Many other physical activity programs were organized without childcare or at times when there was a greater likelihood that the mothers might be working.

Marketing and Communication

Many of the mothers indicated that they used both hard copy and electronic resources to search out information about physical activity opportunities in their respective communities. However, they remarked that the web-based information is often not updated with currently available recreation and childcare opportunities. Mothers need to be “in the know” with respect to particular offerings for the less advantaged. This knowledge can be hard to come by for those

women who do not have the language skills to read and understand promotional materials for physical activity programs available in their communities. Younger mothers want help on how to use the blue pages to access information because the blue pages are updated regularly, free and widely distributed.

Word of mouth was a key strategy used by many mothers.

*"I know YMCA has good subsidy for low income people... I know people who say that helped them a lot."
- Immigrant mother, Ottawa*

Aboriginal women talked about the importance of networking within their own community in order to discover and deliver physical activity and other program information. Outreach was deemed an important component of this, particularly for a community that might feel marginalized in some ways.

"If I come across other native people, the single moms or they don't even have to be single, I'll say 'down at the centre, we have the blah, blah, blah...' and that's where word of mouth comes in."

This outreach and/or networking was focused on delivering a sense of community for these native women so that they could pursue physical activities in a trusted environment where their nativeness did not make them stand out.

"Everybody makes you feel welcome. You don't get that sense of a clique or feeling as an intruder when you come in and you're new. Everybody's welcome - no judgment."

Transportation

Availability, accessibility and affordability of public transportation were repeatedly stressed as important external barriers to physical activity for LSES mothers. The cost of getting to recreational facilities was a factor.

*"...some people don't have a bus pass and they can't afford to buy it. If your budget is low, how are you going to do that?"
- Immigrant mother, Ottawa*

Poor proximity of physical activity programs, parks, paths or sporting fields to the mothers' neighbourhoods made accessibility problematic for LSES mothers.

*"It depends also sometimes on transportation - you need a bus if it's far. It can be too far or not on a bus route or need too many buses to get there."
- Immigrant mother, Ottawa*

Francophone mothers in Calgary felt the impact of this the hardest as the only Francophone physical activity programs were located in one far corner of Calgary, off the bus routes and thus impossible for the women to get to.

Impacting Issues for Physical Activity

Table 3. Impacting Issues for Being Physically Active

Personal Level	Community Level
Life transitions	Lack of childcare
Family influence	Isolation
Lack of spousal support	
Benefits	
Health	

Life Transitions

Immigrant and multicultural women’s participation in sport and exercise dropped off to minimal levels by 14–15 years of age due to the cultural role of women as mothers to be.

“In our culture, when you become a mom your life, your life is ended.”

These young girls entering high school had few opportunities for sport and physical activity.

“You’re told that you’re not a boy, don’t play like a boy. You take it easy a little bit, let the boys do whatever they want. They think traditionally for a girl – she takes care of herself instead of playing outside, become a woman, respect family.”
– Immigrant multicultural woman, Ottawa

The young women who wished to remain involved in sport were considered to be masculine and were thus deemed inappropriate for the roles of wife and mother (by both men and women). One woman stated that “In my country, when a girl like me wanted to do sports and she did it, one man asked: “Since when did you lose your ‘Indian-ness’?” It was interesting to note that this cultural acceptance is changing with the new generation.

Family Influence

The influence of family is both a barrier and a support for physical activity. Overweight immigrant mothers’ children endured schoolyard bullying about their mothers’ being “fat”. These mothers said that their children were ashamed of them yet this did not increase the children’s support of their mothers’ efforts to lose weight.

“As the mom, sometimes you feel ‘okay, your mom is fat’. Because of you, the kids may be bullied... I have a seven year old who always says ‘mommy, don’t come to school because some of my friends say that you are fat’.”

Francophone mothers also indicated that their children pressured them to lose weight.

Spousal Support

Lack of spousal and/or family support for physical activity was another issue that was identified by all the focus groups (e.g., permission to take the time to be active, sharing of childcare so that women could attend a physical activity program, etc.). Some of this was attributed to a general lack of awareness on the part of husbands for the mental health needs of their wives who are involved with the stress of constant motherhood.

"Husbands don't know the kind of information that we need. Sometimes we need help... I need some time for me, at least thirty minutes. I want to do something for me."
- Immigrant mother, Calgary

"My husband, he does anything he wants. He has plenty of time after work and has groups where he exercises. Me, I'm stuck with the kids all the time. No obligations for the man to look after the kids. We do need a lot of support as a mom."
- Muslim mother, Ottawa

Some immigrant women considered lack of spousal support to be more of a cultural problem. The traditional woman living in her own country had lots of family and paid household help but once in Canada, that family and servant support is not available.

"But here, we don't have anyone. There's a gap - my husband doesn't understand that here, I don't get any help."
- Immigrant mother, Calgary

Women discussed the emergence of running and walking events (e.g., Run for the Cure) in support of women's health issues as a potential avenue for renewed and improved support for physical activity from their spouses. The women felt that the health focus of these events, in tandem with spousal education on women's issues such as heart health, breast cancer and the importance of physical activity, would increase the family supports and help LSES mothers to be more physically active. The LSES mothers felt that the health implications of these events were the nod of approval that their spouses needed to culturally accept their wives' physical activities.

"They will support us more and they will say that they will support us."

Immigrant women suggested that men in their culture need to be educated on the important health benefits of physical activity for women's health and well-being. However they further stressed that this education needed to come from women outside of their community.

"Listen, we prefer women like you - a white Canadian - to educate our men. They will see differently. If an immigrant woman or a Somali woman says this, they ask 'when did you become Canadian?'"
- Somali mother, Ottawa

Childcare

The LSES mothers frequently mentioned lack of childcare and/or lack of affordable childcare where physical activity programs are offered as barriers to physical activity.

"Daycares are a blessing."

Mothers noted that the childcare hours are not always convenient and can be too restrictive. For example, the YMCA childcare in one community provides only one to one-and-a-half hour for infant childcare and often at times when there are no programs for mothers.

"You can participate more when you know that you have childcare."
- Muslim mother, Ottawa

Mothers of older children attending school did not have the childcare issue during the daytime. Effectively, this barrier was removed, giving these women time to participate in physical activities without having to worry about looking after the children. The immigrant mothers who were not working used this free time as an opportunity to attend school themselves.

"...We used to go there around 2005. They used to have childcare and exercise on site. They stopped and that was a big loss for us, so most of the mothers stopped going there."

Isolation

Mothers talked about the physical, cultural, and social isolation that they feel and how physical activity can make great inroads on that. Inactive, overweight Aboriginal mothers felt that they have a lot of social pressure from within their own community, which creates a feeling of being outcast and isolated. Mothers who lived in less safe neighbourhoods felt isolated as they had little opportunity to get outside and interact with others since they did not feel safe being alone.

Health Issues

Only a few mothers mentioned overweight and obesity, injury, arthritis, and joint pain. However all of these health issues have an impact on the types of physical activities that women may be capable of doing.

Benefits

Understanding the differences and similarities between the benefits of physical activity and exercise can aid mothers and physical activity promoters to take advantage of opportunities to be physically active. Habitual, daily activities such as housework, caregiving and occupational activities are all forms of activities that have health benefits. For example, walking with the baby in a stroller is a free, simple and practical way to get active while perhaps accomplishing another task such as shopping. Playing with children — at the pool or in the park — is also free, simple and practical.

"Walking is a complete sport. It's convenient, because you can do all sorts of things along with it."
- Francophone mother, Calgary

Household chores are another form of physical activity that also give mental health benefits.

"Peace of mind. When it's clean, we feel good. We're not tired - it gives us energy."
- Francophone mother, Calgary

Recreational and competitive sports and/or exercise programs are the types of physical activities that also include fitness benefits, yet they also require a significantly greater amount of time and effort. For many mothers this is not deemed to be fun or pleasant. Aboriginal mothers equated physical activity with playing and being skinny, healthy, and happy whereas exercise meant going to the gym, doing hard work and having muscles. Other mothers felt that in order to be physically active they needed to follow an exercise program.

"The only way to be more active is to make the extra effort - to sign up for a course and attend it, to commit to going every single week, to commit for the duration."
- Francophone mother, Calgary

Supporting Issues for Physical Activity

Table 4. Supporting Issues for Being Physically Active

Interpersonal	Organizational
Champions	Family
Friends	Partnerships
Spousal support	Professional support

When the mothers were asked what type of things would help them to be more physically active, most addressed the internal, external and impacting influencers they mentioned previously. Many mothers wanted free or low-cost childcare, low-cost or free programs, and neighbourhood based programs so that transportation was not an issue. Some thought it would help if programs and activities were better promoted in the community so they would know where to take their families for activity.

Champion/Mentor

Mothers also indicated the need for a champion or mentor for physical activity as a key support for being physically active.

“Someone has to take initiative so we can get together and discuss how to improve our daily life.”
– Immigrant mother, Calgary

Friends

Physical activity with female friends was important for those mothers who needed the social support to feel safe and more secure when doing outdoor activities, particularly if they lived in an environment where they did not feel safe being alone. Active friends were important supports for being physically active.

“If you have friends that support you and want to do it with you, it helps you do those physical activities.”
– Immigrant mother, Calgary

Spousal/Family Support

Spousal support was a key influencer of mothers’ ability to be physically active and maintain her physical activity levels throughout motherhood. This support could also be in the form of childcare at home from family members such as husband, sister, grandmother, or even friends. Some mothers took advantage of extended family support in the summer in order to have more time to be physically active themselves.

“I go to my parents’ cottage. The kids are at the beach while I do other activities. They have their friends on the beach. They can water ski. But I can do other things.”
– Francophone mother, Calgary

Family Activities

Some women suggested that physical activities for mothers could be scheduled at the same time and same place as activities for their children. For learning new sports, it was suggested to do these along with the children so that the families developed the skills together in a welcoming environment.

“It’s something to do with our kids, to do it together – like baseball with the kids is more fun.”
– Aboriginal mother, Halifax

Partnerships

Partnerships between traditional (e.g., health and recreational departments) and non-traditional partners allow for greater access to physical activity programs for LSES mothers and their families.

Woman Alive is an example of a physical activity based program that was developed for LSES women in Ontario. It is currently funded by the Ministry of Health in partnership with municipalities (Ottawa and Hamilton).

Francophone mothers in Calgary now have a Francophone resource centre with childcare facilities available for all organized programs. The only problem is the lack of accessibility of the centre due to its location in a far corner of the city of Calgary. This effectively limits the participation of LSES mothers in any of the programs.

"...a centre like we have here is outstanding. We can take advantage of workshops, get-togethers and activities where the children are minded for us. And it's free or very inexpensive."

- Francophone mother,
Calgary

"Accessibility in terms of transportation is an issue. That's why twice a week would not be practical - twice is too much time spent in transit."

- Francophone mother, Calgary

"I need the socialization. When we do things here, we play baseball, we go swimming, we do all this stuff for my sense of fun and play and competitiveness."

- Aboriginal mother,
Halifax

Aboriginal mothers felt that the existence of a native friendship centre with structured physical activities for women and their families had a great impact upon their involvement in physical activity.

The group physical activities were organized by the Head Start Aboriginal Center and were deemed very accessible by Aboriginal mothers, as the activities became part of a routine. At the same time, it encouraged social interaction with others of their own cultural group.

Professional Support

Group programs and/or services, as well as programs for mothers with professional help were acknowledged by many mothers as being a strong support as they helped the mothers to plan time for and include physical activity in their day.

"For me, you need a program, a person that gives you support with experience - professional support."

- Immigrant mother, Calgary

Part B – Focus Groups with Physical Activity Promoters

In five focus groups, a minimum of three female physical activity promoters (e.g., women working in public and community health, municipal recreation, community associations, sport organizations, provincial/territorial organizations, government agencies, women’s shelters, and Aboriginal organizations) discussed their “situated knowledge”, biases, experiences, perceptions, and ideas for improving access to physical activity for low socioeconomic status mothers.

Knowledge and Meaning of Physical Activity and Exercise

The focus groups examined whether or not the female professionals involved in the promotion of physical activity had the requisite knowledge regarding what constitutes healthy, active living, as well as their understanding of the importance and benefits of regular physical activity.

The Healthy Active Living guidelines in Canada’s Physical Activity Guide (CPAG) for adults provide a complex message and recommend accumulation of at least 60 minutes of physical activity daily. This may be reduced to a minimum of 30 minutes of more moderate to vigorous activity four days a week. The female physical activity promoters’ (PAP) knowledge of these physical activity guidelines was determined through the following 3 questions:

Table 5. Professionals’ Concepts of Physical Activity

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
To improve your health it is essential to do moderate to vigorous exercise for at least 20 minutes, 3 times a week.	8 (35%)	15 (65%)	0	0	0
Exercise doesn’t have to be done all at once – blocks of 10 minutes are okay to improve your fitness level.	3 (12%)	16 (70%)	2 (9%)	2 (9%)	0
Half an hour of brisk walking on most days of the week is enough physical activity to improve your health.	14 (61%)	7 (30%)	0	2 (9%)	0

The vast majority of the PAP’s agreed that:

- To improve your health it is essential to do moderate to vigorous exercise for at least 20 minutes, 3 times a week;
- That exercise doesn’t have to be done all at once – blocks of 10 minutes are okay to improve your fitness level; and
- That half an hour of brisk walking on most days of the week is enough physical activity to improve your health.

The majority of the PAPs seemed to be confused with their concepts of physical activity. They overwhelmingly agreed that activity that is more vigorous is required to improve health yet the vast majority of health benefits are associated with 30-60 minutes of moderate physical activity every day. However, they also agreed that 30 minutes of brisk walking most days of the week would suffice for health benefits. It would appear that there is confusion between health versus fitness benefits and the dosage of physical activities required for each.

These results indicate that there is the potential for conflicting physical activity messages with respect to the dosage of physical activity (i.e., intensity and duration) needed to meet established guidelines for health versus fitness benefits. If physical activity program development, design and delivery operate under the tenant that vigorous activity is essential to improve health, then there is the potential for programs to incorporate a level of physical activity that is likely impossible for most mothers to want to do and/or to be able to do.

We also asked the women to define what physical activity and exercise meant to them. Overall, physical movement and health emerged as the key themes (Table 6), as it did with the LSES mothers. With respect to the theme of physical movement, exercise compared to physical activity had the element of more intensity and structure to it (but not necessarily) while sport compared to exercise was defined as more organized and structured.

Table 6. Meaning of Physical Activity to Professionals

THEMES	Specifics	Definition/reason
Physical movement	Sports	Structured competition For social interaction
	Exercise	Structure and unstructured physical activities of increased intensity Flexibility, strength and cardiovascular conditioning exercises
	Leisure time	Leisure activities (e.g., walking to outdoor parks)
	On-the-job	Have to do it – transportation to and from work
	Household chores and childcare	Have to do it – cleaning, cooking, taking care of children, cutting the grass, walking the dog, etc.
	Active living	Shopping, walking with baby in stroller, stairs, daily multiple praying sessions, playing with children
Health	Holistic health and wellness	Necessity – becomes an addiction to feel good It is not always pleasurable but important for overall physical and mental health
	Mental	Fun – positive, balance, stress reduction; Relaxation Social interaction, meeting people
	Physical	Weight loss; Burns calories

The PAPs views on physical activity were shaped on their own personal experiences:

"I think it depends on your own experience, as well as what we experience as younger people. Sometimes exercise was a negative experience in school. For example, if you had to do gymnastics and you couldn't do that for love or money but maybe you enjoyed swimming, so you might have liked it and hated it at the same time."

"Where if you had a positive experience with exercise and you have had success at it, enjoyment, recognition or any of those things, then it tends to be something you embrace rather than something you distance yourself from. So for some people it does have a positive, and some a negative – depending on your earlier experience or even current experiences."

These experiences could have an impact upon the ultimate message that PAPs convey in their work life with respect to physical activity support.

Physical activity meant being active, in structured or unstructured activities.

"For me, it involves movement of activities."

"Anything that keeps you moving but mostly also brings feeling of wildness – movement leading to wildness."

In terms of health, physical activity to professionals was considered a priority. It was also considered a necessity – one likened it to a positive addiction yet at the same time the physical effort has to be something that is enjoyable.

The clinical aspect of a health professional approach is summed up in one of the public health nurse's comments:

"I might put another perspective – I'm not sure it is always pleasurable. For me, I sometimes do it to do it because I know that I'm getting an overall greater benefit and if I don't do it, I won't be healthy. So there can be days that when I get up I say 'I just want to go back to bed' but I'd rather go to the gym. I may or may not feel better after that, and for me that is a bigger reason. Although I would like to feel good, I don't always feel good."

Physical activity and exercise were also discussed as being on a continuum, with exercise being thought of as one aspect of physical activity that is more structured with a higher level of intensity and/or a longer duration. Exercise was seen as a purposeful regime with intention whereas physical activity might not be translated as such.

"I see exercise as a subset of physical activity. Physical activity being a longer movement and exercise may be something you know you could choose to do that is more structured, intense and has more focus to it."

Some physical activity promoters felt that the words we use to talk about "physical activity" could have a negative impact. As an example, they considered that physical activity was a neutral term yet exercise had a strong potentially negative emotion attached to it.

"I think the word exercise has a negative connotation, especially for our clients. If I would use the word exercise, I would never see participation."

Because of this perceived connotation some of the physical activity promoters felt that it was important to communicate the physical activity message instead: "I think that is what we are trying to do here – show people that physical activity is everything that you do. I think that is what we need to promote."

Physical Activity Promoter's Perceptions of Physical Activity Levels of LSES Mothers

We asked the physical activity promoters to rank their perceptions of the typical physical activity level of LSES mothers in their communities as well as what activities they thought were the major contributors. The general perception amongst the professionals was that LSES mothers did little sports and exercise. Many of them thought that the LSES mothers have more daily physical activities involving household tasks, childcare and occupational physical activities rather than active leisure time physical activities and/or regular exercise programs (refer to electronic Appendices for full focus group summaries).

"I feel most of them have more activities. They are walking because they don't have a car or are taking other ways to get to services. They are probably on the move more with the kind of stuff they have to do."

"...coming to work on Wednesday morning, seeing a young woman pushing a double stroller with 2 kids in all that snow storm. The street and side walks were horrible. It probably took her 10 minutes to walk up to the end of the street where she was heading, and I thought that this is real physical activity."

In Calgary, the level of occupational activity was ranked higher than mothers living elsewhere in Canada. This is likely attributable to the high cost of living. Couples often share three jobs just to stay above poverty level and cover basic living costs. The built environment of many urban centers has not helped women to remain physically active. Bike riding is an important form of transportation in countries such as China. New immigrants from China have lost that important daily activity, especially in cities such as Calgary where everything is spread out due to the poor layout of the city (i.e., no central core). The cold weather environment throughout the winter months is also perceived to be a problem for those new immigrants coming from warmer countries. The multicultural workers stated that many of the African immigrants to Calgary hibernate all winter and do minimal physical activities.

According to the public health nurses involved with participants in the *Women Alive/Femme active* municipal program which promotes active living and healthy eating in LSES women in Ottawa, the LSES mothers in the program are very active and become more active after participating in the program. They do integrate the concept of active living and healthy eating. However they felt that most other LSES mothers are at low levels of physical activity due to family demands, feelings of guilt when taking time for themselves, and a lack of support in place (i.e., childcare or a women's support group) to permit them to take any action.

Physical Activity Promotion for LSES Mothers

Health and physical activity professionals were asked to rate their physical activity promotion efforts with LSES mothers. Their responses are summarized in the table below.

Table 7. Physical Activity Promotion of Women Professionals

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Whenever I am dealing with a low socioeconomic status mother, I always promote the general benefits of physical activity.	6 (26%)	9 (39%)	6 (26%)	2 (9%)	0
I feel confident to advise my low socioeconomic status mothers about the levels of physical activity recommended for health gain.	11 (48%)	12 (52%)	0	0	0
Aside from exercise prescribed for treatment purposes, I feel confident that I can help my low socioeconomic status mothers set goals and develop a plan to maintain a regular physical activity program.	3 (13%)	15 (65%)	5 (22%)	0	0
I can help my low socioeconomic status mothers to overcome the barriers they have to establishing a regular physical activity program.	5 (21%)	13 (54%)	2 (8%)	2 (8%)	2 (8%)
I don't think that I can influence the level of participation in general physical activity among low socioeconomic status mothers.	0	6 (25%)	2 (8%)	9 (38%)	7 (29%)

Generally speaking, the female physical activity promoters do feel that they confidently promote physical activity to LSES mothers. However there was some hesitation related to their level of influence with respect to the participation of LSES mothers in physical activities. Yet interestingly enough, the mothers indicated that champions, mentors and group activities organized by professionals and/or done in partnerships with other groups were invaluable to them in terms of becoming more physically active.

Perceived Barriers to Physical Activity

Table 8. Perceived Barriers and Proposed Solutions to Physical Activity for LSES Mothers

Perceived barriers of physical activity promoters	Proposed solutions and examples
Misconceptions and stereotype of who is a LSES	Talk with LSES mothers and assess (through women-specific physical activity survey tools) what are appropriate activities for their different cultural, age and life situations. Assess what they would like to do, what their barriers and limitations are, and how physical activity fits into their culture.
Not enough program leaders who understand LSES mothers	Develop mentorship programs for participants in Women’s Only physical activity/exercise programs (e.g., Women Alive) to become an instructor and teach the program. Offer on-going support to the trainees. Invite LSES women to participate in physical activity program development.
Insufficient financial resources for physical activity programs for LSES mothers	Generate more funding, and foster a greater understanding from municipal parks and recreational groups that having a LSES women’s physical activity program will profit the community by being more welcoming to everyone.
Lack of partnership between Health and Recreation professionals	Individual organizations need to create partner networks to work together to create physical activities that are coordinated, connected, responsive, effective and sustainable. This requires collaboration and coordination between those who have the recreation facilities, and those who have the communication and capacity-building in the community. Public health can pay for instructors and supply the in-person support needed for the group. Offer programs at times when there is childcare available and at a convenient time for the mothers rather than when the recreation center is not busy or it is not their most profitable time.
LSES mothers feel intimidated by some leaders	Set the goal to have fun. Build a sense of belonging and security. Hire welcoming and non-judgmental leaders. Hire leaders who understand LSES mothers (i.e., having people leading who have had the experience in your own community) will result in an immediate bond and better understanding of the immediate issues “LSES” mothers face.
Not enough mental health workers	More mental health workers to help women overcome some of the mental health barriers post-partum mothers experience.
Lack of Francophone physical activity resources in Alberta	Integrate Francophone programs into recreation centres; Hire bilingual professionals and recruit bilingual volunteers to contribute to physical activity programs; Political request for bilingual services for all Francophone Canadians (not just immigrant Francophone) within the Francophone community in Alberta potentially using Centre Accueil Nouveaux Arrivants Francophones (CANAF)
Lack of appropriate physical activities	Determine what the mothers want to get out of this physical activity/exercise (i.e., is it because they want to lose weight, look better or strive for better health, or simply to have time for themselves?).

Part C — Kaiser Physical Activity Survey Tool

Characteristics of the Sample

Respondents were 29 through 45 years of age with many of the women being in their late thirties. As shown in Table 9, the majority (60%) of respondents were multicultural (English and French speaking) encompassing many new immigrants from French-speaking African countries. Body mass index (BMI), as calculated from self-reported height and weight was a skewed right distribution, with 25 of the 48 women having BMI's > 29.7 (overweight/obese) and 9 of these 25 women reporting BMI's > 34 (obese). These findings are similar to other reports of overweight and obesity existing at relatively high levels in low socioeconomic status populations.

Table 9. Characteristics of LSES Mothers to KPAS

Number of mothers completing Kaiser Tool (incomplete)	48 (71)
Age [yr (mean, SD)]	37 (7.34)
Cultural grouping [% , (N)]	
Multicultural Anglophone	33.3 (16)
Multicultural Francophone	8.3 (4)
Francophone	27.1 (13)
Anglophone	18.8 (9)
Aboriginal	12.5 (6)
BMI kg/m ² (mean, SD)	26.4 (5.2)

Table 10 summarizes the average and median activity index in each domain of activity. Variability, as measured by the interquartile range, was greatest for occupational activity; however only 17 of the 48 respondents reported being employed outside of the home. The variability for all women combined was greatest for the sports/exercise index (2) and smallest for the household/care-giving index (0.7), while only 3 women (6%) reported no sports or exercise in the past year. Of those who did report participation in sports or exercise, the mean MET hours per week spent in these activities was not highly skewed (0.1). There were no differences in BMI between non-employed versus employed women (data not shown) even though the addition of occupational physical activity significantly increased overall total physical activity level in these employed women as compared to their non-employed counterparts.

Table 10. Domain Specific and Total Activity Level Reported by LSES mothers

Sports and Exercise	N = 48		
	Average	2.93125	
	Median	3.125	
	25 th –75 th percentile	2	4
Active Living	N = 48		
	Average	3.02083	
	Median	3	
	25 th –75 th percentile	2.5	3.5
Household/Caregiving	N = 48		
	Average	2.96313	
	Median	3.1	
	25 th –75 th percentile	2.6525	3.355
Occupational	N = 17		
	Average	2.12167	
	Median	1.825	
	25 th –75 th percentile	1	3.11455

We wanted to compare the sports/exercise activity of this sample with that reported in other activity studies (e.g., national surveys of leisure time physical activity in Canada). We converted the data on mode, frequency, and duration of specific recreational activities into an activity score expressed as MET hours per week, by assigning the MET values of 3.5, 5, and 7 to the activity intensity codes of 1, 2, and 3 respectively. These MET values represent the average MET value of the activities in each intensity category as noted in the Compendium of Physical Activities^[11]. This was multiplied by the frequency and duration and summed up over all reported sports and exercise activities. One Met is the equivalent to the oxygen consumption at rest or approximately 1 kcal/kg per hour.

Table 11 summarizes the energy expenditure of LSES mothers in sports and exercise over the last year. To help put this table into perspective, the 2005 Canadian Community Health Survey found that only 23% of Canadian women expended more than 3 KKD. Physical activity recommendations for maintenance of a healthy weight/prevent weight gain suggest 1200 kcal–2200 kcal per week in leisure time physical activities. The LSES mothers who completed the KPAS have similar leisure time energy expenditures as the majority of Canadian women and they are at risk of becoming overweight.

Table 11. Energy Expenditure by LSES Mothers

Kcals/kg/day	Average	3.05	
	Median	2.95	
	25 th –75 th percentile	1.6875	4.4375
Kcals/day	Average	212.68	
	Median	180.45	
	25 th –75 th percentile	114.443	322.4813
Kcals/week	Average	1488.76	
	Median	1263.13	
	25 th –75 th percentile	801.1	2257.369

The KPAS tool also asked mothers how often each of the following perceived barriers prevents them from getting the amount of exercise they want or need.

Table 12. LSES Mothers’ Perceived Barriers to Exercise

	Never	Seldom	Sometimes	Often	Always
a) Self-conscious about how I look when I exercise	46%	17%	28%	2%	7%
b) Lack of interest or enjoyment	38%	21%	30%	6%	6%
c) Feelings that I don’t deserve the time to exercise	69%	15%	10%	6%	0%
d) Lack of self-discipline	26%	9%	32%	21%	11%
e) Lack of time	8%	15%	26%	26%	25%
f) Lack of energy	24%	15%	30%	26%	6%
g) No one to exercise with	49%	9%	13%	17%	11%
h) No exercise/sport equipment	41%	13%	19%	15%	13%
i) Lack of good weather	17%	21%	47%	9%	6%
j) Lack of skills or knowledge	45%	15%	25%	13%	2%
k) Lack of facilities or space	34%	17%	17%	25%	8%
l) Lack of good health	52%	13%	25%	6%	4%
m) Concern for personal safety	61%	9%	22%	4%	4%
n) Lack of childcare	34%	4%	21%	26%	15%
o) Fear of injuring myself	72%	17%	7%	4%	0%
p) Other	91%	0%	0%	0%	9%
External obstacles	34%	16%	27%	15%	7%
Health constraints	62%	13%	18%	4%	3%
Lack of motivation	53%	20%	37%	28%	13%
Time constraints	21%	9%	24%	26%	20%

Time constraints (including lack of childcare) and lack of motivation were acknowledged barriers at least sometimes by more than two thirds and greater than three quarters of all surveyed women, respectively. At least one out of two women indicated that lack of energy and lack of good weather were barriers to them being physically active.

D — Proposed Solutions

Encouragement for Physical Activity

All the women, LSES mothers and physical activity promoters, talked about the need for encouragement for LSES mothers to be physically active.

Encouragement encapsulated the following themes:

i) With Education:

The LSES mothers and physical activity promoters stressed the importance of educating the women on the benefits and importance of physical activity in women's health. Specific groups organized by physical activity promoters to educate immigrant men as well as women about the importance of physical activity/sport/exercise in women's health was considered an integral component for increasing physical activity levels of LSES mothers.

"We would like you to come to talk, visit our kitchens and facilities – that's important."

– Muslim mother, Ottawa

"It comes back to education all the time. If the immigrant women are more educated and know that it's very important to be active, they will go."

ii) With Awareness:

The mothers indicated the need for increased awareness amongst men and women on the health benefits of physical activity, ultimately encouraging men to give them a chance to be physically active. The immigrant women also suggested support groups for both women and men (spouses) to increase awareness of and further educate on the health benefits of physical activity for women. Physical activity promoters felt that LSES mothers have a misconception of the importance of physical activities. These groups could hence play a bigger role in encouraging and convincing mothers to be more active and take time for themselves.

iii) With Financial Support:

Cost is a barrier that both LSES mothers and physical activity promoters have identified for physical activity in LSES mothers. Cost has different reaches: transportation, childcare, program affordability, literacy, all big broad determinants of health. Suggestions from recreational professionals were to find ways with other partnerships to offer more subsidized programs, with free equipment, clothing, transportation and childcare offered to all participants. The health and physical activity professionals suggested that the *Women Alive/Femme Active* concept/program for low income women should be spread throughout Canada as a form of best and promising practice for LSES mothers. With this program there is no need to provide proof of income and all costs are covered.

iv) With Appropriate Communication:

A lack of physical activity personnel who speak the mother tongue of participants (e.g., French-speaking outside of Quebec) and a lack of physical activity program information in different languages is important if non-English speaking mothers are to be able to find out about and become involved in physical activities within their communities.

v) With Mentors:

Both LSES mothers and physical activity promoters indicated the need for physical activity mentors or champions that participants can identify with – “We want women with stretch marks, a real one.” These can be volunteers, professionals, or active mothers with a keen interest in helping others. This is supported by the results of the March 2000 working group of the Community Action Program for Children (CAPC) and the Canada Prenatal Nutrition Program (CPNP). A key learning included having the right staff – “People connect to people, not to agencies or programs.”^[12]

vi) With Childcare:

Young children require childcare if mothers are to be able to be involved in physical activities (e.g., exercise and sports) without their children. The exception to this would be those physical activities that integrate the mother into the child’s physical activity or sport program.

Women in Sport

Physical activity programming efforts for mature women tend to focus on traditional aerobics, fitness, strength training, and flexibility type of programs led by instructors in fitness studios or community centres. While many of the mothers mentioned these types of programs they also talked often about their need for physical activity to be fun and have a social support system. They related this back to times in their lives when sport/team activities were greatest and how organized sport gave them the support they needed to enjoy being active. Women’s organized sport activities, such as playing baseball, soccer, basketball, or tennis, with integrated daycare were suggested as viable solutions that would enable women to learn and participate in sports (e.g., learn to run, bike, skate, team sports) within a supportive women’s only environment. The focus was on sport participation that was culturally appropriate and fun and which promoted specific women’s health issues (e.g., Run for the Cure). Certainly in those cultures where a greater variety of physical activities are accepted, there were greater opportunities for low-cost, family sport type activities.

“Cycling – it’s simple, cheap, accessible, easy for the family to do together.”
– Francophone mother, Calgary

Learning to run and playing outdoor sports were suggested frequently as these activities do not rely on much infrastructure for program delivery. Mothers can get together at mutually convenient times in their own neighborhood parks, where they can share the childcare responsibilities.

Group activities that are organized, free, and scheduled at a convenient time are advantageous for LSES mothers.

Some mothers suggested that free indoor space at the nearest community center where they could get together to do organized games and active playing with their children would help them to be more active in a low-cost fashion, while also encouraging interaction between families. This would ultimately increase the social support system and decrease the sense of isolation some mothers experience.

“As long as it’s organized, people tend to show up – this is what’s happening, it’s free, be here at this time and this is what we’re going to do.”
– Aboriginal mother, Halifax

Traditional Activities

Physical activity promoters and LSES mothers suggested that in today's ever-changing world the need for traditional cultural games and teachings is increasing more and more. Multicultural and Aboriginal women discussed how traditional dance is a physical activity that they can do with their children.

"...like traditional dancing... I'd like to learn. I've got my daughter - I'd like to teach her. I've got me - get myself going again."
- Aboriginal mother, Halifax

Not only is there a need to instill upon the new generations of Aboriginal peoples an understanding, appreciation and respect for the traditional way of life but also a need to promote a healthy and more active lifestyle. Aboriginal organizations and health centers across Canada are taking efforts to reintroduce traditional games to promote not only a healthy lifestyle but to keep the culture, values, and skills alive and well. Clients of Ottawa's Wabano Aboriginal Centre have volunteered their time to provide teachings of traditional Aboriginal games to the youth in the community in order to offer them a chance to understand the traditional ways of life and appreciate the importance of staying fit and healthy. While these games not only instill a sense of pride and respect in the traditional Aboriginal way of life, they also help Aboriginal people to develop the fitness and strength needed to compete and excel in these games.

Other traditional activities such as walking, the main traditional physical activity that people from within all cultural groups do and have done for centuries, needs to be encouraged as a meaningful way to incorporate physical activities into a mother's day. This was well summed up by a Francophone mother.

"Walking is practical - it is a complete sport. You can do other things along with it."
- Francophone mother, Calgary

Accessibility

Open access and more equal access for LSES mothers, regardless of income, was suggested as a way to stop the social inequity that LSES mothers experience, rather than the notion of "we'll do what we can with what we have, and take a donation here and there because we are dealing with poor women."

"If we are looking at recreational physical activities, exercise, whatever... I kind of see accessibility as almost a two-tier system. I don't think that's right."
- Public health nurse, Ottawa

It was unanimous that more government support, in the form of more programs for physical activity that are affordable and that have childcare, is needed to enable LSES to be physically active. Some of the mothers were aware of the federal tax credit available for their children and they questioned why there was not a tax credit for participation in recreation activities for mothers.

Community collaboration is crucial to the development of physical activity strategies to reduce the inequalities that LSES mothers face. There appears to be a community divide between programming availability and accessibility at the municipal level. Public health nurses involved in planning programs for LSES mothers noted that the traditional operating culture for physical activity programs has been to throw a bunch of programs out into the community, see what is popular (i.e., what people will register and pay for) and/or pick up on societal physical activity trends, and offer those types of programs. This approach is not based on consultations within the targeted community and the programs developed will likely not meet the needs of the potential participants. It seems that program development is actually motivated by this bottom line, financial/cost recovery outcome.

“There is a philosophical difference within organized recreation sports that is a barrier as well as an advocate for the kinds of programs relevant to low SES moms. It is going to take a real meeting of the minds with recreation and health, and more working towards a philosophy that is more focused on social determinants than the bottom line.”
– Public health nurse, Ottawa

The public health nurses who develop and implement physical activity strategies targeted to the low income population of women in their community expressed their outrage with the municipal recreation planners whose bottom line mandate is to offer programs that cover all their costs, effectively canceling out programs for those that can not afford the registration fees. A recent report by the Canadian Fitness and Lifestyle Research Institute indicated this incongruence — while the percentage of municipalities who offer programming and scheduling to low income groups has increased dramatically in Canada the number who offer fee discounts or subsidies for low income adults has remained unchanged^[13]. A municipal recreation planner indicated the need for a higher-level directive from Parks and Recreation with respect to programming for the LSES community.

“...somebody at the top needs to realize that because I am driven by money, my goal is not to make a huge profit. I can run a program but at least need to recover the instructor’s cost.”

The LSES mothers indicated that this lack of financial support was still an important issue and that there should be an increase in the availability of subsidies and bursaries for LSES mothers to be able to take part in recreation activities with childcare provided simultaneously. Mothers also suggested that there should be an increase in the number of hours that the children can attend affordable daycare within their respective communities.

Social Support

The LSES mothers in the focus groups emphasized the importance of their social environment in terms of their ability to incorporate physical activity into their lives. They indicated unanimously that improved social support and outreach activities would help them to become and remain more physically active.

“Keeps me happy, helps my self-esteem and breaks the isolation. Activities without kids allow some time for myself, especially when they are very young.”

Aboriginal women talked about how sport was a social type of support that could get them out of the house. Including a physical activity/sport program on the evenings that they come to the native centre for a women’s support group would increase the likelihood that they would be involved. They indicated that the supportive nature of this community setting would allow them to get their confidence with the physical activity first, and then they would likely feel more comfortable to go out and do the physical activity in other settings. A suggestion was to have a women’s only program on how to play various sports. This would introduce mothers to the particular sporting equipment and how to use it, as well as how to play the sport itself.

Communication

LSES Mothers and physical activity promoters suggested that better communication — both computer and paper-based — is needed to better promote the availability and location of recreation opportunities with childcare for LSES mothers. Mothers also said that a computer-based resource must be updated on a regular basis and that contact numbers need to be included for those women without email access.

Marketing messages for promoting physical activity for LSES mothers need to focus on fun as well as the health aspects (e.g., breast cancer, heart disease, cholesterol, blood pressure, diabetes) of physical activity.

Health-based messages also need to target spouses in order for them to approve of their wives taking time to be physically active. Immigrant women indicated the radio was the key medium to influence their husbands with physical activity information. They suggested that local radio talk shows would be the ideal forum to discuss the health benefits of physical activity for women in their own language.

E – Recommendations

It is important to understand the impact that an individual's culture, SES, age, language, immigration status, education, and familial influence has on his or her activity level. If health (physical and mental) is largely influenced by the social environment, then the social context needs to be a main point of intervention. Municipalities are well suited to help facilitate support networks for LSES mothers and their families as part of outreach programs as well as through more targeted and specific programming efforts. Since 2000, there has been an increase in the proportion of Canadian municipalities who offer targeted programming and scheduling for families, women and low income groups^[13]. Yet, these targeted efforts are futile if the accessibility to these programs is limited for financial, childcare or other reasons. Only about half (58%) of Canadian municipalities offer discounted fee structures for families and a small fraction (19%) actually report having childcare facilities available for the mothers^[13].

Research continues to support the psychological benefits of physical activity^[14] and in this study the LSES mothers indicated that physical activity contributed to improved social connectedness as a key psychological benefit. Social isolation can be a consequence of motherhood, particularly in the LSES population, as many of these women are either single and/or of minority and multicultural populations. Social isolation may also be a cause of poor nutrition and physical activity habits leading to chronic disease. Engaging in group-based physical activities can thus serve an important function with respect to reduction of potential burden on health care services for these LSES mothers.

It is important that physical activity programming for LSES mothers includes a place that the women can get to by transportation that is affordable. Municipalities are well-positioned to offer women's activities within their local sport and recreation centres. Municipalities can also have formal agreements with local school boards regarding shared use of school and municipal facilities. Group-style physical activities that take place in proximity to where participants live bring mothers (and their children) together and provide opportunities for social interactions, enabling the development of new friendships and contacts for those women who may have little contact with other women as a result of their household/childcare demands, immigrant or cultural seclusion. Active friends can provide valuable support systems for marginalized women wanting to take part in physical activities, enhancing not only their personal well-being but social cohesion as well. These two factors together could likely make initiation and maintenance of physical activities more appealing and consonant for LSES mothers.

So while sport does not fit in as a traditional value for some cultural groups of women even here in Canada, physical activities that are integrated into childcare are often deemed to be acceptable for these women. The development of family-oriented physical activities and sport could accomplish a number of things for LSES mothers. It would introduce them to new skill sets for exercise and sport in a comfortable learning environment with their children and other mothers and children; it would reduce the need for childcare and thereby decrease program costs; and it would provide opportunities for social interactions, enabling the development of new friendships and contacts for those women who may have little contact with other women as a result of their household/childcare demands, or language/cultural seclusion.

Community-level physical activity interventions in the LSES population should use community members and physical activity promoters in a systematic method to develop locally defined intervention strategies. From the strategies and action steps identified, evidence-based interventions can be developed. This approach requires a conceptualization and understanding of the local needs and resources as well as characteristics of the physical and social environment within each community.

The A⁴ Approach

Assessment – Accessibility – Availability – Affordability of Physical Activity

Community-based **Assessment – Accessibility – Availability – Affordability** of physical activity in the respective community is a simple approach to define and develop locally relevant physical activity strategies.

“We need, as professionals, to find ways not only to promote the benefits of physical activity but to offer programs that benefit women in terms of affordability and accessibility.”
– Public health nurse, Ottawa

Table 13. Create Better Accessibility – Availability – Affordability to Physical Activity for LSES Mothers

Provide childcare
Re-introduce traditional activities
Offer culturally appropriate, women only physical activities
Sport programs for women – learn to play, etc
Free or low-cost (subsidies)
Neighborhood-based or not having to travel
Encouragement for physical activity with education and awareness
Better promotion of available activities in community
Family-based activities
Spousal support groups to encourage and educate on women’s health benefits
Have groups offered at better times that fit into their schedules

Assessment

Physical activity promoters need to assess the LSES community of mothers to better address their specific community issues with respect to accessibility, availability and affordability of physical activity opportunities for these women. Simple checklists that address these issues should be used whenever new programs are being developed. This creates an evidence base of information that community stakeholders need to build a strong case that low socioeconomic status, not just low-income, mothers and their families are disadvantaged with respect to accessibility of physical activity opportunities.

a) Assess current knowledge of physical activity promoters

Ensure that physical activity promoters are well-versed in current, up-to-date guidelines for health versus fitness benefits of physical activity so that a consistent physical activity message is being conveyed to LSES mothers.

b) Assess physical activity status and behaviours of LSES mothers

Physical activity promoters need to assess the LSES community of mothers to better address their specific community issues with respect to accessibility, availability and affordability of culturally appropriate physical activity opportunities for LSES mothers.

Accessibility – Availability – Affordability

Community-level physical activity interventions in the LSES population should use community members and physical activity promoters in a systematic method to develop locally defined intervention strategies. From the strategies and action steps identified, evidence-based interventions can be developed. This approach requires a conceptualization and understanding of the local needs and resources as well as characteristics of the physical and social environment within each community.

- a) Develop a business case around increasing opportunities for physical activity for LSES mothers without the stigma of having to prove financial need. Community stakeholders need the evidence-based information to build a strong case for LSES mothers and their families, including those of low income, as being disadvantaged with respect to accessibility of physical activity opportunities.
- b) Develop simple resources for promoting availability, accessibility, and affordability of physical activity for LSES mothers that can be integrated into existing physical activity tool kits of partners.
- c) Develop a web-based workshop delivery for physical activity promoters in partner networks to build awareness of the specific needs of LSES mothers with respect to physical activity.

The success of this approach would be enhanced via partner networks working together as a team to increase physical activity opportunities. Suggestions are to:

- Include an electronic network of focus group participants (LSES mothers and physical activity promoters) to start regular communications to pilot ideas and get suggestions; and
- Conduct workshops across the country to build capacity, share information, and create and maintain partner networks to increase physical activity opportunities for LSES mothers that are coordinated, connected, responsive, effective and sustainable. This requires collaboration, coordination, communication, and capacity building between and for each organization.

Policy Recommendations

Many recreation policies and practices increase barriers for low socioeconomic status mothers and their children by:

1. Espousing community development, but operating from a direct delivery model.
 - Recreation programs not based on community needs assessments may be irrelevant to some of the cultures in a community;
 - Cultures view recreation in different ways and beliefs vary – e.g., some cultural beliefs prevent women from wearing bathing suits or swimming in public, but pools may not accommodate such alternatives;
 - Most LSES mothers work outside the home, yet many recreation programs are offered during working hours.

2. Failing to provide sufficient in-service training on gender, sensitivity, and cultural issues for frontline staff.
 - Recreation facilities may not have staff trained to make people from all cultures feel welcome;
 - Staff may not be aware of how to create a trusting, supportive and caring environment for LSES mothers;
 - Community support may not be culturally appropriate.
3. Lack of bilingual or multilingual staff for community development.
 - New immigrants may not know how Canadian recreation facilities work and/or what goes on in recreation settings. Lack of translation of information on programs or materials in other languages may increase feelings of intimidation and exclusion as a result.
4. Making cost recovery and revenue generation the priority.
 - Physical recreation programs, fitness programs, and childcare that TOGETHER are NOT affordable are therefore NOT accessible to all, regardless of income status.

Three Principles for Development of Effective Policy

There are three basic principles that appear to be important for the development of effective social policy that would support the participation of LSES mothers in physical activity in order to enhance their psychosocial well being.

1. Participation opportunities: This research on current physical activity levels using the KPAS tool has provided useful benchmarks for assessing the future impact of policy and program changes on the involvement of LSES mothers in sport and physical activity. This type of information gathering needs to be integrated into community needs assessments in tandem with measures of community capacity, health and well-being in order to support the development of new policies for accessibility, availability and affordability of physical activities within the LSES community. In addition, policy makers need to consider not just the number of physical activity opportunities that are available for LSES mothers to be active, but also the quality of these opportunities.

2. Tailored programming: Physical activity programs, facilities and environments need to be tailored for each distinct population of women. The focus group research has demonstrated that groups defined by physical activity levels, socioeconomic status and ethnicities have different needs and capacities, and are therefore best-supported using different strategies.

3. Community partnerships: The feedback from the physical activity promoters overwhelmingly supports the need for community partnerships at all levels. The factors that contribute to LSES mothers' physical health and well-being are multidimensional and interdependent, and thus require a strategy that reflects this in order to be effective.

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