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WALKON 2008 SURVEY REPORT

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EXECUTIVE SUMMARY

Research has shown that the environment in which people live, work, and play impacts their amount of total physical activity. Urban planners, sociologists and other professionals have conducted research about the factors influencing the walkability of a community. A walkable community is defined as a community that features a medium density mix of housing, stores, businesses, schools, and destinations in walking distance with paths, trails and sidewalks that connect neighbourhoods to one another. In addition, walkable communities are attractive, invite further exploration, and are places where people feel safe.

The **walkON** survey was conducted in order to understand the current levels of awareness, knowledge, attitudes, and practices of Simcoe Muskoka residents regarding walkable communities. At the time of the survey, there was no data on this from the general public living in Simcoe Muskoka.

Survey respondents came from every township and municipality and reflected the age distribution patterns of Simcoe Muskoka. In general, the sample size represented the population of Simcoe Muskoka overall. Half of the survey respondents lived in a city or town setting and half lived in a rural setting compared with the 2006 Census data which indicated that 40% of Simcoe Muskoka residents lived in an urban setting and 60% lived in a rural setting.

Sixty-nine per cent (69%) of survey respondents had not heard or read the term “walkable community” whereas 31% of respondents had heard it. Of the respondents who had heard the term “walkable community”, more than half understood the concepts behind the phrase. People who had heard or read about the term “walkable community” were more likely to be physically active for between 5 to 7 days a week than those who had never heard nor read the term.

When making the decision of where to live, the vast majority of respondents thought that it was very important or somewhat important to live in a neighbourhood with little or no traffic (90%), with a big yard or garden (86%) and with a sense of belonging (86%). However, housing developments designed with big yards that are away from traffic result in more land being consumed for residences¹. Land usage has consequences and the choices often

¹ Gurin, D. Understanding Sprawl: A Citizen's Guide. The David Suzuki Foundation. Vancouver, B.C. 2003, p. 9-10.
http://www.davidsuzuki.org/pww370829/files/Climate/Ontario/Understanding_Sprawl.pdf Accessed 15 August 2008.

come down to using existing available land for housing or allowing it to continue to support agriculture and local food production.

The linkage between the location of infrastructure and services near one's neighbourhood and increased personal physical activity was well understood among respondents who lived in cities and towns in Simcoe Muskoka. Over 85% of survey respondents felt their ability to be physically active was impacted by having roads, sidewalks, and pathways that were in good condition, that were connected to each other, and that were well-lit at night as well as having parks within a 5-10 minute walk from their neighbourhood.

In walkable communities, optimal neighbourhoods have sidewalks and are connected to other neighbourhoods, parks, stores, schools, and public transportation within walking or cycling distance. Currently, being within a 5-10 minute walking distance to typical neighbourhood destinations ranked as the lowest priorities among what is valued as important neighbourhood characteristics by survey respondents. Just under 50% of survey respondents valued being within a 5-10 minute walk of stores and restaurants (49.8%), 37.9% valued being a 5-10 minute walk from schools, public transportation (36.7%), and walking/cycling distance (33.6%) from work.

Respondents identified that the following changes would make it easier to be physically active in their neighbourhood (in order of the highest to the least degree of acceptance): designing buildings and other infrastructure that fit with the overall look or character of the neighbourhood, having stores, shops or restaurants within a 5-10 minute walk of their neighbourhood, creating sidewalks or pathways to connect streets in the neighbourhood more directly, having a variety of housing options, and finally putting sidewalks on both sides of the street.

The survey results provide direction for further work towards increasing the amount of daily physical activity engaged in by Simcoe Muskoka residents. The Health Unit and its partners would be well advised to engage in a communication campaign that increases awareness and knowledge about the term and concept of "walkable communities". Secondly, the Health Unit and its partners would be well served by showing images of desirable neighbourhood characteristics of walkable communities (and other aspects of healthy communities) in real settings. People need to be able to visualize what desirable neighbourhood characteristics would look like in both new developments and in retrofitted existing developments.

However, programming efforts must work towards action on creating walkable communities and not just focus on awareness raising and increasing basic knowledge. Three-quarters of the city and town residents surveyed already acknowledged that their physical activity was impacted by their neighbourhood infrastructure and nearby services. Initiatives that cause

people to evaluate their own neighbourhood for supportive infrastructure and nearby services may result in more community action for walkable community infrastructure. Shared common viewpoints among neighbourhood residents could initiate specific municipal requests for change. The provision of tools to address identified gaps would be part of further action. For those who are new to the idea of walkable communities, neighbourhood evaluation would provide concrete questions that illustrate the overall meaning of the term walkable communities.

A variety of options should be considered in terms of local practicality and palatability. The role of the health professional is to know the evidence of what has worked and to employ the best (or better) practices to achieve these local goals and to help the community see a new vision for itself. The work at the level of the community begins with the changes that people have identified as important. In working with any community, the ability for the community to learn, grow, and make its own changes is what moves the process forward and ultimately can result in an environment that is more walkable.

INTRODUCTION

Many health units across Ontario have made walkable communities a priority initiative as a result of the increasing amount of research demonstrating an association between the built environment and health². The evidence demonstrates that the environment in which people live, work, learn, and play impacts their amount of total physical activity³.

A walkable community is defined as a community where walking, biking, and other modes of human-powered activity is supported and encouraged in the daily living of residents⁴. Since work in the area of walkable communities is new, health units need insight into public knowledge, awareness and attitudes towards communities that support daily physical activity. There was no existing data on the knowledge, awareness and attitudes towards walkable communities from the general public living in Simcoe Muskoka. The **walkON** survey was conducted in order to understand the current levels of awareness, knowledge, attitudes, and practices of Simcoe Muskoka residents regarding walkable communities. The survey collected information about the following areas of interest:

- Demographic profile of respondents (questions marked A – Health Unit Municipality and questions marked F1-9 in questionnaire)
- Information on neighbourhood of respondent (questions marked BA1-2 in the questionnaire);
- Attitudes towards components of the built environment on the decision of where to live (questions marked B1-9 in the questionnaire);
- Level of physical activity behaviour of the survey sample (questions AB1-2, F1-2 in the questionnaire);
- Awareness and level of knowledge of the term “walkable communities” in general (questions AB3a,b in the questionnaire);
- Awareness and level of knowledge of walkable community components on physical activity (questions marked C1-6 in the questionnaire);
- Attitudes towards community changes to make a locale more walkable (questions marked CC1-4 and questions marked D1-5 in the questionnaire);
- Comparison of behaviour and attitudes of residents living in a city or town versus those living outside a city or town (analysis of data).

² Williams, M., Wright, M. The impact of the built environment on the health of the population: A review of the review literature, Simcoe Muskoka District Health Unit, 2007.

³ Ibid. pages 15, 16.

⁴ **walkON** website at <http://www.walkon.ca/what-walkable-community>. Accessed on 3 September 2008.

The analysis of the data generated from the **walkON** survey will support Simcoe Muskoka District Health Unit (SMDHU) staff working in physical activity promotion to:

- provide information to the public and decision-makers about the awareness, knowledge, and attitudes towards walkable communities from the residents of Simcoe Muskoka;
- tailor messages about walkable communities to the public;
- generate more support for the infrastructure necessary for walkable locales;
- promote active transportation for distances under one kilometre;
- increase the capacity of communities to create more walkable locales; and
- build support for healthier public policy related to the built environment.

I. BACKGROUND

A. The walkON Initiative

The community partnership of Heart Health projects from Central West Ontario developed and implemented the **walkON** initiative including: Choices 4 Health in Halton Region, Brant Healthy Living in Brant County, Health Action in Haldimand and Norfolk Counties, Together 4 Health in the Region of Waterloo, Healthy Living Niagara in the Niagara Region, and the Community Heart Health Network in Wellington-Dufferin-Guelph.

The **walkON** partnership identifies that walkable communities are an important aspect of a healthy and vibrant community. The environment in which citizens live, work, learn and play must support walking as a form of everyday transportation to encourage citizens to rely on their cars less and choose walking more often. Well-designed, compact communities where people can walk to school and work, to stores, parks and restaurants significantly reduce the need to drive⁵. The **walkON** partnership identifies many economic, health and environmental benefits of building and sustaining a community that supports walking as a primary mode of transportation and they include:

- **Health:** Reducing the health risks such as obesity, diabetes and heart disease currently faced in our communities;
- **Environment:** Replacing short distance auto trips that damage the environment by impacting air and water quality;
- **Road Traffic and Congestion:** Reducing road congestion, and improving safety by calming auto traffic and reducing maintenance costs;

⁵ walkON website at <http://www.walkon.ca/what-walkable-community>. Accessed on 3 September 2008.

- **Society:** Promoting community cohesion and a heightened sense of place. Discouraging street crime by increasing pedestrian and cycling traffic. Reintroducing residents to the street to enhance their awareness of the environment;
- **Economy:** Reducing health care costs by increasing the health of residents. Improving access to employment, education & social services⁶.

Urban planners, sociologists and other professionals conduct research about the factors influencing the walkability of a community. The **walkON** partnership defines a walkable community as a community that features a medium density mix of housing, stores, businesses, schools, and destinations to walk to. It has paths, trails and sidewalks that connect neighbourhoods to one another⁷. In addition, walkable communities are attractive, invite further exploration and are places where all people feel safe. Based on this research, **walkON** defines the key elements of a walkable community as:

- **Connectivity** where sidewalks, trails, and pathways connect one area to another in a neighbourhood;
- **Access to Amenities** where a variety of amenities such as stores, schools, and restaurants are within a short walking distance of residences;
- **Density** refers to the amount of activity found in an area. Medium density areas have a high number of people living in an area with a variety of residential structures, businesses, schools, stores, and restaurants integrated into the community;
- **Safety Along Walkway Routes** where walking routes feature separation from the road, traffic calming features, clear and functional sidewalks, adequate lighting, crossing signals and legible street signs;
- **Aesthetics** where neighbourhoods are attractive and invite further exploration by including landscaping, lighting, a variety of building types and availability of amenities along walking routes such as street benches, shade trees and shelter⁸.

The **walkON** initiative offers activities, strategies, and information to engage the community in the creation of environments that support walking. Information sessions and workshops are facilitated at a community level to build awareness for the need for walkable environments and identify changes required in a community to support walking. Building support for public policy related to health and the built environment is addressed in their Tool Kit which provides a compilation of sound research to build the case for local work, information on organizing a local pedestrian advocacy group, insight into influencing planning policy, working with the media, fundraising and grant writing and a list of resources including best practices. Additional resources, reports, and their own research are also provided.

⁶ **walkON** website at <http://www.walkon.ca/why-are-walkable-communities-important>. Accessed on 3 September 2008.

⁷ **walkON** website at <http://www.walkon.ca/what-walkable-community>. Accessed on 3 September 2008.

⁸ Ibid.

The Chronic Disease Prevention - Healthy Lifestyle Team of the Simcoe Muskoka District Health Unit (SMDHU) had a complement of staff who worked on the promotion of physical activity in everyday life known as the Walkable Communities Task Group (WCTG). The group had its first meeting in June 2007 and began work to develop a plan to engage local communities in improving the walkability of their neighbourhoods. The **walkON** initiative was identified in a brief scan of existing walkability programs across the program.

In the fall of 2007, the **walkON** partnership was engaged in a formal survey of their communities to determine the residents' viewpoints on a number of components of walkable communities. The WCTG contacted them as this survey was being conducted. In exploring the opportunities available to adapt some of the **walkON** work, the SMDHU was invited to take part in the survey. The participation of the WCTG in the **walkON** survey work was the result of a number of factors coming together: the WCTG wanted to have a walkability survey conducted of Simcoe Muskoka residents, money was available to pay for such a survey as a result of funding received from the Public Health Agency of Canada for the Diabetes Project, the deadline for funding use was approaching, the **walkON** partnership had already prepared a survey script which had been approved by Ethics Review of the University of Waterloo and engaged the Survey Research Centre of the University of Waterloo, and trained staff were available to administer the survey immediately. The WCTG was pleased to be presented with an opportunity to join an existing survey although it did mean that we did not have input into the wording or the order of the questions in the questionnaire. The survey was conducted in English from November 28th to December 12th, 2007 among those people with residential phones in Simcoe Muskoka.

B. Physical Activity

The amount of physical activity an individual engages in impacts her/his health⁹. Her/his capacity and tendency to be physically active is influenced by demographic characteristics, genetics, lifestyle, attitudes and beliefs, and time constraints. The individual is surrounded by a built environment that includes land use patterns, the transportation system and design features.¹⁰ Both the individual and the built environment fit into the larger social environment of economic, political and societal forces that shape the available opportunities and choices for physical activity.¹¹

Physical activity can be categorized according to purpose – either utilitarian or recreational. Recreational physical activity is defined as exercise, sports, recreation or hobbies and occurs during one's leisure or spare time and is not associated with activities as part of regular job duties, household duties or transportation.¹² It is planned and routine, such as attending an aerobic class or going for a walk. When most people think about "being physically active",

9 U.S. Department of Health and Human Services. Physical Activity and Health: A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion; 1996.

10 Transportation Research Board Committee on Physical Activity HTaLU. Does the Built Environment Influence Physical Activity? Examining the Evidence. Washington, DC: National Academy of Sciences; 2005. Report No.: 282.

11 Ibid.

12 U.S. Department of Health and Human Services. Physical Activity and Health: A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion; 1996.

they picture it as a time set apart from other tasks with the primary goal of exercising. Examples include jogging, playing tennis, or walking around the block with the baby in a stroller.

In contrast, utilitarian physical activity (or active transportation) is self-powered human movement where the primary purpose is to get to the destination or accomplish the task and the physical activity involved is secondary. Active transport comprises non-motorized, human-powered modes of transportation, such as walking, cycling and wheeling (for wheelchair users) or similar activities, to and from places, such as work, school, a place of worship, and stores to carry out errands.¹³ It is a way of life where being active is natural, and is incorporated into everyday activities such as walking to pick up the mail instead of driving, biking over to a friend's house instead of getting driven or taking the bus with friends to see a movie rather than getting driven. Sufficient opportunities for public transport increase people's likelihood of walking and cycling in combination with using public transport.¹⁴

The above distinction is important because the driving forces for recreational and utilitarian physical activity are different.¹⁵ Recreational physical activity requires both motivation and time to initiate and sustain it whereas utilitarian physical activity is done as part of the tasks of the day that need to be accomplished. When a busy person is running out of time, it is usually the leisure-time physical activity that is sacrificed in order to get the other necessary items accomplished. But this same busy person needs to address the "must do's" on their list such as buy milk or go to the bank. If they can walk to the store or the bank, they accomplish their necessary tasks and are able to be physically active at the same time. Active transportation allows tasks to get accomplished with the added benefit of incorporating physical activity into one's routine.

Different types of built environments are needed to support recreational and utilitarian physical activity. Specific infrastructure is often required to support recreational physical activity. Baseball diamonds, tennis courts, skating arenas and recreation centres are needed for recreational or leisure-time physical activity. All these recreational activity supports are configured for different sport requirements, often specific to only one activity, take up large areas of space, and require significant capital investment and maintenance resulting in user fees that often do not make the facility accessible to everyone.

Utilitarian physical activity requires environments with connecting sidewalks and bicycle paths that support active transportation. Additionally, utilitarian physical activity requires environments that locate destinations like shops, banks and restaurants within walking distance of home or work. The type of environment that supports utilitarian physical activity is captured in the concept of walkability. The World Health Organization defines walkability as "the degree to which a single route or a system of routes between points is relatively short, barrier-free, interesting, safe, well-lighted, comfortable and inviting to pedestrians".ⁱ It includes pedestrian movement to everyday destinations such as workplaces, shops, schools and community facilities. Furthermore, these same environments support transit, since

¹³ Ibid.

¹⁴ World Health Organization. Tackling Obesity by Creating Healthy Residential Environments. World Health Organization; 2007.

¹⁵ Frumkin H, Frank L, Jackson R. Urban Sprawl and Public Health: Designing, Planning, and Building for Healthy Communities. Washington, D.C.: Island Press; 2004.

transit users are required to walk or cycle to the bus, subway or train stops. The built environment needed to support active transportation can be used for more than one purpose and is available for use by many people thereby reinforcing the concept of integrating physical activity into everyday life.

II. METHODOLOGY

Simcoe Muskoka has a population of approximately 479,765 inhabitants¹⁶. In any survey, inferences are made about the population based on the responses from the sample of people selected to participate. Both the sample procedures and the data analysis need to be done according to accepted standards of practice in order to ensure accuracy of the data. This section details how the survey was conducted and how the resulting data was analyzed so that the survey results are representative of the population. The data from the survey was analyzed by a Research Analyst with the Simcoe Muskoka District Health Unit

The **walkON** survey was conducted by the Survey Research Centre of the University of Waterloo, a research organization separate from the Simcoe Muskoka District Health Unit. According to the report provided by the Survey Research Centre, 1933 inhabitants were reached through phone calls. A sample of 403 respondents was achieved so there was a 20.8% response rate, which is typical of telephone surveys. This sample size allowed achieving a 95% confidence interval¹⁷ with a 4.9% margin of error¹⁸. Only one respondent refused to continue answering the survey and this survey was partially completed.

A. Sample Procedures

The sample for the **walkON** survey was designed to represent the adult population of the service area of the Simcoe Muskoka District Health Unit (adults 18 years of age or older). Households without telephones were excluded from the sample population since the mode of data collection for the survey was telephone interviewing.

1. Selection of Households

To select individual survey respondents, a two-stage probability selection process was utilized. The first stage involved the selection of households by randomly selecting residential telephone numbers for each township/municipality in the Simcoe Muskoka area (i.e., a random sample for each township/municipality).

A random digit dialling (RDD) was employed to select the numbers. Typically, non-household numbers are identified the first time the interviewer calls and most of the interviewer's subsequent efforts are then directed at encouraging an informant from a household to provide information about the number of adults living in the home, and after randomly selecting a respondent, completing the interview.

¹⁶ Statistics Canada, Census 2006. Catalogue Number: 97-550-XWE2006002

¹⁷ *Confidence Interval* is the statistical range with a specified probability that a given parameter lies within the range.

¹⁸ *Margin of error* is a statistic expressing the amount of random sampling error in a survey's results. The larger the margin of error, the less confidence one should have that the poll's reported results are close to the "true" figures; that is, the figures for the whole population.

2. Selection of Respondents

The following stage of the sample selection process is the random selection of an adult respondent (18 years of age or older) from the selected household. In households with more than one adult, the person with the next birthday was selected as the survey respondent. The “birthday” selection method is used to ensure a random selection of respondents and it is a much less intrusive way to start an interview than other methods based on a count of the adults in the household. The less intrusive start makes it easier for the interviewer to secure the respondent’s cooperation.

3. Household Size Weights

The probability of an adult member of the household being selected for an interview varies with the number of people living in that household. In a household with only one adult, that adult has a 100 percent chance of selection; in a two-adult household each adult has a 50 percent chance of selection, in a three-adult household each adult has only a 33 percent chance of selection, and so on.

The data received from the survey was weighted to obtain even statistical representation of households with more than one adult in them. Analyses based on un-weighted estimates may be biased: residents of one-adult households are overrepresented, and residents from larger households are under-represented. Weighting the data is believed to compensate for the unequal probabilities of selection (one-adult households are given a weight of one, two adult households are given a weight of two, three-adult households a weight of three, etc.). The data for this survey included responses from households with up to 6 adults in them. In other words, weighting the data was the mathematical method to correct the distributions in the sample data to approximate those of the population from which it is drawn.

B. Data Analysis

1. Overview

Data Analysis was completed to determine information about the following indicators:

1. Demographic profile of respondents (questions marked A – Health Unit Municipality and questions marked F1-9 in questionnaire)
2. Information on Type of Dwelling and Location Description of respondent (questions marked BA1-2 in the questionnaire);
3. Attitudes towards components of the built environment on the decision of where to live (questions marked B1-9 in the questionnaire);
4. Level of physical activity behaviour done by the survey sample (questions AB1-2, F1-2 in the questionnaire);
5. Awareness and level of knowledge of the term “walkable communities” in general (questions AB3a,b in the questionnaire);

6. Awareness and level of knowledge of walkable community components on physical activity (questions marked C1-6 in the questionnaire);
7. Attitudes towards community changes to make a locale more walkable (questions marked CC1-4 and questions marked D1-5 in the questionnaire) ;
8. Comparison of behaviour and attitudes of residents living in a city or town versus those living outside a city or town (analysis of data).

Estimates of these indicators were based on a coefficient of variation (CV). The CV is a measure of the variability (or dispersion) of a distribution and the imprecision in survey estimates introduced by sampling. It is the ratio of the standard deviation of the variable to the mean value of the variable expressed as a percentage. The coefficient of variation is useful because the standard deviation of data should be understood in the context of the mean of the data. A coefficient of variation of 1 percent would indicate that an estimate could vary slightly due to sampling error, while a coefficient of variation of 50 percent means that the estimate is very imprecise. The most common way to improve the coefficient of variation is to increase the number of people surveyed and is typically expensive to accomplish.¹⁹

The CV indicates the quality of a population estimate²⁰. A CV of 16.7-25.5 indicates moderate sampling variability. A CV of 25.6-33.3 indicates high sampling variability. Estimates with either a moderate or high CV should be interpreted with caution. In some situations, the sample in the survey was too small to produce a reliable estimate.²¹ Analyzed data that had a CV greater than 33.3% were not released meaning that these numbers are not included in the report. The application of the coefficient of variation in this report means that if the number of respondents is less than 5 in the numerator or less than 30 in the denominator, the data is not statistically significant which means that the data is not representative of the population.

The CV also gives an upper and lower confidence level for the result. The greater the range between the upper number and lower number, the less representative the population estimate. Data with a CV between 16.3%-33.2% was released with a caution message; this means that the numbers with a caution message have a wide range of variability around the average value of the population for a specific indicator. Data with a CV larger than 33.2% was not released, due to high variability and therefore lack of accuracy in the indicator.

2. Data Analysis Limitations

- Because the SMDHU joined this project when other health units were already in the process of collecting data, no input could be made to the questionnaire as it had been developed by the members of the Central West Heart Health initiative.

¹⁹ Glossary, NuStats. <http://www.nustats.com/Glossary.htm> Accessed on 27 August 2008.

²⁰ Glossary, Diabetes in Canada, 2nd Edition. Public Health Agency of Canada. http://www.phac-aspc.gc.ca/publicat/dic-dac2/english/55appendix_a_e.html Accessed on 27 August 2008.

²¹ Ibid.

- Flaws in the wording of the physical activity questions in the questionnaire may have lead to confusion among the survey respondents as to what exactly was being asked due to the lack of specific differentiation between the types of physical activity in the questions. Without calling attention to the differentiation between examples of utilitarian physical activity/active transportation and recreational physical activity, both sets of physical activity questions may have been interpreted by some respondents as examples of physical activity in general rather than specific phrases reflecting actual utilitarian physical activity or recreational physical activity.
- Due to non-sampling error a response bias can be expected in the answers. This is due to the respondents' self selection during the first part of the recruitment process. This means that when the interviewer asked to speak with one of the adults (18 years or older) in the household and whose birthday is coming up next, the person who answered the call would decide if she/he would respond to the questions, either because she/he was the only adult in the home at the moment, or because she/he wanted to answer the questionnaire on behalf of the whole household.
- Some of the objectives identified in the proposal of this project could not be met, due to the types of questions included in the questionnaire. Some questions were asked more than once in a different way, and with different answering options; when comparing the results for these questions, no common trend or commonality on answers was achieved.
- Some data appear to not have sufficient statistical power to report any results (coefficient of variation > 33.3%); other data is recommended to interpret with caution due to high variability (coefficient of variation between 16.3 – 33.2%). When the coefficient of variation is below 16.3%, data can be interpreted and used without any caution since it is reliable and representative of the population, due to the low variability.
- Comparisons were made with the data obtained. When subgroups were analysed or compared, the resulting analyses was not able to be shared due to low sample size and therefore high variability (high coefficient of variation). Thus, several comparisons between/among groups were performed, where the CV allowed. However, low sample size for the subgroups did not permit to achieve all the comparisons planned and expected.
- The **walkON** survey was conducted within specific budget constraints so surveying more people was not an option that could be considered.

III. ANALYSIS OF THE DATA

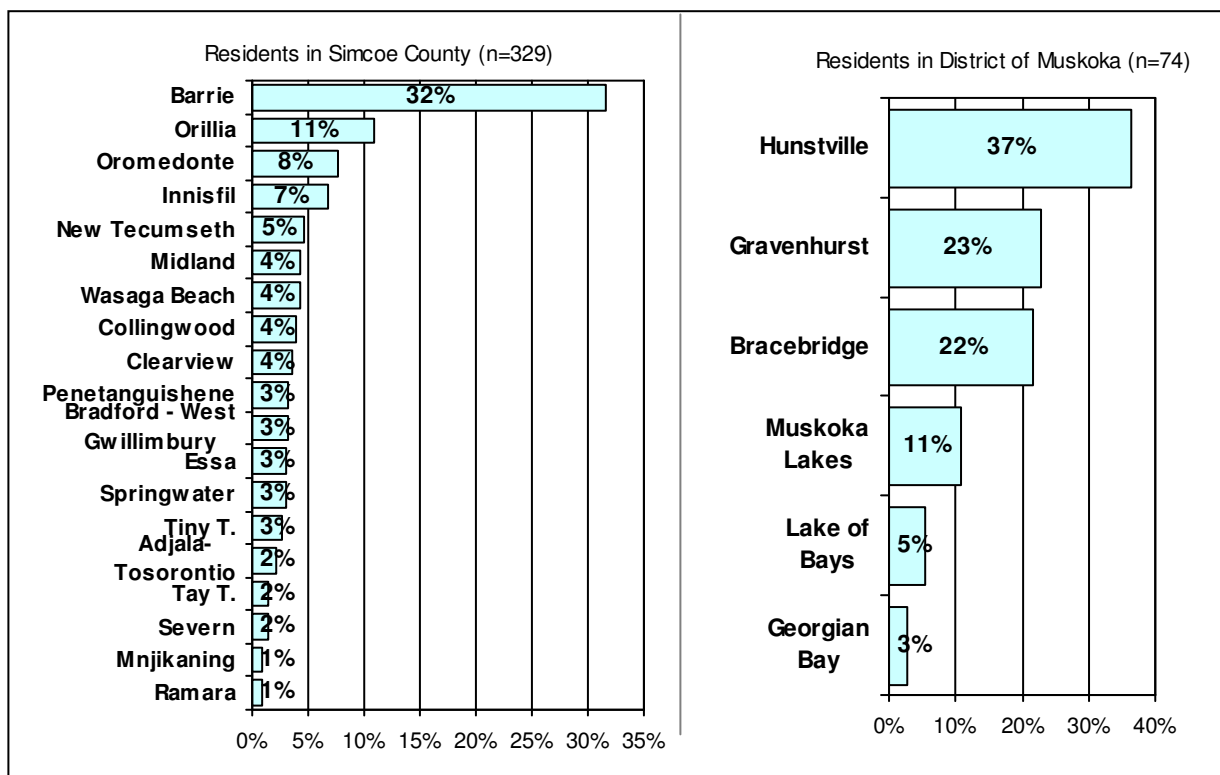
A. Respondent Demographic Information

1. Geographical Distribution of Respondents

Survey participants were from every township and municipality in Simcoe County and the District of Muskoka as seen in Figure 1. Of the 403 respondents, 329 (82%) were residents of Simcoe County, and 74 (18%) were residents of District of Muskoka. This ratio is fairly representative of the population numbers from the 2006 Census, where Simcoe County is 88% of the catchment of the health unit and District of Muskoka is 12%. Because of low sample size for each city or township, no comparisons or analysis is made at these levels. Analysis was done at the health unit level: Simcoe Muskoka.

[Figure 1](#) shows the distribution of respondents as residents within townships and municipalities in both Simcoe County and District of Muskoka.

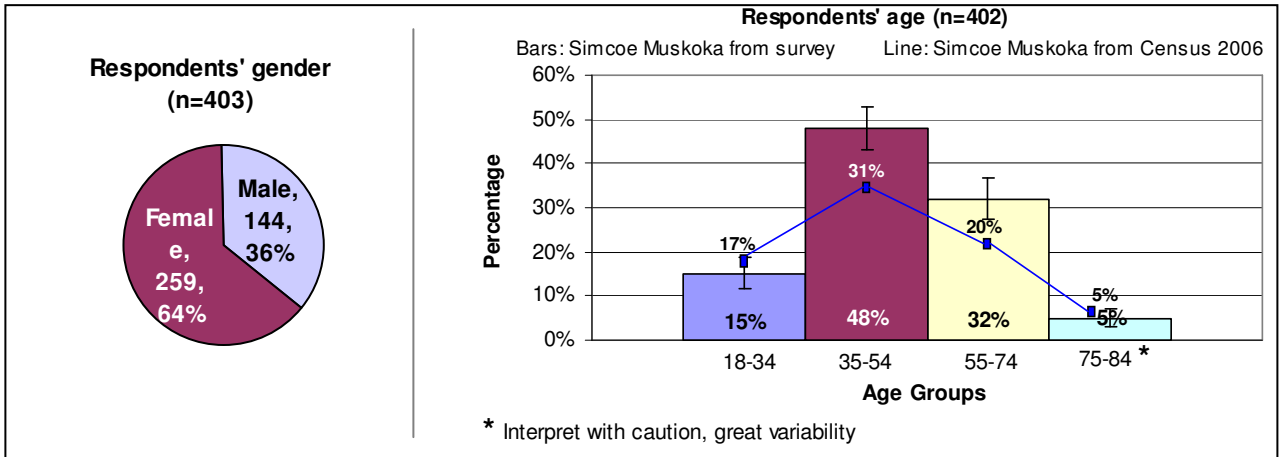
Figure 1: Distribution of Simcoe Muskoka respondents per township and municipality



2. Age and Gender Distribution of Respondents

There were more female respondents (64%) in the survey sample than are seen in the Simcoe Muskoka gender demographics (male = 49% and female = 51%). The majority of respondents (80%) are between the ages of 35 and 74. However, this survey had more respondents belonging to this age bracket than reflected in the 2006 Census. The shape of the graph in [Figure 2](#) simulates the one of the 2006 Census.

Figure 2 Distribution of respondents' gender and age

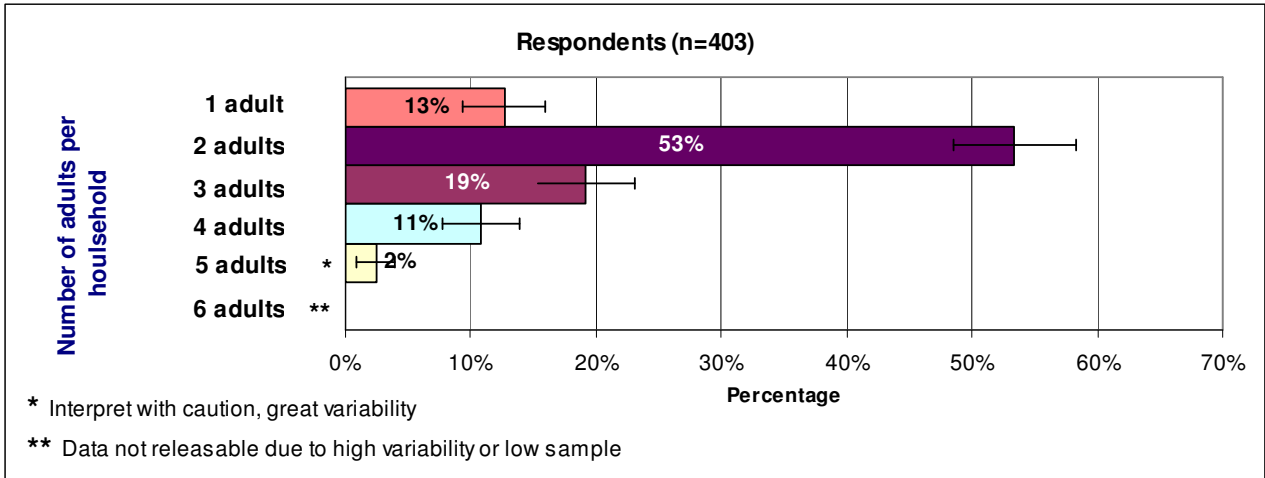


3. Proportion of Adults per Household

More than half of respondents (53%) live in their household with another adult. [Figure 3](#) shows the distribution of adults per household. This is the variable used to weigh the survey responses when analyzing the data to ensure that every adult in each household surveyed had an equal chance of being interviewed.

Over a third of respondents (40%) live with children (younger than 18) in their households. According to data from the 2006 Census, this proportion under-represents the population of Simcoe Muskoka; 2006 Census data shows that 80% of the Simcoe Muskoka households have children under 19.

Figure 3 Proportion of adults per household

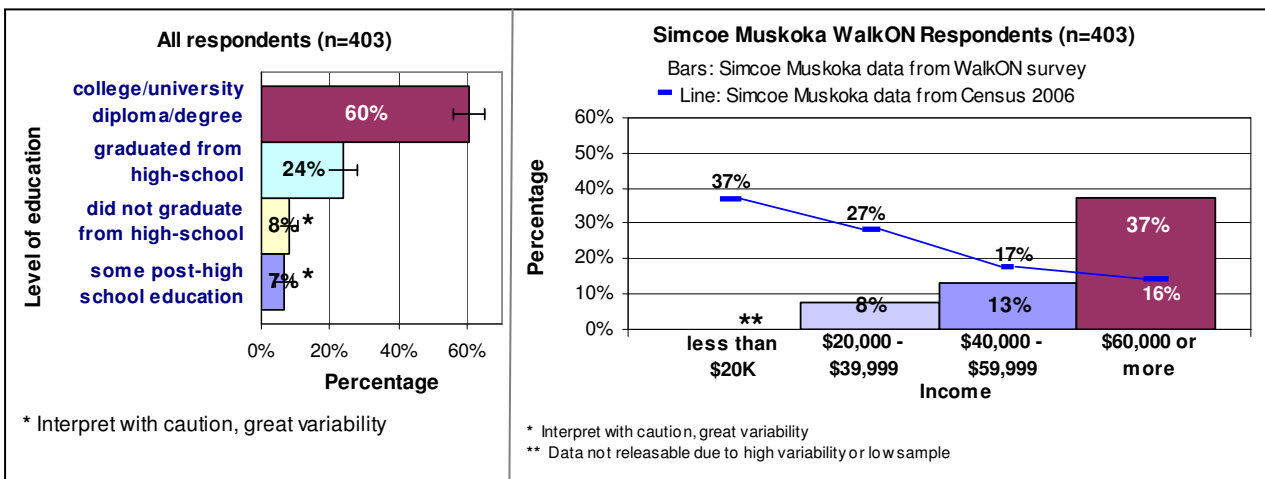


4. Level of Education and Income of respondents

The vast majority of respondents (91%) have at least high school education (college/university diploma/degree, or some post-high school education, or graduated from high school). This proportion is higher than the one reported in the 2006 Census for Simcoe Muskoka where 80% of residents have at least high school education. [Figure 4](#) shows the proportions of education among respondents of the **walkON** survey.

Among the survey respondents, few households (8%) earned between \$20,000 and \$39,999 in 2006. Over 37% of households made more than \$60,000 in 2006. The income figures of the households participating in this survey did not reflect Simcoe Muskoka's information based on the 2006 Census, which shows opposite proportions, as shown on the graph in [Figure 4](#).

Figure 4 Education and level of income of respondents

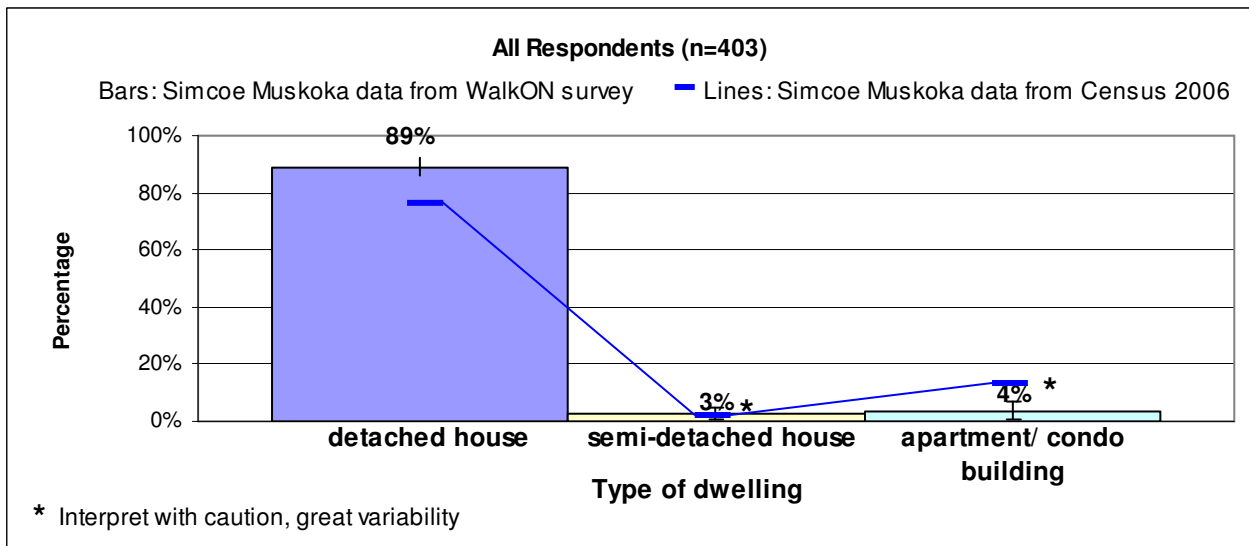


B. Where Respondents Lived – Dwelling Type and Location Type

1. Type of Dwelling

The majority of respondents (89%) live in a detached house as compared to the 2006 Census data which reflects that just over three-quarters of the residents in Simcoe Muskoka (76%) live in detached houses, 4% live in semi-detached and 15% live in an apartment/condo building. Over 2% of respondents reported to live in other types of dwellings, such as “retirement/nursing homes”, “mobile home”, “detached home with an apartment on top”, and “modular home” among others. [Figure 5](#) shows the comparison between the type of dwellings reported in the *walkON* survey and the 2006 Census.

Figure 5 Comparison between types of dwellings reported in the WalkON survey and Census 2006



2. Location Description

Respondents were asked information about their neighbourhoods. According to location, neighbourhoods were classified as ‘located in the downtown centre or core of a city or town’, ‘in a city or town, but not in the downtown centre or core’, and ‘outside of a city or town, including in the countryside’. Respondents also had the option of answering ‘not sure’ and ‘refused’. To those who responded *living outside of a city or town*, a second question was asked to identify the type of neighbourhood they lived in: ‘on a farm’, ‘in a hamlet or small village’, ‘in a residential estate home’ or ‘other’.

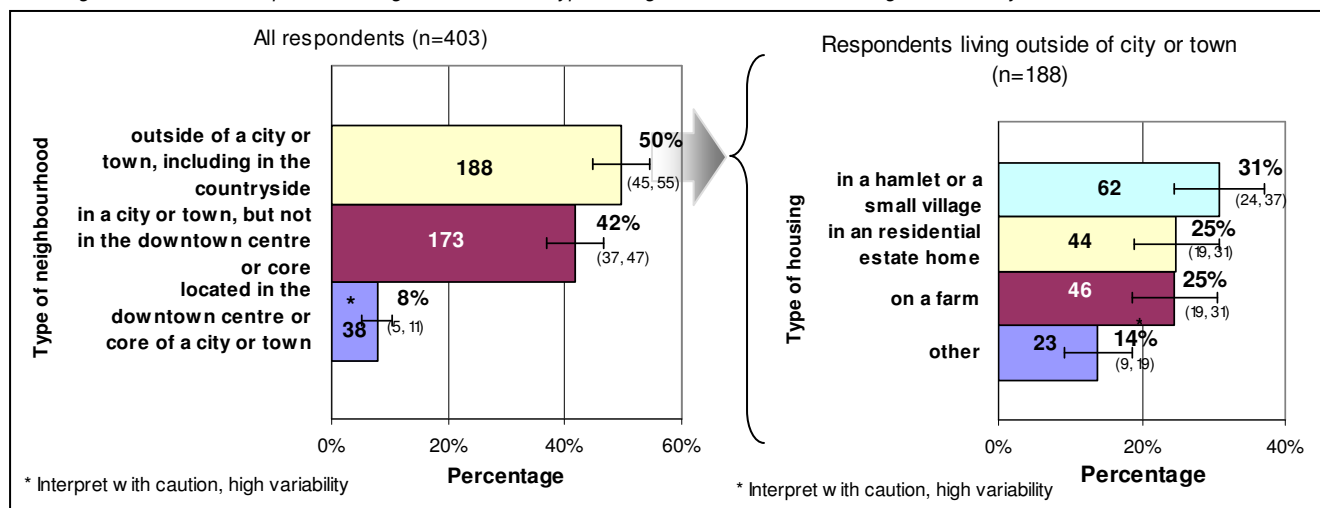
Half (50%) of Simcoe Muskoka respondents lived in a city or town. Among the city/town dwellers, 8% lived in downtown centre or core of a city or town, and 42% live in a city or town, but not in downtown centre or core.

The other half of Simcoe Muskoka respondents (50%) lived outside of a city or town. Among the respondents living outside a city or town, one third (31%) lived in a hamlet or small village, one quarter (25%) lived on a farm and another quarter (25%) lived in a residential

estate home. The remaining 14% of these respondents identified their neighbourhood as “other”. There were no specifics asked about the ‘other’ category.

[Figure 6](#) shows the distribution of locations of respondents’ neighbourhood

Figure 6 Location of respondents’ neighbourhoods and type of neighbourhoods for those living outside a city or town

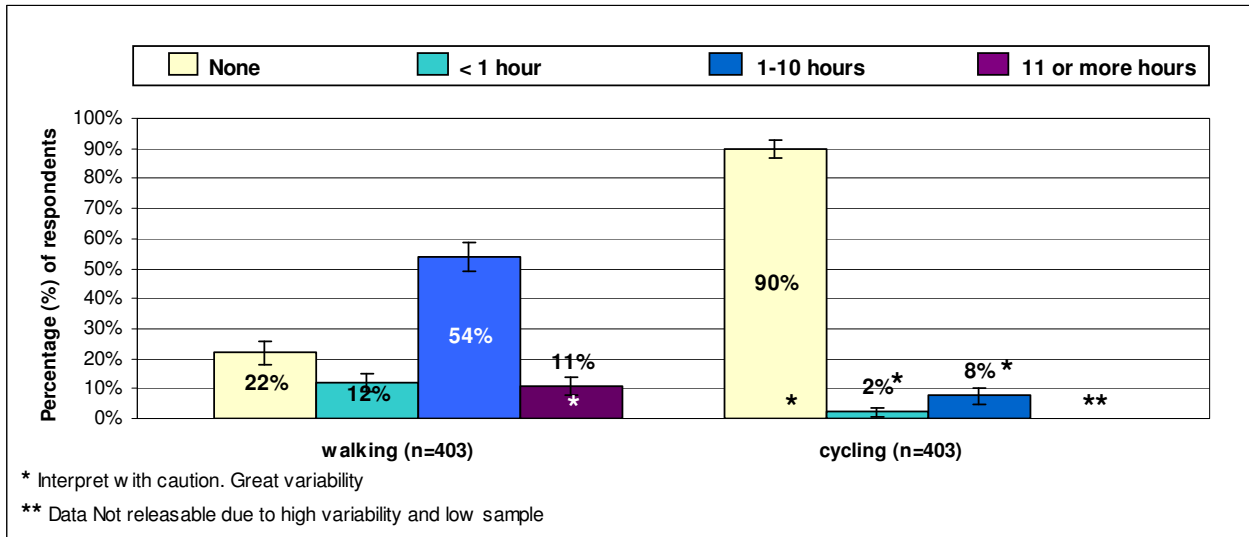


C. Level of Respondent’s Physical Activity

Questions about physical activity were asked in two different sections of the survey. The next two paragraphs deal with those physical activity questions asked at the beginning of the survey. Utilitarian physical activity was the focus of the first set of physical activity questions although it was not explicitly identified as such. Respondents were asked ‘in a typical week in the past 3 months, how many hours did you usually spend walking to work or to school or while doing errands?’ The second question used the same wording inquiring about the number of hours spent cycling. Respondents had the following choices for a typical week: none, less than 1 hour, from 1-5 hours, from 6-10 hours, 11- 20 hours, more than 20 hours, don’t know and refused.

Of the respondents that walked to work, school, or to do errands in a typical week, 12% walked for less than 1 hour, 54% walked for 1-10 hours, and 11% walked for more than 10 hours. Almost one quarter of respondents (22%) did not walk to work, school, or to do errands at all. A vast majority of survey respondents (90%) did not cycle to work, school, or to do errands at all. The information for cycling was very low on representation (high in variability) as there were so few respondents that cycled to work, school, or to do errands; therefore caution is recommended where data was released. [Figure 7](#) shows the responses for walking/cycling for utilitarian reasons in a typical week.

Figure 7 Number of hours respondents usually spent walking or cycling to work, to school or while doing errands (utilitarian reasons)



The second set of questions about physical activity was asked towards the end of the survey. Unlike the previous questions, respondents were asked the number of days they were “physically active for a total of 60 minutes or more per day, over the past seven days” and a second similar question but in a typical week. Interviewers specified that “*physical activities may include playing sports, jogging, dancing, yoga and lifting weights, as well as walking, cycling or in-line skating within their neighbourhood*”. Based on this description, these questions were meant to relate to recreational activities and not to utilitarian activities.

In general, the number of days of physical activity of a typical week varied widely among respondents. Since most government and health organizations recommend being physically active for 3-4 days a week, the number of days were grouped to get a better sense of any trends: 0 days (non active), 1-4 days (active) and 5-7 days (very active).

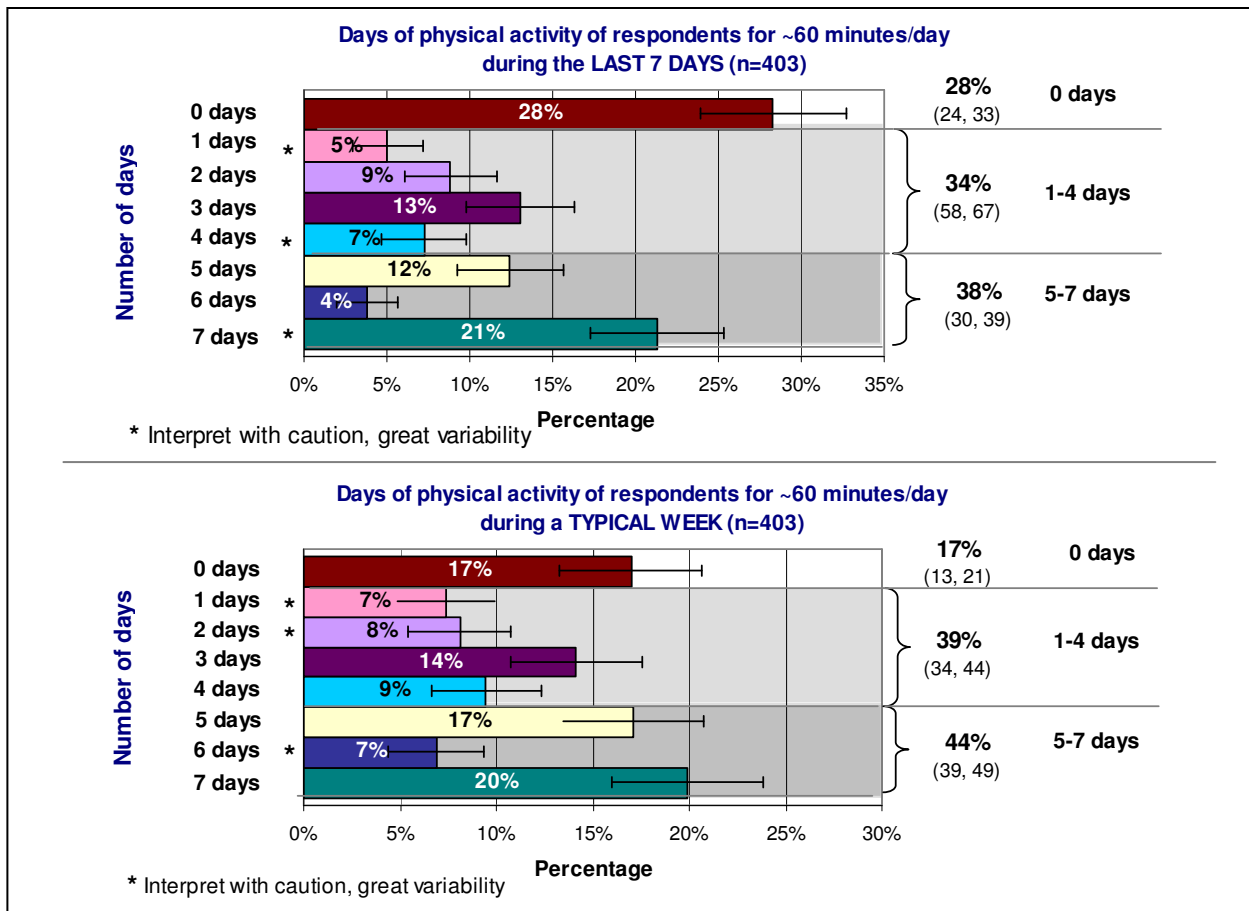
During the previous seven days to the survey, almost one third of respondents (28%) were not active at all. Thirty-four per cent (34%) were active one to four days of the week and 38% were active five to seven days of the week.

When respondents were asked to describe their activity in a typical week, only 17% of respondents indicated they were not physically active. Thirty-nine per cent (39%) were active one to four days of a typical week and 44% were active five to seven days of a typical week.

Overall, survey respondents indicated they did less physical activity in the seven days prior to the survey than the typical week. Slightly fewer respondents (34%) were physically active 1-4 days during the last seven days before the survey than those that were physically active the same number of days (39%) a typical week. Similarly, 38% of respondents were physically active in the past seven days previous to the survey as compared to 44% of the respondents were physically active 5-7 days during a typical week.

Figure 8 shows the comparison of physical activity of respondents during the last 7 days and a typical week.

Figure 8: Days of physical activity of respondents during the past 7 days prior to the survey and during a typical week



Relationship between education and physical activity during a typical week

Some published literature has indicated that education level is linked to the amount of physical activity done at the population level with an increased likelihood of being more physically active with increasing educational attainment. This relationship was explored with the *walkON* Survey data but was **not statistically significant** for either utilitarian or recreational physical activity.

Relationship between importance of living within a walking/cycling distance of work and respondents' physical activity

The importance given to living within a walking or cycling distance to work was compared to the number of hours that respondents spent walking or cycling for utilitarian reasons. Importance was rated by combining *very important* and *somewhat important* for **important** and *not very important* and *not at all important* for **not important**.

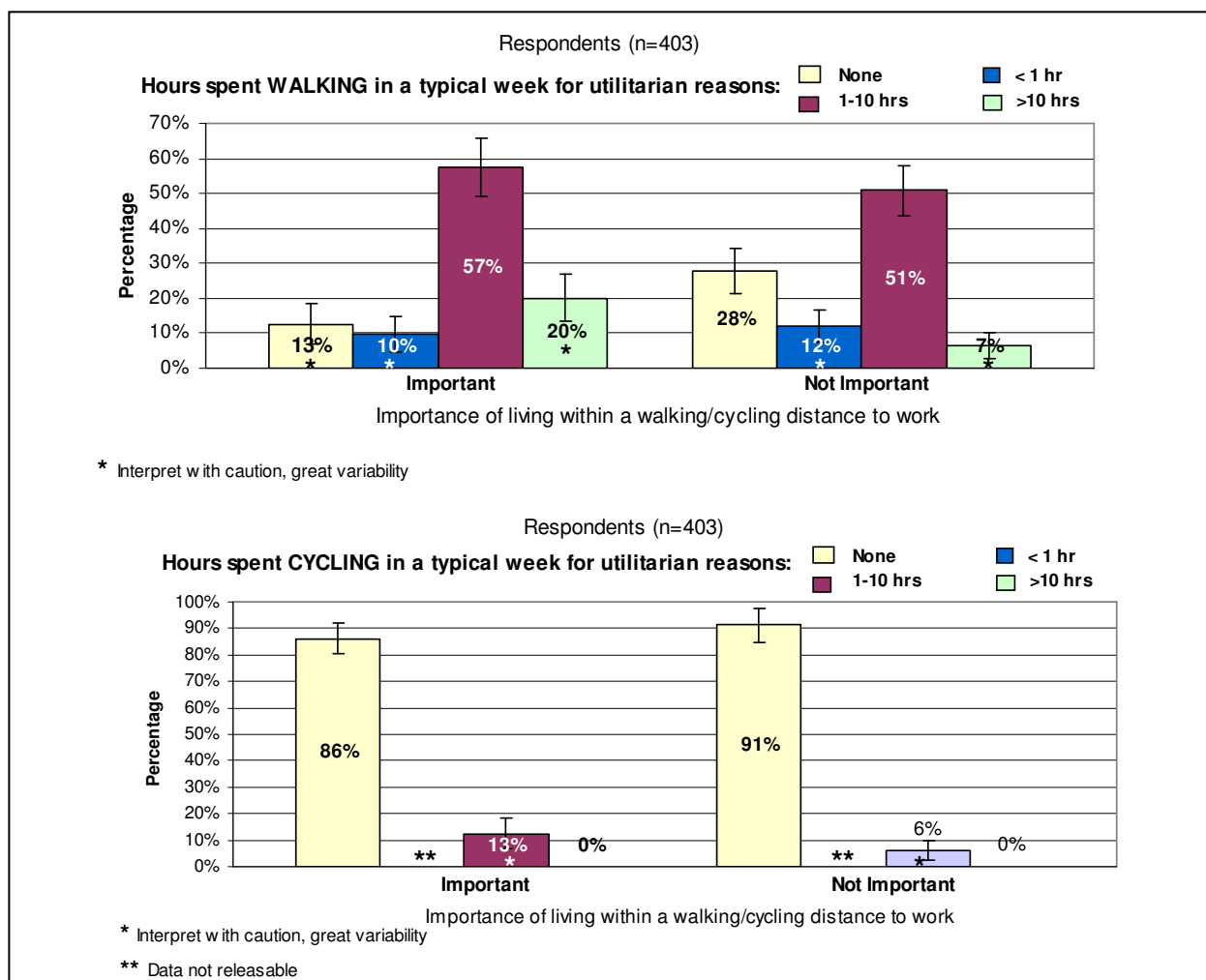
The relationship between walking for utilitarian reasons and the importance given to living within walking/cycling distance to work is statistically significant ($p < .05$).

Seventy-seven per cent (77%) of respondents who walk more than 1 hour to work/school/errands identified that it was important to live within walking/cycling distance to work whereas 58% of respondents who walk more than 1 hour to work/school/errands identified that it was not important to live within walking/cycling distance to work. Among respondents who walked for more than 10 hours in a typical week for utilitarian reasons, 20% indicated that it was important to live within a walking/cycling distance to work, compared to 7% of respondents who indicated it was not important. Among respondents who walked 1-10 hours in a typical week for utilitarian reasons, similar proportions of respondents indicated it was important (57%) or not important (51%) to live within a walking/cycling distance to work. However, among respondents that do not walk at all for utilitarian reasons, more (28%) indicated it was not important to live within a walking/cycling distance to work, compared to those who found it was important (13%).

The relationship between cycling for utilitarian reasons and the importance given to living within walking/cycling distance to work is not statistically significant ($p < .05$). Among the group of survey respondents who identified it was important to live within a walking/cycling distance to work and number of hours spent walking or cycling, 13% of them cycled between 1-10 hours per week for utilitarian reasons whereas 86% of them did not cycle for utilitarian reasons. Among the group of survey respondents who identified it was not important to live within a walking/cycling distance to work and number of hours spent walking or cycling, 6% of them cycled between 1-10 hours per week for utilitarian reasons whereas 91% of them did not cycle for utilitarian reasons.

[Figure 9](#) shows the relationships between the importance given to living within a walking/cycling distance to work and the number of hours spent walking or cycling in a typical week for utilitarian reasons.

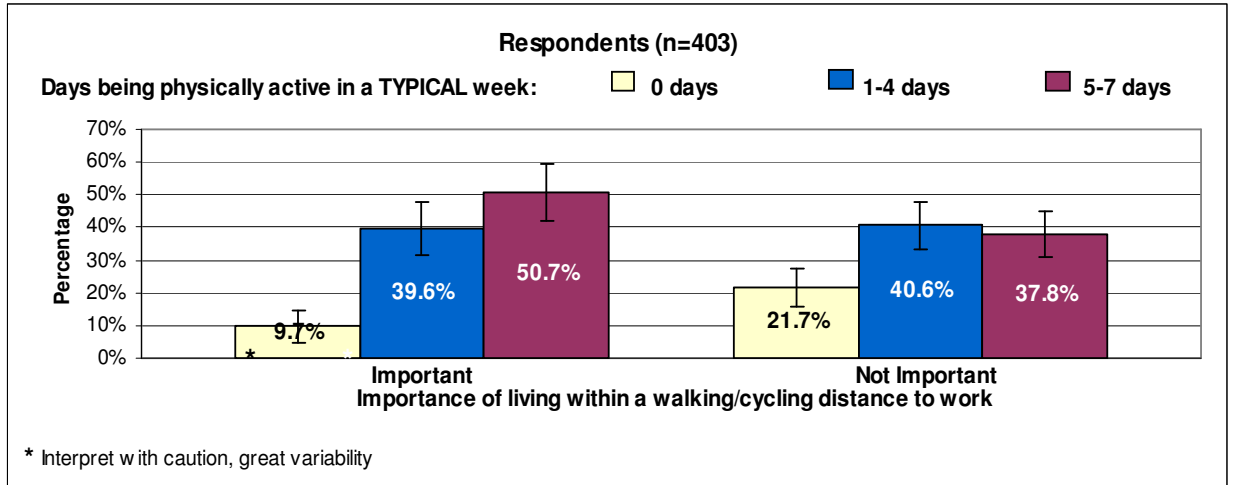
Figure 9 Relationships between importance given to living within a walking/cycling distance to work and number of hours spent walking or cycling in a typical week for utilitarian reasons



There was no direct relationship between the number of days respondents were physically active for recreational reasons (such as playing sports, jogging, dancing, yoga and lifting weights, as well as walking, cycling or in-line skating within their neighbourhood) during a typical week and the importance they give to living within a walking/cycling distance to work.

More respondents (51%) who were active for 5-7 days per week thought it was important to live within a walking/cycling distance to work than those who found it not important (38%). Among respondents who were active 1-4 days in a typical week, similar proportions identified it was important or it was not important living within a walking/cycling distance to work (40% and 41%, respectively). On the other hand, among those who were not active at all during a typical week, more respondents (22%) indicated that it was not important to live within a walking/cycling distance to work as compared to only 10% who found it to be important. [Figure 10](#) shows the proportions of number of days being physically active and the importance given to living within a walking/cycling distance to work.

Figure 10 Relationship between number of days being physically active and importance to living within walking/cycling distance to work



D. Attitudinal Importance Given to Attributes of Built Environment

The survey script for these questions began with “*whether you live in the city or the country, neighbourhoods have many qualities that make them attractive and enjoyable places to live.*” Survey participants were asked to answer “*questions are about how some of these qualities affect your decision about where to live. Suppose you were making a decision today about where to live...*”

All respondents were asked about the importance they give to nine (9) qualities that are thought to make neighbourhoods attractive and enjoyable, regardless of living in the city or the country. [Table 1](#) shows the list of qualities asked to be rated based on importance.

Table 1 List of qualities that make neighbourhoods attractive and enjoyable

(Suppose you were making a decision today about where to live, how important is it for you...)	
1.	being within a 5-10 minute walk of public transportation
2.	being within a 5-10 minute walk of schools
3.	being within a 5-10 minute walk of stores and restaurants
4.	being within walking or cycling distance of your place of work
5.	having sidewalks and pathways that are connected to each other so you can walk or cycle to places within your neighbourhood
6.	having a sense of belonging; such as knowing your neighbours
7.	living in a neighbourhood with little or no traffic
8.	having a big yard or garden
9.	being within a 5-10 minute walk of parks

The respondents had the following options to rate the importance of the qualities above: “*very important*”, “*somewhat important*”, “*not very important*”, and “*not all important*”.

The characteristics above were grouped in two categories: neighbourhood ‘physical’ characteristics and neighbourhood ‘emotional’ characteristics.

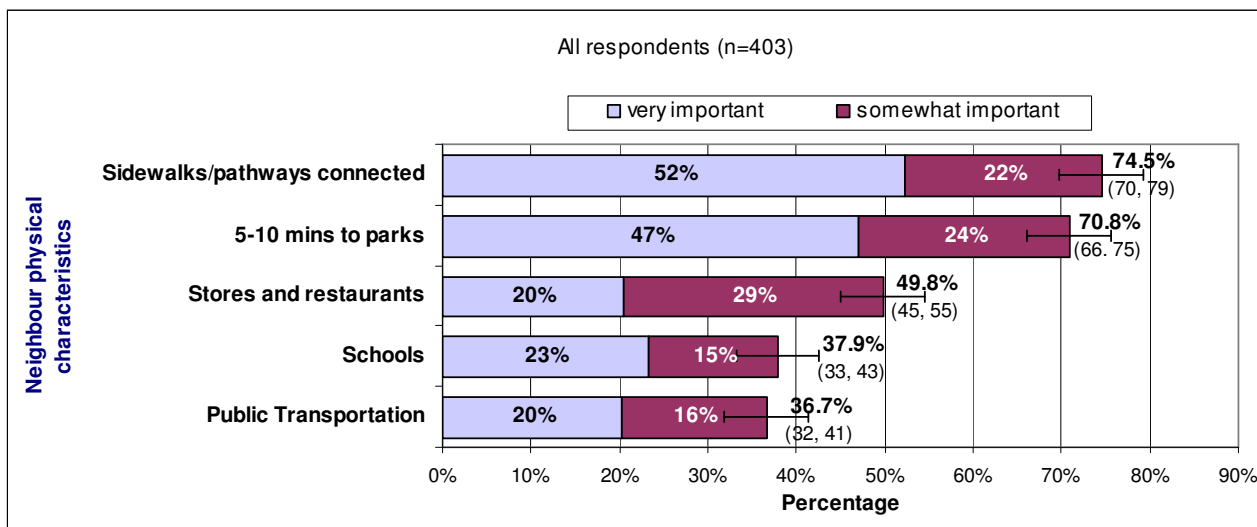
Category 1: Neighbourhood physical characteristics

This category includes:

1. being within a 5-10 minute walk of public transportation,
2. being within a 5-10 minute walk of schools,
3. being within a 5-10 minute walk of stores and restaurants,
4. having sidewalks and pathways that are connected to each other so you can walk or cycle to places within your neighbourhood, and
5. being within a 5-10 minute walk of parks.

Of all the respondents (403), 75% of respondents thought it was very important or somewhat important to live where sidewalks/pathways are connected; 71% of respondents thought it was very important or somewhat important to live within a 5-10 minute walk to parks. Half of all respondents (50%) thought it was very important or somewhat important to live close to stores and restaurants. Less than half of all respondents (38%) thought it was very important or somewhat important to live within a 5-10 minute walk from schools and public transportation (37%). [Figure 11](#) shows the proportions of importance given by respondents to the characteristics in category 1.

Figure 11 Proportions of importance given by respondents to neighbourhood physical characteristics



Category 2: Neighbourhood 'emotional' characteristics

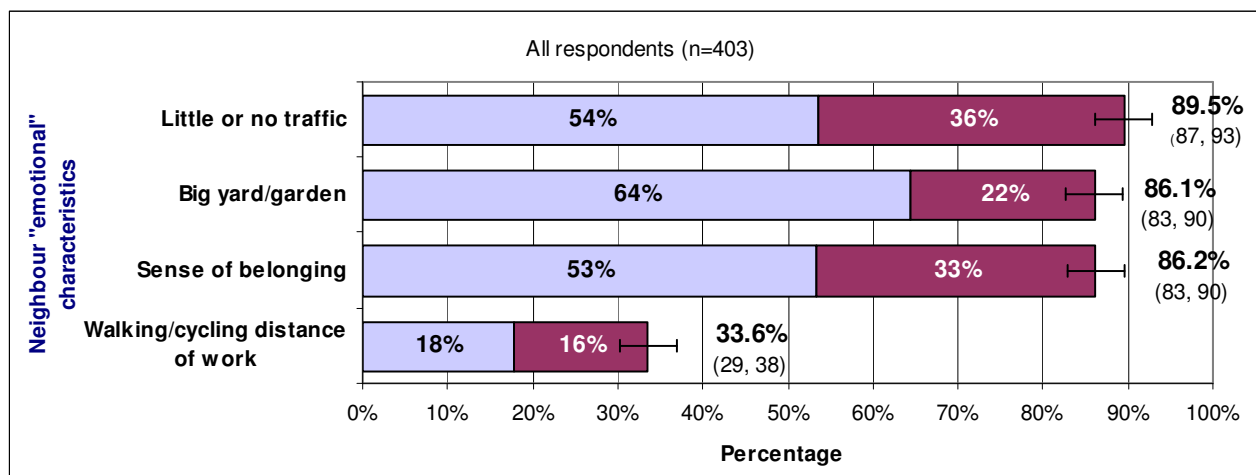
This category includes the following characteristics:

1. being within a walking or cycling distance of your place of work,
2. having a sense of belonging, such as knowing your neighbours,

3. living in a neighbourhood with little or no traffic, and
4. having a big yard or garden.

The vast majority of respondents thought that when deciding where to live it was very important or somewhat important to live in a neighbourhood with little or no traffic (90%), to have a big yard or garden (86%), and to have a sense of belonging (86%). Thirty-four percent (34%) of respondents thought it was very important or somewhat important to live within walking or cycling distance of their place of work. [Figure 10](#) shows the proportion of importance of these four qualities.

Figure 12 Importance given by respondents to neighbourhood 'emotional' characteristics



E. Knowledge of the term “walkable community”

Survey participants were asked whether they had ever read about or heard of the term “walkable community”. While almost one third (31% = 123 respondents) of all respondents had heard the term “walkable community”, 69% of the respondents had not heard or read it.

Among the respondents that had heard the term “walkable community”, more than half (53%) were physically active during a typical week. Meanwhile, among the respondents that had NOT heard the term “walkable community”, about the same proportion of respondents were physically active during 1-4 days (42%) or 5-7 days (39%) during a typical week. About the same proportion of respondents were not physically active at all during a typical week, regardless of having heard or not the term “walkable community” (16% and 18%, respectively). [Figure 13](#) shows the relationship between number of days of physical activity during a typical week and the awareness of the term “walkable community”.

Almost one third (31% = 123 respondents) of all respondents have heard the term “walkable community”. Of these respondents, more than half (54%) walked from 1-10 hours for utilitarian reasons in a typical week, and almost 22% did not walk at all in a typical week. Of

the same 123 respondents, a high percentage (91%) did not cycle at all in a typical week, for utilitarian reasons.

Numbers for the other times of cycling in a typical week were too low and no data could be released to compare with walking. The large proportion (91%) of respondents that did not cycle at all in a typical week infers that most respondents prefer to walk rather than cycling.

Since information about cycling was missing due to high coefficient of variation (high variability or low sample), another relationship test was performed using the number of days respondents reported to be physically active during a typical week.

Having heard the term “walkable community” was not a factor in being physically active in a typical week but it could influence the number of days of physical activity. The relationship between this factor and being physically active is statistically significant ($p < .05$).

Figure 13 Number of hours walking or cycling in a typical week for utilitarian reasons of respondents that have heard about Walkable Community

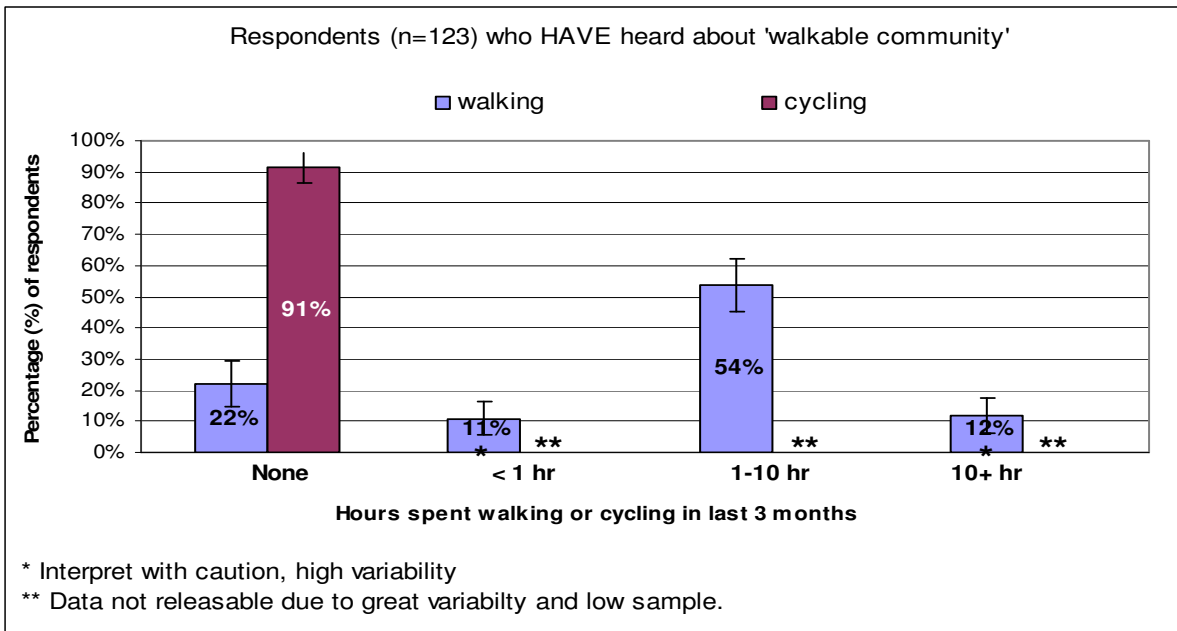
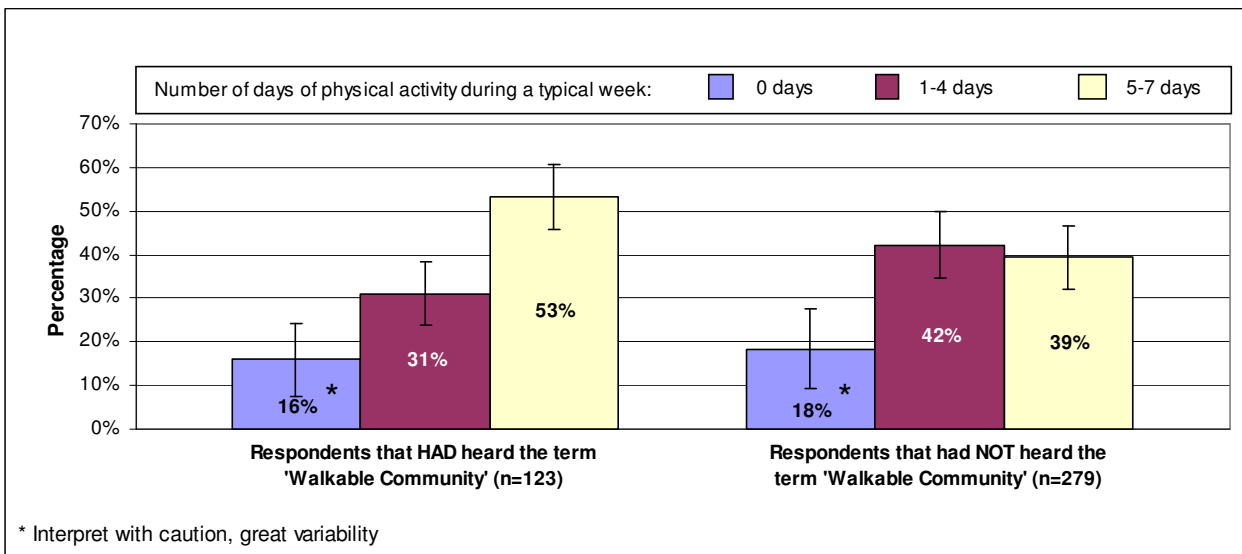


Figure 14 shows the relationship between number of days of physical activity during a typical week and the awareness of the term “walkable community”.

Figure 14 Relationship between the number of days respondents were physical active during a typical week and their awareness of the term 'Walkable community'



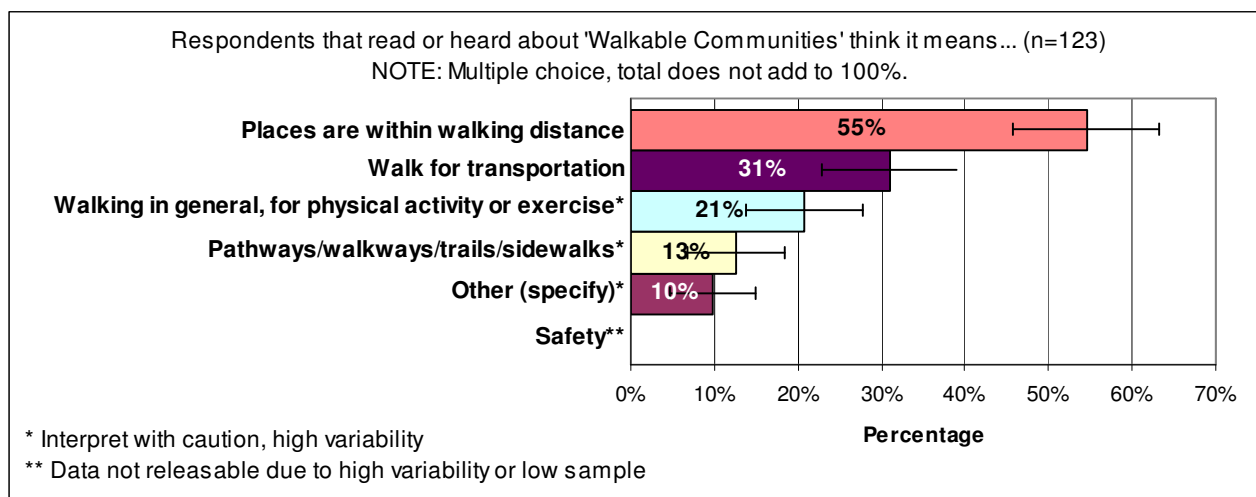
The 123 respondents (31% of all respondents) were asked ‘What does a “walkable community” mean to them?’ Or ‘what comes to mind when you hear “walkable community”?’ The following were the options respondents were offered:

- Places are within walking distance (shops, parks, restaurants, schools, etc.)
- Walking in general/walking for physical activity or exercise
- Safety (including safe communities/safety for pedestrians)
- Pathways/walkways/trails/sidewalks
- Walk instead of using a car/walking for transportation
- Other (specify)

The first two options listed above were accepted in defining the term “walkable community”. More than half (55%) of respondents who have heard the term “walkable communities” thought that this term referred to having ‘places within walking distance (shops, parks, restaurants, schools, etc.)’. Almost one third (31%) of the 123 that have heard this term thought that “walkable communities” referred to “walk instead of using car/walking for transportation”. Figure 15 shows the proportions of what respondents who had heard the

term ‘walkable communities’ thought it meant. (Note: percentages do not add up to 100%, since this was a multiple response question, and respondents could select more than one option).

Figure 15 What respondents who have heard the term “walkable communities” think it means



F. How Perception of Built Environment Attributes Affects Respondent’s Physical Activity

In section C of the questionnaire, survey participants were asked about *how much they thought their neighbourhood could affect their ability to be physically active*. Physical activity was stated to refer to “activities like walking, jogging, running, cycling, or in-line skating within their neighbourhood”. “Physically active” was defined as including “having a chance or opportunity to be active” for this part of the survey, and that they were not being asked “about their strength or ability”. The respondents had the following options: ‘a lot’, ‘a little’, and ‘not at all’.

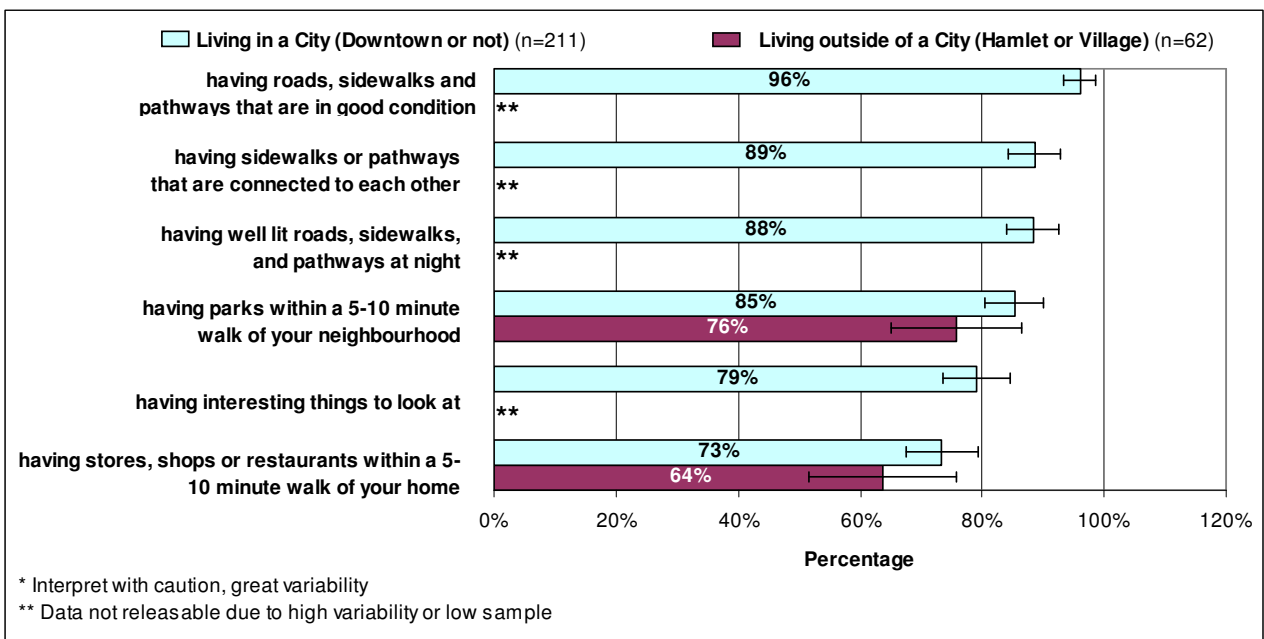
[Table 2](#) has the list of questions asked related to a specific attribute of the built environment affecting the respondent’s ability to be physically active.

Table 2 List of questions related to ability to be physically active.

Would you say that...a lot, a little, not at all, not sure?	
1.	... having stores, shops or restaurants within a 5-10 minute walk of your home <i>could affect your ability to be physically active</i>
2.	... having parks within a 5-10 minute walk or your neighbourhood
3.	... having sidewalks or pathways that are connected to each other so you can walk or cycle to places within your neighbourhood
4.	... having interesting things to look at
5.	...having roads, sidewalks and pathways that are in good condition, for example, free from bumps and holes
6.	...having well lit roads, sidewalks, and pathways at night

In general, seventy-three percent (73%) to ninety-six percent (96%) of respondents living in a city or town (downtown or not) found that the characteristics in [Table 2](#) would affect ‘a lot’ or ‘a little’ their ability to be physically active. Comparing these to the ones living outside a city or town (living in a hamlet or village), fewer respondents (64% to 76%) found that having stores and parks within a 5-10 minute walk from home, respectively, would affect ‘a lot’ or ‘a little’ their ability to be physically active. Information from respondents living outside a city or town (hamlet or village) related to other characteristics is not releasable. [Figure 16](#) shows these proportions.

Figure 16 Proportions of respondents finding that the characteristics below would affect ‘a lot’ or ‘a little’ their ability to be physically active



At least three-quarters of city/town residents (n=211) felt that having the amenities or infrastructure asked in the questions would impact their physical activity. Specifically,

- 96% of city/town residents felt having roads, sidewalks and pathways that are in good condition would affect their ability to be physically activity
- 89% of city/town residents felt having sidewalks or pathways that are connected to each other so they could walk or cycle to places within their neighbourhood would affect their ability to be physically activity
- 88% of city/town residents felt having well lit roads, sidewalks, and pathways at night would affect their ability to be physically activity
- 85% of city/town residents felt that having parks within a 5-10 minute walk of their neighbourhood would affect their ability to be physically activity

- 79% of city/town residents felt having interesting things to look at would affect their ability to be physically activity
- 73% of city/town residents felt having stores, shops or restaurants within a 5-10 minute walk of their home would affect their ability to be physically activity

For those who lived in a rural setting

- 76% of rural hamlet/village residents (n=62) felt that having parks within a 5-10 minute walk or their neighbourhood would affect their ability to be physically activity
- 64% of rural hamlet/village residents felt having stores, shops or restaurants within a 5-10 minute walk of their home would affect their ability to be physically activity

Comparing Built Environment Characteristics to Reported Physical Activity Level

The relationship between how much the characteristics in [Table 2](#) affect the respondents' ability to be physically active with their number of days a week they would be physically active in a typical week was analyzed.

[Table 2](#) has the list of questions asked related to physical ability.

Comparisons were made between respondents who lived in a city or town setting (i.e. more urban) and respondents who lived in a hamlet or village (i.e. more rural). Unfortunately, some data from the rural group was not releasable because of the low sample size. There was no statistical significance between being active for a range of days, either 1-4 days a week or 5-7 days a week, and respondents' estimation of the impact their neighbourhood has on their physical activity for both urban and rural dwellers.

G. Attitudes towards Changes to Make Locale More Walkable

Respondents were asked about their "opinion about changes that could be made to make it easier to be physically active in their neighbourhood". Five sets of questions were asked and each set had two parts. The first part of each set would be a yes or no question; the second part would be to identify the level of support those who answered "no" would give to an initiative. The level of support was identified as "strongly support", "somewhat support", "somewhat oppose", "strongly oppose", "not sure" and "refused".

1. Sidewalks

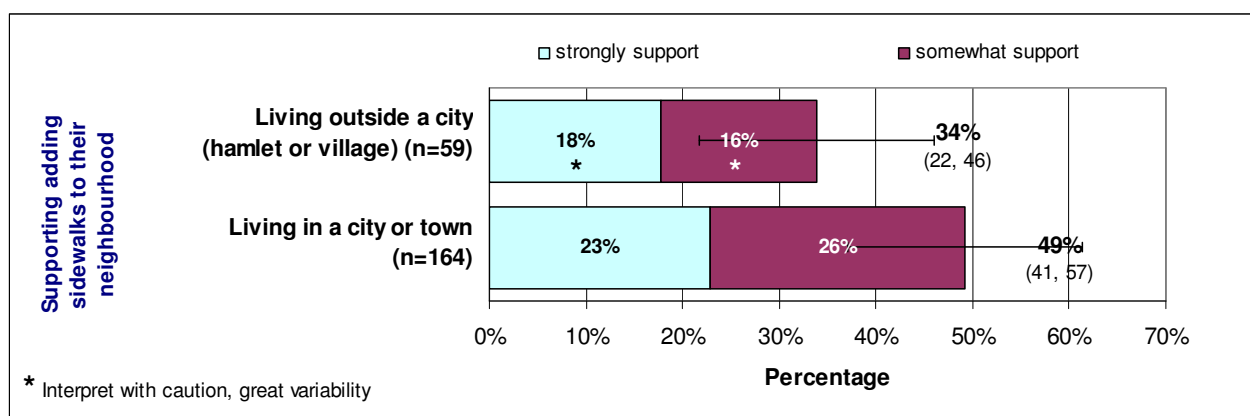
Survey participants were asked, "First, *do you have sidewalks on both sides of the streets in your neighbourhood?*" For those who answered no, the second question was asked the degree to which they would support, "... *adding sidewalks to both sides of the streets in your neighbourhood?*"

Almost 78% of respondents living in a city or town did not have sidewalks on both sides of the streets in their neighbourhood. (Information from respondents living outside the city (hamlet or village) was not releasable due to the small numbers). Of the respondents without sidewalks on both sides of the street in their neighbourhood, more respondents (49%) living

outside the city (hamlet or village) would support adding sidewalks on both sides of the street to their neighbourhood, compared to respondents living in a city or town (34%).

However, the difference between the opinions of respondents living outside a city or town (hamlet or village) and those living in a city or town was not statistically significant ($p > .05$). Therefore, there was no meaningful difference between the opinions of urban and rural dwellers on the issue of having sidewalks on both sides of the streets. Regardless of where respondents live, less than half of respondents without sidewalks on both sides of the street would support adding them to their neighbourhood. [Figure 17](#) shows the proportions.

Figure 17 Residents without sidewalks on all the streets in their neighbourhood support or oppose adding them neighbourhood.



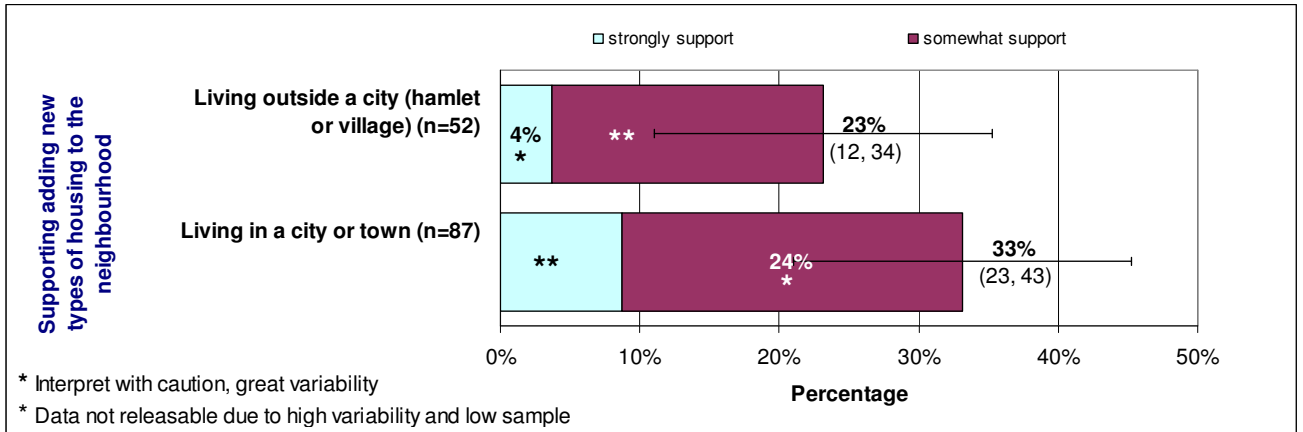
2. Variable types of housing

Survey participants were asked, “Do you have a variety of housing options such as: detached homes, townhouses, apartments and condominiums in your neighbourhood?” For those who answered no, a second question was asked the degree to which they would support, “... adding new types of housing to your neighbourhood?”

A majority of respondents (87%) living outside the city in a hamlet or village do not have a variety of housing options compared to those living in a city or town (43%). Of those respondents without a variety of housing options, more respondents living in a city or town (33%) would support adding new types of housing to their neighbourhood, compared to those living outside the city (hamlet or village) (23%). [Figure 18](#) shows the proportions.

The difference between the opinions of respondents living outside a city or town (hamlet or village) and those living in a city or town was not statistically significant ($p > .05$). This means that regardless of where respondents live, less than one third of respondents without different types of housing would support adding new ones to their neighbourhood.

Figure 18 Residents without a variety of housing options in their neighbourhood support or oppose adding them to their neighbourhood



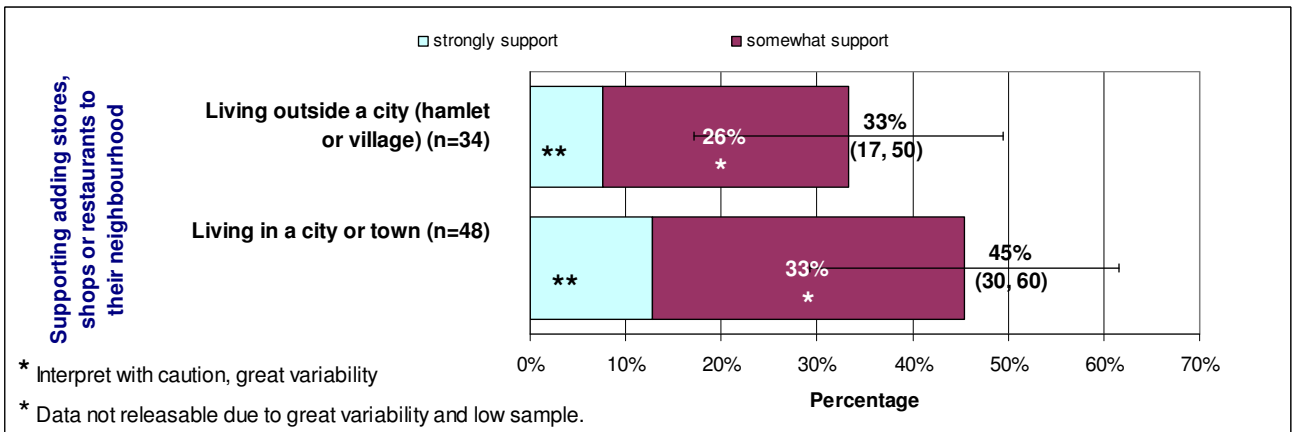
3. Stores, shops or restaurants

Survey participants were asked the question, “Do you have stores, shops or restaurants within a 5-10 minute walk of your neighbourhood?” For those who answered no, a second question was asked about the degree to which they would support, “... adding stores, shops or restaurants to your neighbourhood?”

More respondents living in a city or town (79%) have stores, shops or restaurants within a 5-10 minute walk of their neighbourhood, compared to 47% of respondents living outside the city (hamlet or village). Of those who do not have stores, shops or restaurants within a 5-10 minute walk, more respondents (45%) living in a city or town would support adding stores, shops or restaurants, compared to those living outside a city or town (33%). [Figure 19](#) shows the proportions.

The difference between the opinions of respondents living outside a city or town (hamlet or village) and those living in a city or town was not statistically significant ($p > .05$). This means that regardless of where respondents live, less than half of respondents without different stores, shops or restaurants would support adding them to their neighbourhood.

Figure 19 Residents without stores, shops or restaurants within a 5-10 minute walk support or oppose adding them to their neighbourhood



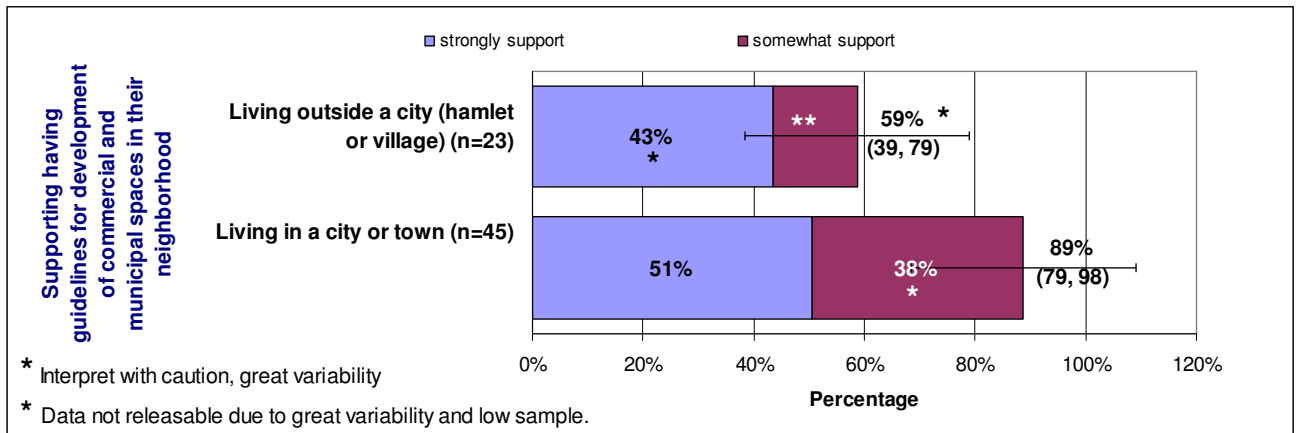
4. Design to Fit with Character of Existing Neighbourhood

Survey participants were asked the question, “Are businesses, stores, shops, city/town owned spaces and parks designed to fit with the overall look and design or character of your neighbourhood?” For those who answered no, a second question was asked the degree to which they would support “...having guidelines for the development of commercial and municipal spaces in your neighbourhood?”

More respondents living in a city (73%) live in a neighbourhood where the businesses, stores, shops, city or town owned spaces and parks are designed to fit the overall look and design of the neighbourhood, compared to 59% of respondents living outside the city (hamlet or village). Of those respondents that live in areas where commercial structures do not fit with the overall look and design of the neighbourhood, most of the respondents living in a city or town (89%) would support having guidelines for development of commercial and municipal spaces; 59% of respondents living outside a city (hamlet or village) would support this.

Figure 20 shows the proportions.

Figure 20 Residents living in neighbourhoods where businesses, stores, shops, city or town owned spaces and parks do not fit with the overall look and design of the area



The difference between the opinions of respondents living outside a city or town (hamlet or village) and those living in a city or town was not statistically significant ($p > .05$). This means that regardless of where respondents live, about three quarters of respondents living in areas where businesses, stores, shops, city/town owned spaces and parks are designed to fit with the overall look and design of their neighbourhoods would support having guidelines for the development of commercial and municipal spaces.

5. Neighbourhood design

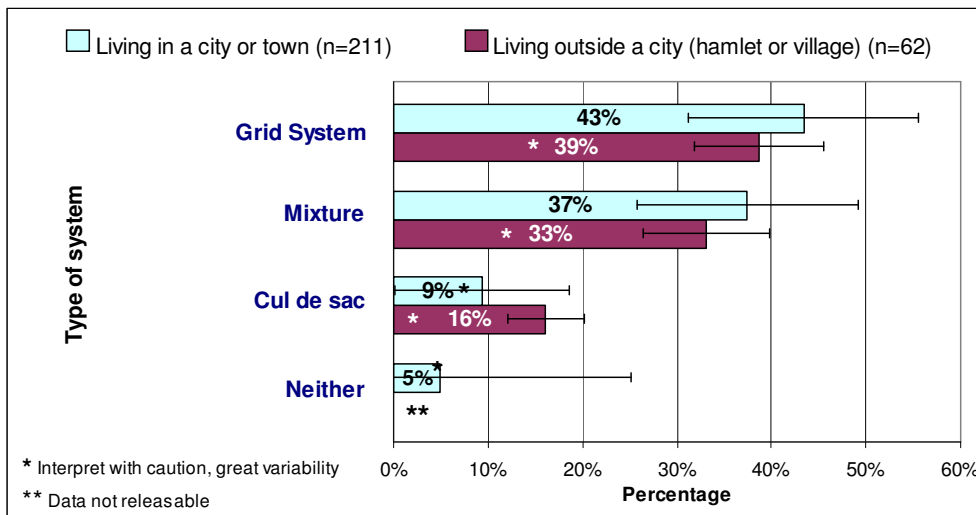
Survey participants were asked the question “Is your neighbourhood built on a grid or a cul de sac system, or a mixture (grid and cul de sac), or neither?” For those who answered “cul de sac system or mixture (grid and cul de sac),”, a second question asked the degree to which they would support “creating sidewalks or pathways to connect the streets in your neighbourhood more directly to one another?”

Respondents were given a general explanation of what constituted a grid system and a cul de sac system. “A grid system refers to a set of streets that cross one another, while a cul

de sac system refers to a set of streets with intersections on one end and closed turning areas on the other end’.

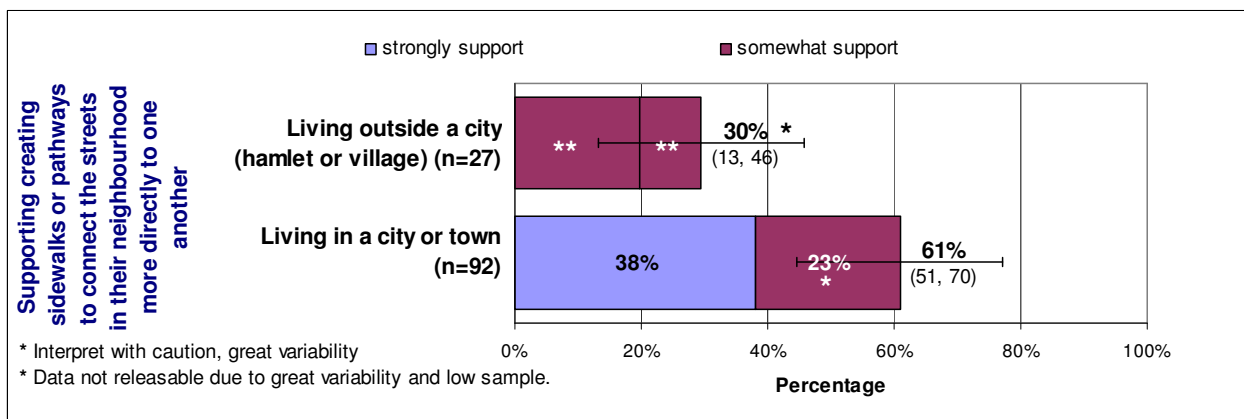
More respondents living in the city, lived in a neighbourhood designed as a grid system or a mixture (grid and cul de sac) at 43% and 37%, respectively, compared to respondents living outside the city (hamlet or village) where 39% and 33%, respectively. Fewer respondents living in the city live in a neighbourhood designed as a cul de sac (9%) compared to 16% that live outside the city (hamlet or village). [Figure 21](#) shows the proportions.

Figure 21 Type of neighbourhood residents living in a city or town and outside a city (hamlet or village) live in



More respondents living in a city (61%) would support creating sidewalks or pathways to connect streets, compared to 30% of those living outside the city. [Figure 22](#) shows the proportions.

Figure 22 Residents living in a cul de sac or mixture systems in a city or town or outside a city (hamlet or village) support or oppose creating sidewalks or pathways



The difference between the opinions of respondents living in cul de sac or mixture (grid and cul de sac) systems, outside a city or town (hamlet or village) and in a city or town, is not

statistically significant ($p > .05$). This means that regardless of where respondents live, between half and two thirds of respondents living in cul de sac or mixture systems would support creating sidewalks or pathways to connect the streets in their neighbourhood more directly to one another.

H. Barriers for Residents living outside a city or town (in a farm or residential estate)

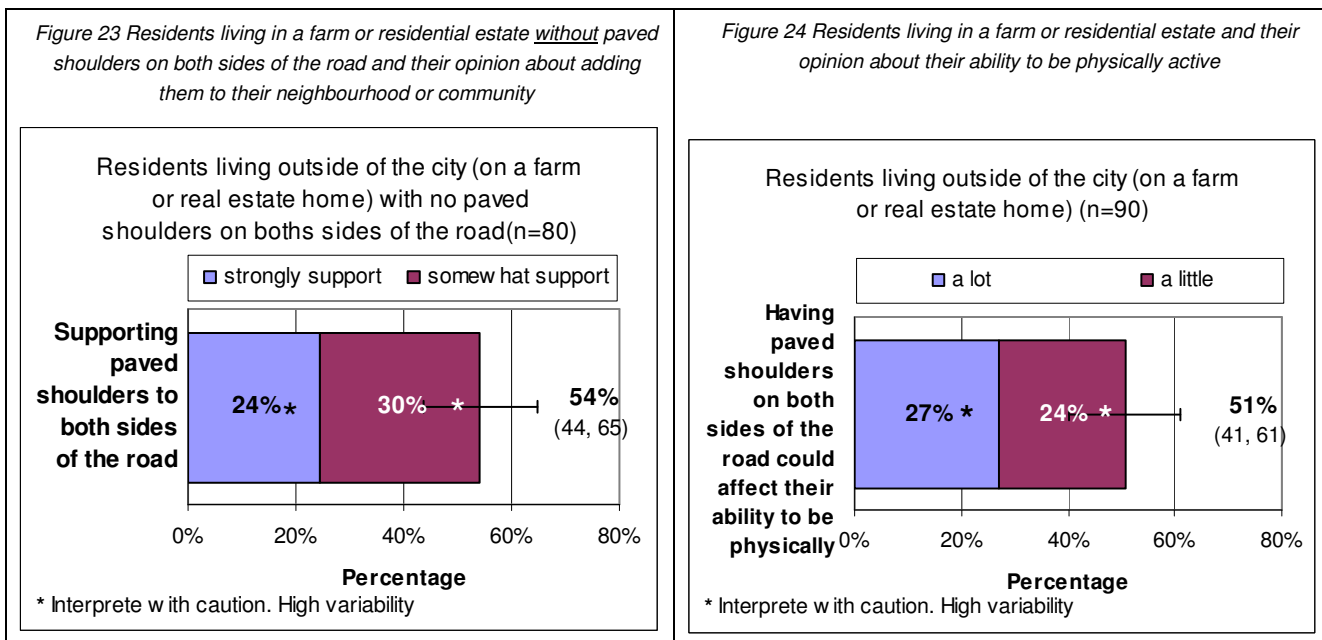
This section had unique questions asked to respondents living on a farm or residential estate and therefore could not be compared to any other group of respondents. Survey participants were asked about their “*opinion about the roads and pathways in their neighbourhood or community*”. Four sets of questions were asked; each set had two parts. The first part of each set would be a ‘yes’ or ‘no’ question asking if they had a physical characteristic (paved shoulders and trails and pathways) in their neighbourhood; among those who answered no to having the specific physical characteristic, the second part asked the level of support the survey participant would give to improving the physical characteristic. The level of support was identified as ‘*strongly support*’, ‘*somewhat support*’, ‘*somewhat oppose*’, and ‘*strongly oppose*’.

1. Paved shoulders

Survey participants were asked the question, “*Do you have paved shoulders on both sides of the road in your neighbourhood or community?*” For those who answered no, a second question was asked the degree to which they would support “*adding paved shoulders to both sides of the road?*”

The vast majority (89%) of respondents do not have paved shoulders on both sides of the road in their neighbourhood or community (interpret with caution, great variability). Over half of these (54%) would support adding paved shoulders to both sides of the road (See [Figure 22](#)).

Over half of respondents (51%) living in a farm or residential estate consider that having paved shoulders on both sides of the road could affect their ability to be physically active ‘a lot’ or ‘a little’. (See [Figure 23](#)).



2. Trails and pathways

Survey participants were asked the question, “Do you have trails or pathways within a 5-10 minute walking or cycling distance of your home?” For those who answered no, a second question was asked the degree to which they would support “adding trails or pathways to your neighbourhood or community?”

Over one third (35%) of respondents do not have trails or pathways within 5-10 minute walking or cycling distance from their home. Almost three quarters of these (75%) would support adding trails or pathways to their neighbourhood or community. (See [Figure 24](#)).

Over two-thirds (68%) of respondents found that having trails or pathways within a 5-10 minute walking or cycling could affect a lot or a little their ability to be physically active at all. (See [Figure 25](#)).

Figure 25 Residents living in a farm or residential estate *without* trails or pathways within a 5-10 minute walking/cycling distance from home and their opinion about adding trails or pathways to their neighbourhood or community

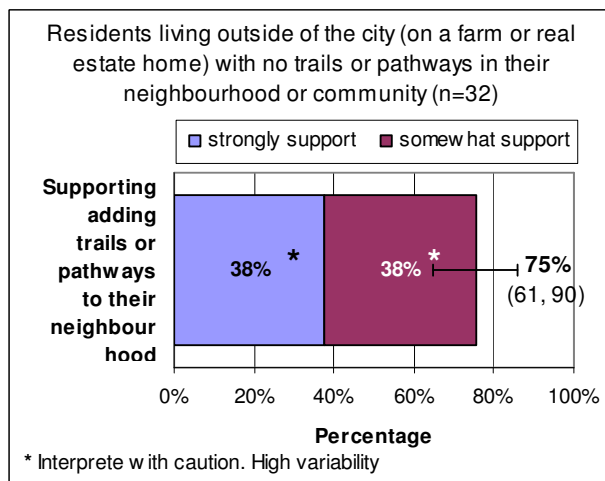
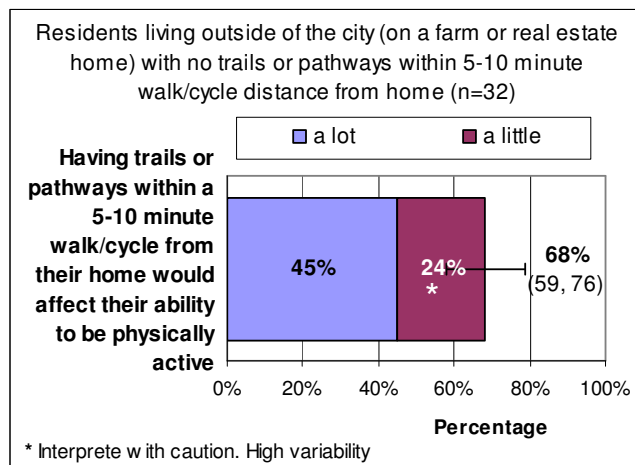


Figure 26 Residents living in a farm or residential estate and their opinion about their ability to be physically active if they had trails or pathways within a 5-10 minute walking/cycling distance from home



IV. DISCUSSION

A. Respondent Demographic Information

In general, the sample size represented the population of Simcoe Muskoka overall. Survey respondents came from every township and municipality and reflected the age distribution patterns of Simcoe Muskoka. These demographic questions can be found in section F of the questionnaire.

However, the sample was over-representative of females, residents of the District of Muskoka, people who live in detached houses, those who have at least a high school education, and those who live in a city or town. The survey sample was under-representative of Simcoe Muskoka households with children under 19, households with total incomes under \$60,000 per year, and those who lived in rural settings outside of a city or town. Nevertheless, information from this survey can give us a general idea of the opinions of residents in Simcoe Muskoka as distinct from other health unit jurisdictions in Ontario.

The decision to secure completed interviews from 400 residents from Simcoe Muskoka was based on the minimum number of respondents needed to be statistically significant and on the budgeted amount of money available for this survey from the Diabetes Project funding. The SMDHU Unit could afford to pay for a sample size of 400 and no more. However had the money been available to increase the sample size to 500 or 600, which was done in some of the health unit jurisdictions in the Central West Heart Health partnership, there would have been more data that was releasable in questions which a specific sub-set of respondent characteristic was captured. It is one thing to get general data from a survey but it is important to ensure that the sample size is large enough to capture and reflect the answers of smaller sub-populations within the sample. Nevertheless, it was important that this survey was conducted even with the budgetary restraints involved as it was an important learning exercise for all involved and did yield substantive results. It is recommended that budgeted monies allotted to surveys reflect conducting the survey with a sufficient the sample size beyond the minimum number needed to be statistically significant in order to capture data on sub-populations.

B. Where Respondents Lived – Dwelling Type and Location Type

Half of the survey respondents lived in a city or town setting and half lived in a rural setting. This even split contrasts with the 2006 Census which indicated that 40% of Simcoe Muskoka residents lived in an urban setting and 60% lived in a rural setting. Among survey respondents who were the city/town dwellers, eight per cent (8%) lived in the downtown centre or core of a city or town, and 42% lived in a city or town, but not in the downtown centre or core. The other half of Simcoe Muskoka respondents (50%) lived in a rural setting outside of a city or town. Among these survey respondents, one third (31%) lived in a hamlet or small village, one quarter (25%) lived on a farm and another quarter (25%) lived in a residential estate home. The remaining 14% of these respondents identified their neighbourhood as “other”.

A vast majority (89%) of survey respondents lived in a detached house as compared to the Census 2006 data which reflects that just over three-quarters of the residents in Simcoe Muskoka (76%) live in detached houses, 3.5% of residents lived in semi-detached housing, and 14.6% lived in apartment or condominium buildings. The percentages of survey respondents who lived in semi-detached and apartment or condominium buildings were too small to release the data but certainly apartment or condominium residents were under-represented. Question F7 in the questionnaire was the source of this information.

C. Level of Respondents' Physical Activity

Questions about physical activity were asked in two different sections of the survey. After determining the appropriate adult to speak with and the city or township the respondent lived in, the first set of questions asked about the amount of physical activity done in the form of walking to work or to school or while doing errands. Respondents were asked *'in a typical week in the past 3 months, how many hours did you usually spend walking to work or to school or while doing errands?'* The second question used the same wording regarding the number of hours spent *cycling*. Based on this description, these questions were meant to relate to **utilitarian** activities and not to recreational activities.

The survey data reflected that more respondents walked than cycled to work or school or to do errands in a typical week. More than half of respondents walked for 1-10 hours per week for these same reasons. Almost one-quarter of respondents (22%) did not walk to work, school, or to do errands; a vast majority (90%) did not cycle to work, school, or to do errands.

The second set of questions about physical activity was asked towards the end of the survey. Unlike the previous questions, respondents were asked ***the number of days*** they were *"physically active for a total of 60 minutes or more per day, over the past 7 days"* and a second similar question but in *"a typical week"*. Interviewers specified that "physical activities may include *playing sports, jogging, dancing, yoga and lifting weights, as well as walking, cycling or in-line skating within their neighbourhood*". Based on this description, these questions were meant to relate to **recreational** activities and not to utilitarian activities.

Eighty-three per cent (83%) of respondents were physically active during a typical week in a manner typified by playing sports, jogging, dancing, yoga, and lifting weights as well as walking, cycling or in-line skating within their neighbourhood and in the last seven (7) days prior to the survey; 72% of respondents did similar type of physical activity. Nevertheless, fewer than half of these respondents (44%) were active 5 days or more in a typical week and only 38% of respondents did so in the last seven (7) days prior to the survey. Finally, the survey data did show that the level of education of respondents did not influence the amount of physical activity engaged in by the survey respondents.

These results should be taken with some caution due to flaws in the questionnaire which may have lead to confusion among the survey respondents as to what exactly was being asked of them due to the lack of specific differentiation between the types of physical activity in the questions.

Developing a good survey requires both clear questions and appropriate ordering of the queries. This survey presented challenges in the area of determining the amount of physical

activity done by the respondents with both vague questions and poor ordering of the queries. The impact of these clarity and ordering concerns is significant; these concerns could have affected the accuracy of the data which is the likelihood of being near to the true value and the reliability of the data which is the extent to which the same result is achieved when a measure is repeatedly applied to the same group.

It is difficult to ascertain whether or not the first set of questions regarding the number of hours spent “*walking to work or to school or while doing errands*” and “*cycling to work or to school or while doing errands*” actually reflected the number of hours of utilitarian physical activity/active transportation done by the respondents **or** if survey respondents thought that the listing of getting to work, school, and doing errands were just examples meant to capture examples of various types of physical activity done that could be done in a day. This question was meant to isolate the “*utilitarian physical activity*” or “*active transportation*” type physical activity. But the question did not make it clear that the respondent was not to include recreational physical activity in her/his answer nor did the question use phrases to highlight the specific aspect of physical activity the response was meant to reflect.

As well, we cannot know whether or not using the phrase “*we are asking about all your physical activities, which may include playing sports, jogging, dancing, yoga, and lifting weights, as well as walking, cycling or in-line skating within your neighbourhood*” used in the second group of physical activity questions actually captured just the number of hours of recreational physical activity done by the survey respondents as itemized in the details of the question **or** if respondents truly did include all their physical activities, as the questions state initially.

Without calling attention to the differentiation between examples of utilitarian physical activity/active transportation and recreational physical activity, both sets of physical activity questions may have been interpreted by some respondents as examples of physical activity in general rather than specific phrases reflecting actual utilitarian physical activity or recreational physical activity. Some respondents may have assumed that the question and the examples provided were representative of physical activity in general. As a result, the answers to the first set of questions may not be reflective of the actual amount of utilitarian physical activity done by the survey participants and the answers to the second set of questions may not be reflective of the actual amount of recreational physical activity done.

It is recommended that the health unit be involved in the development of the questionnaire used for surveys it engages in and that if that is not possible, it requests a rationale behind the wording and ordering of the questions used in the questionnaire.

D. Attitudinal Importance Given to Components of a Desirable Neighbourhood

The survey asked about qualities people value in neighbourhoods where they might consider living. As the purchase of a house is the most significant investment most people make, these questions were meant to ascertain what neighbourhood characteristics are most important to people.

The survey script began with “(w)hether you live in the city or the country, neighbourhoods have many qualities that make them attractive and enjoyable places to live”. Survey

participants were told that “(t)he questions are about how some of these qualities affect your **decision about where to live** with the phrase “Suppose you were making a decision today about where to live...” followed by the specific question.

The neighbourhood characteristics that were valued by survey respondents for attractiveness and enjoyability are listed below in order of importance:

- 90% valued living in a neighbourhood with little or no traffic,
- 86% valued having a big yard or garden,
- 86% valued having a sense of belonging, such as knowing your neighbours,
- 75% valued having sidewalks and pathways that are connected to each other so they can walk or cycle to places within their neighbourhood
- 71% valued being within a 5-10 minute walk of parks.
- 50% valued being within a 5-10 minute walk of stores and restaurants,
- 38% valued being within a 5-10 minute walk of schools,
- 37% valued being within a 5-10 minute walk of public transportation,
- 34% valued being within a walking or cycling distance of your place of work.

Survey respondents that already walk more than 1 hour to work or to school or for errands found it important (very and somewhat) to live within walking/cycling distance to work. We can infer that respondents who walked *for utilitarian reasons* and found it important to live within walking/cycling distance influence one another based on the statistical significance between both factors. The same cannot be said about cycling to work or to school or for errands. There was **no statistical significance** between the number of days respondents were physically active *for recreational purposes* during a typical week, and the importance they give to living within a walking/cycling distance to work.

Land use planning issues feature prominently in the top neighbourhood characteristics choices. Status, success, and the ability to provide for one’s family are displayed with the location of the house, the size of the yard, and the distance it is away from vehicular traffic. The vast majority of respondents thought that when deciding where to live it was very important or somewhat important to live in a neighbourhood with little or no traffic (90%), having a sense of belonging (86%) and having a big yard or garden (86%), which was the item that ranked highest in the designation as “very important” (64%).

Public health needs to challenge people’s assumptions of what makes an optimal neighbourhood. The public need to know the societal impact of having a big yard and living in a neighbourhood with little or no traffic. These characteristics have been achieved through building fewer houses on bigger pieces of land and routing traffic around rather than through housing developments. More land is consumed when roads are planned around living areas so it adds to the total amount of land used for residences. These planning practices were done with the assumptions that everyone had a car, fossil fuel was plentiful and affordable,

and the land supply for housing was inexhaustible. However, that scenario of yesteryear is no longer reflecting the current realities. Car ownership, maintenance, and fuelling are expensive and not everyone has access to a car at all times. Dwindling amounts of limited fossil fuel resources now exist at ever-increasing prices and there is a limit to how much people can afford to pay. The population is aging and not everyone can drive in their later years. Land usage often means choosing between using available land for agriculture and local food production or for housing. The status quo needs to be reframed so that the negative impacts of what society traditionally values in a neighbourhood – a big yard or garden and little or no traffic can be clearly understood.

Public health agencies have a role in communicating different expectations for optimal neighbourhood characteristics on the basis of long-term health and sustainability. We know that people can change what they value. Among people who are walking to work, school, or to do errands, 77% of them indicated that the proximity of housing to other locations and infrastructure was an important consideration in where they chose to live. In this new mindset, optimal neighbourhoods have sidewalks and are connected to other neighbourhoods, parks, stores, schools, and public transportation within walking or cycling distance. Currently, these items are in the lowest ranking of neighbourhood characteristics of importance with just under 50% of survey respondents valuing being within a 5-10 minute walk of stores and restaurants (50%), 38% valuing being 5-10 minute walk from schools, public transportation (37%), and walking/cycling distance (34%) from work. People need to be able to visualize what the new desirable neighbourhood characteristics would look like through social marketing campaigns.

The public also needs to know that these favourable characteristics can be obtained through retrofitting of existing neighbourhoods, seeking out neighbourhoods that already have these new characteristics, or by purchasing homes in developments which exemplify these connected characteristics with specific infrastructure, such as schools, parks, and sidewalks and in close proximity to stores, services and workplaces. For those who are limited in their ability to choose a neighbourhood by monetary constraints, it is necessary that connectivity and infrastructure be a universal characteristic and not solely available to those who can afford it.

The one challenge with the type of questioning used was that it was based on a hypothetical premise whereby the respondent was reflecting on making a decision about where to live the day the survey was conducted using characteristics that made a neighbourhood attractive and enjoyable. However, it would have been better to have asked the respondent about what criteria they used in selecting their current residence and then had a subsequent question about what qualities they would look for in the next home they bought. The unspoken component of this hypothetical premise that needs to be determined is the compromises made in order to get a place as attractive as possible to live in that is as affordable as it can be within one's current financial status. Nevertheless, the question as it was worded did highlight the significant characteristics that people value for their most significant financial investment.

E. Awareness and Understanding of the Term “walkable community”

Sixty-nine per cent (69%) of survey respondents had not heard or read the term “walkable community” whereas 31% of respondents had heard it. More than half of respondents who had heard the term “walkable community” thought that this term referred to having ‘*places within walking distance (shops, parks, restaurants, schools, etc.)*’ and almost one third thought that “walkable community” referred to ‘*walk(ing) instead of using car/walking for transportation*’. Both of these definitions accurately reflected the concept of “walkable communities”.

Of the 31% of survey respondents who had heard the term “walkable community”, more than half of them (53%) were physically active for more days (i.e. five to seven days) in a typical week compared to those people (39%) who had not heard the term. The relationship between knowing about walkable communities and being physically active for 5-7 days of the week is statistically significant. This means that having heard the term ‘walkable community’ could not be a factor in being physically active in a typical week but it could influence the number of days of physical activity. About the same proportion of respondents were not physically active at all during a typical week, regardless of having heard or not the term “walkable community” (16% and 18%, respectively).

This result highlights the importance of awareness-raising and knowledge building initiatives. The Health Unit would be well advised to engage in a communication campaign that increased awareness and knowledge about the term “walkable communities”. While the direct measure of effectiveness in these types of campaigns is increased awareness and increased knowledge of the term, another measure of effectiveness is a positive change in the behaviour associated with the term. People who had heard or read about the term “walkable community” were more likely to be physically active for between 5 to 7 days than those who had never heard nor read the term. Awareness and knowledge are the first steps to behaviour change. It would seem that communication campaigns done elsewhere about walkable communities have been effective in conveying the concept to Simcoe Muskoka respondents because of the 31% who had heard the term, 92% of them had the correct idea of what it meant.

The people who are impacted at the behavioural level by an awareness and knowledge campaign are more likely to be those who are early adopters. According to Roger’s Diffusion of Innovations theory, for any new innovation or idea there are categories of adopters that provide a common language for innovation researchers. The first few people who connect with an idea are known as innovators (3%), the next group is known as early adopters (14%), and then the early majority group (34%) embraces the idea. As the idea is accepted, a group known as the late majority (34%) becomes engaged and finally the laggards (16%) bring up the rear and adopt the idea. Since 31% of the people have heard the term “walkable communities”, Simcoe Muskoka is almost at the point of having an early majority who has heard the concept. Nevertheless, 69% still need to be aware of the concept of walkable communities and an awareness-raising campaign would be warranted in order to see increased awareness and possible behaviour change.

F. How the Built Environment Impacts on Respondent's Physical Activity

A majority of survey respondents felt that their ability to be physically active was affected by their neighbourhood. The survey data highlighted respondents' estimation of their neighbourhood's impact on their ability to be physically active from questions in section C of the questionnaire. Among respondents living in a city or town, a predominant number felt their ability to be physically active was impacted by having the following:

- roads, sidewalks, and pathways that were in good condition (96%),
- sidewalks or pathways that were connected (89%),
- well lit roads, sidewalks, and pathways at night (88%),
- parks within a 5-10 minute walk from their neighbourhood (85%)
- interesting things to look at within a 5-10 minute walk (79%),
- stores, shops or restaurants within a 5-10 minute walk (73%).

Among respondents living in a rural hamlet or village, there was similar acknowledgement that components in their neighbourhood would affect their physical activity. Seventy-six per cent (76%) of hamlet and village dwellers felt that having parks within a 5-10 minute walk from their neighbourhood would impact their ability to be physically active and 64% felt that having stores, shops or restaurants within a 5-10 minute walk would impact their ability to be physically active. It is unfortunate that information from respondents living in hamlets or villages related to the other characteristics listed for the city or town dwellers was not releasable due to small sample size. What survey respondents felt about the neighbourhood characteristics and the number of days respondents were physically active was not statistically significant.

It would seem that among city and town dwellers in Simcoe Muskoka, the linkage between location of infrastructure and services near one's neighbourhood and increased physical activity is well understood and city and town dwellers do not have to be convinced that closer proximity to infrastructure and services would be of benefit to them. Among hamlet and village dwellers in the more rural areas of Simcoe Muskoka, this concept was understood, but not as widely as in the urban areas.

Since three-quarters of the city and town residents surveyed believed that their physically activity was impacted by their neighbourhood infrastructure and nearby services, an awareness campaign on this topic is not warranted. However, an initiative that causes them to evaluate their own neighbourhood for supportive infrastructure and nearby services and then giving them tools to advocate for changes to address these gaps would be useful for those people who were ready to take action. For those who are at the stage of noticing gaps and exploring their desire to do anything to address them, the neighbourhood evaluation exercise provides a topic for an initial discussion with a family member or neighbour about what is good about the neighbourhood and what could be improved. Sharing viewpoints from a variety of neighbourhood residents could be the first step towards action. The identification of a common problem and subsequent ideas about how to solve this common

problem may be of sufficient concern to enough people that individuals decide to do something to fix it.

The same type of evaluation for supportive infrastructure and nearby services may be of use among rural hamlet and village residents. However, it may be that those who live in rural hamlets and villages have different expectations with respect to having specific infrastructure and services close to them as compared to city and town dwellers. It would be helpful if a larger sample size was used in subsequent surveys to increase the likelihood that sufficient numbers of people would be in various sub-groups so that more data would be useable and differences between city/town residents and hamlet/village dwellers could be determined.

G. Attitudes Towards Changes to Improve Community Walkability

Respondents were asked their opinion regarding changes that could be made to make it easier to be physically active in their neighbourhood. The following changes were explored and are listed below in order of the highest degree of acceptance to the least accepted:

- designing buildings and other infrastructure that fit with the overall look or character of the neighbourhood (73% living in a city or town and 49% living in a hamlet or village),
- creating sidewalks or pathways to connect streets in the neighbourhood more directly (61% living in a city or town and 30% living in a hamlet or village),
- having stores, shops or restaurants within a 5-10 minute walk of your neighbourhood (45% living in a city or town and 33% living in a hamlet or village),
- having a variety of housing options (33% living in a city or town and 23% living in a hamlet or village), and
- putting sidewalks on both sides of the street (34% living in a city or town and 49% living in a hamlet or village).

1. Sidewalks on both sides of the street

Almost 78% of respondents living in a city or town did not have sidewalks on both sides of the streets in their neighbourhood. (Information from respondents living outside the city (hamlet or village) was not releasable due to the small numbers). This is not surprising as most developments built since the 1950's provide a sidewalk on only one side of the road, if at all.

Of the respondents without sidewalks on both sides of the street in their neighbourhood, more respondents (49%) living outside the city (hamlet or village) would support adding sidewalks on both sides of the street to their neighbourhood, compared to respondents living in a city or town (34%).

Given that under only one third of the respondents (31%) had heard the phrase "walkable community" and understand the concept, it is not surprising that support for this option is limited. The literature indicates that including sidewalks on both sides of the streets should

be done on a priority basis with the following order: transit routes, arterial streets, pedestrian collector streets, higher zoned streets, and finally local residential streets. Since sidewalks on both sides of the street in a residential area are the last priority, it does not make sense to introduce this as an initial change without putting it into the appropriate context of the priority it would be given. It would have been more useful if the questionnaire asked if participants had a sidewalk on one side of the road and, if the respondent did not have it, would s/he support the addition of a sidewalk on one side of the street. The answer to this type of question would be a better gauge of what currently exists and support existing for adding one sidewalk.

Putting sidewalks on both sides of the street would be a shift in the current values. The rights of pedestrians would be prioritized over the wishes of property owners. This type of change would likely be better received once a majority has bought into the concept and implementation of walkable communities is underway. When a change is proposed that usurps a fundamental value, resistance to change is that much higher.

2. Variety of Housing Options

A majority of respondents (87%) living outside the city in a hamlet or village do not have a variety of housing options such as detached homes, townhouses, apartments, and condominiums compared to those living in a city or town (43%). Of those respondents without a variety of housing options, more respondents living in a city or town (33%) would support adding new types of housing to their neighbourhood, compared to those living outside the city (hamlet or village) (23%).

It is not surprising that less than one third of respondents without different types of housing currently existing in their neighbourhood would support adding new types to their neighbourhood. A vast majority (89%) of survey respondents lived in a detached house as compared to the Census 2006 data which reflects that just over three-quarters of the residents in Simcoe Muskoka (76%) live in detached houses, 3.5% of residents lived in semi-detached housing, and 14.6% lived in apartment or condominium buildings. The voices of people who live in other types of housing were under-represented in this survey. However, proposing the addition of a variety of housing options is an attack on a value where the worth of a dwelling is based on the other structures and features around it. Many people may think that adding a mix of townhouses, apartments, and condominiums to an area with detached homes would decrease the value of the detached homes. Given that a home is the largest single asset that most people own, anything that would undermine its value could be perceived very negatively. This type of change would be best to propose when there was a significant majority buy-in to the concept and implementation of other elements of walkable communities had begun.

3. Adding stores, shops or restaurants within a 5 – 10 minute walk

The majority of respondents living in a city or town (79%) have stores, shops or restaurants within a 5 – 10 minute walk of their neighbourhood, compared to less than half of respondents living outside a city or town (hamlet or village) (47%). Of those who do not have

stores, shops or restaurants within a 5-10 minute walk, more respondents (45%) living in a city or town would support adding stores, shops or restaurants, compared to those living outside a city or town (33%). Since the difference between the opinions of respondents living outside a city or town (hamlet or village) and those living in a city or town was not statistically significant ($p > .05$), this means that regardless of where respondents live, less than half of respondents without different stores, shops or restaurants would support adding them to their neighbourhood.

The percentage of respondents (79%) who live within a city or a town who have stores, shops or restaurants within a 5 – 10 minute walk of their neighbourhood seems somewhat high. But if indeed that is the case, perhaps respondents did not feel additional stores, shops or restaurants would not be warranted. Additionally, it could be that people associate these services with more vehicle traffic. Since living in a neighbourhood with little or no traffic seems to be a strongly held value, anything that could increase traffic is not welcomed.

4. Design to Fit with Character of Existing Neighbourhood

Almost three quarters (73%) of respondents living in a city or town live in a neighbourhood where the *businesses, stores, shops, city or town owned spaces and parks are designed to fit the overall look and design of the neighbourhood*, compared to more than half (59%) of respondents living in a rural hamlet or village.

Of those respondents that live in areas where commercial structures do not fit with the overall look and design of the neighbourhood, most of the respondents living in a city or town (89%) would support having guidelines for development of commercial and municipal spaces; whereas 59% of respondents living outside a city (in a hamlet or village) would support this.

Hamlet and village residents may differ on the perceived need to have new buildings designed to fit in with the character of the existing neighbourhood. They already may see more diversity in building appearances in rural areas and are more accepting of a variety of designs as a reflection of the history of the village or hamlet. The prosperity of the village or hamlet would rise and fall over the years which would impact when a structure was built, for what purpose, and if the building was still being used for its original intent.

5. Connecting Streets in Neighbourhood More Directly

Forty-three per cent (43%) of respondents living in a city or town lived in a neighbourhood designed as a grid system or a mixture of grid and cul-de-sac systems (37%). Close to half (49%) of respondents living in a city or town and 46% of respondents in a rural hamlet or village lived in cul-de-sac system or a mixture of grid and cul-de-sac systems. Of these, more respondents living in a city or town (61%) would support creating sidewalks or pathways to connect streets, compared to 30% of those living outside the city or town in a village or hamlet. These percentages contrast with the finding from section B of the questionnaire that 75% of respondents valued having sidewalks and pathways that are connected to each other so you can walk or cycle to places within your neighbourhood, regardless of whether the respondent lived in urban or rural setting. Perhaps the way the questions were worded and the order in which they were asked caused the respondent to think about whether additional sidewalks or pathways would increase the connectedness of the areas around their own neighbourhood where as the wording and order of the question in section B allowed them to respond in a more hypothetical way.

More than half the respondents living in a city or town would support more sidewalks or pathways to increase the connections among streets. Perhaps the 30% level of respondent support among village and hamlet residents reflects that the settlement area is not that big in the first place and the probable connections already exist.

6. Respondents living outside a city or town (on a farm or residential estate home)

Additional questions were asked of respondents living on a farm or residential estate home, in order to determine what would make it easier for them to be physically active.

Of the vast majority (89%) of respondents living on farms and residential estate homes who do not have *paved shoulders* on both sides of the road in their neighbourhood or community; over half of them (54%) would support adding paved shoulders. Regardless of the pavement status of the shoulders, half of these respondents (51%) living outside a city or town considered that having paved shoulders could affect their ability to be physically active. It would be worthwhile to explore the types of activity that people would do on paved shoulders that they are not able to do currently.

More residents (65%) on farms and residential estate homes had access to trails or pathways within 5 – 10 minute walking or cycling distance from their home than those who did not (35%). Over one third of respondents (35%) do not have *trails or pathways within 5 – 10 minute walking or cycling distance* from their home; three quarters of them (75%) would support adding them to their neighbourhood or community. Regardless of the trail or pathway status, over two thirds of respondents (68%) living outside a city or town (on a farm or residential estate home) identified that having trails or pathways would affect their ability to be physically active.

The addition of trails or pathways was more preferred by survey respondents who lived on farms and residential estate homes over the addition of paved shoulders on the roads. This could be due to the fact that examples of trails and pathways in this setting already exist.

However, paved shoulders is not a common feature of rural roads and only half (54%) supported their addition. Perhaps those who did not support the addition of paved shoulders felt it would be too costly to consider over the vast network of rural roads or did not see themselves as being active on a paved shoulder while sharing the road with vehicles and farm equipment. Respondents living in a city or town would be more supportive to see any changes in the built structure of their neighbourhoods and communities than those living outside a city or town.

V. CONCLUSION

This survey captures a snapshot of participants' responses reflecting their own perceptions around their own physical activity levels and what impacts these levels. While the answers reflect the design of the questionnaire and their frame of mind at the time of the survey, at a basic level, the responses give us insight into what people in Simcoe Muskoka are thinking and doing with respect to how the built environment impacts their physical activity. Having discussed the various findings of the survey, this portion of the report provides commentary on the overall findings.

Changing core values through images of change

Most of the communities we live in are not walkable communities. Some walkable neighbourhoods exist but do not represent the bulk of growth in the residential market over the past 50 years. Most people do not experience a community where walking, biking, and other modes of human-powered activity are supported and encouraged in our daily living. Most of us cannot walk to do our banking, grocery shopping, or visiting of our family and friends. The current group of consumers who have bought homes and are buying housing in new developments and in existing settlement areas are the second generation of people who have been raised in cul-de-sacs and have been significantly influenced by the driving culture promoted since the 1950's. Status, success, and the ability to provide for one's family are displayed with the location of the house, the size of the yard, and the distance it is away from vehicular traffic. These values and beliefs are not regularly challenged nor countered with other values using realistic images of different types of communities. People are not necessarily doing much critical thinking about their environment because, for the most part, they have not known anything different. Often the types of housing in areas that are walkable are not affordable to single people and young families who are buying a residence for the first time.²²

The Health Unit would be well served by showing images of desirable neighbourhood characteristics of walkable communities (and other aspects of healthy communities) in real settings through social marketing campaigns. Public health has a role in communicating different expectations for neighbourhood characteristics on the basis of long-term health and sustainability. We know that people can change what they value. People need to be provided with the visual of what walkable communities look like in both new developments and in retrofitted existing developments. In promoting these favourable walkable communities, featured depictions would include connected neighbourhoods with sidewalks, parks, stores, schools, and public transportation within walking or cycling distance. The next step is to challenge the status quo by showing what changes could be done to make it more walkable and enjoyable. The bottom line would be the positive impact on health and the

²² Gurin, D. Understanding Sprawl: A Citizen's Guide. The David Suzuki Foundation. Vancouver, B.C. 2003, p. 10.

http://www.davidsuzuki.org/pvw370829/files/Climate/Ontario/Understanding_Sprawl.pdf Accessed 15 August 2008.

environment and improved quality of life for the current generation as well as the ones to come.

The campaigns would have the purpose of challenging and shifting accepted core values towards new values. Public health has had a number of successful experiences in shifting social values and norms including the work towards smoke-free environments, the expectation that all infants and young children ride in vehicles with appropriate child restraints, the recommendation that children wear helmets while cycling and skiing/snowboarding, and that safe food handling practices are conducted both in the home and in restaurants and large institutions. Learnings from these success stories can be applied to changing the criteria that make neighbourhoods desirable for living.

Order of change is important: Be aware, make it easy, be involved, speak out

The analysis and discussion of the data give some insight into the possible ordering of approaches to facilitate the development of more walkable communities within Simcoe Muskoka. Sixty-nine per cent (69%) of survey respondents still need to **be aware** of the concept of walkable communities and an awareness raising campaign would be warranted in order to see increased awareness and possible behaviour change. Certainly the introduction of a communication campaign that highlights the concept of walkable communities would be an important step. The campaign should introduce the concept of walking as the principle transportation mode for common trip locations that are taken on an almost daily basis and invite personal reflection by the hearer/viewer to think about their own ability to walk to a store, school, or work.

But any effort must move beyond awareness raising and increasing basic knowledge towards action. Small steps towards action **make it easy** to overcome initial inertia. Since three-quarters of the city and town residents surveyed believed that their physical activity was impacted by their neighbourhood infrastructure and nearby services, their need is not for more awareness or knowledge. Rather, the next step is for people to **be involved** through tools that support them to evaluate their own neighbourhood for supportive infrastructure and nearby services. A walkability survey entitled How walkable is your community?²³ has already been created to facilitate evaluation of individual neighbourhoods but further work needs to be done with community partners to get this tool into the hands of the people.

To further progress, the movement must be from personal or individual action towards community or group action. For those who have already bought into the concept, the walkability survey can be used to identify next steps for change. For those who are new to the idea of walkable communities, it can provide concrete questions that illustrate the overall meaning of the term walkable communities and take the user to the next step. For those who are at the stage of noticing gaps and exploring their desire to do anything to address them, the neighbourhood evaluation exercise provides a topic for an initial discussion with a family member or neighbour about what is good about the neighbourhood and what could be improved and this is the next step of community action. Sharing viewpoints from a variety of neighbourhood residents would be the first step towards **speaking out** for specific municipal

²³ http://together4health.ca/public_docs/Walkability%20Checklist.pdf

action to improve local conditions. The identification of a common problem and subsequent ideas about how to solve this common problem may be of sufficient concern to enough people that individuals decide to do something to fix it. The result of community action on a specific concern is an environment which is more supportive of walking and the potential for bylaws or other policy which can be applied more broadly to other locales. As well, the momentum for change is further developed and can result in other improvements.

Local Practicality and Palatability

Shifting a core set of values into action on new values is a tricky proposition that has been demonstrated to need at least a decade if not multiple decades to occur. Shifts in core values would likely be better received once a majority has bought into the general concept and implementation of the most readily acceptable components of walkable communities. Too much change too soon can be disastrous to the overall effort and can increase resistance.

The changes that were explored in the survey and are listed in order of the highest degree of acceptance to the least accepted include designing buildings and other infrastructure that fit with the overall look or character of the neighbourhood, having stores, shops or restaurants within a 5-10 minute walk of your neighbourhood, creating sidewalks or pathways to connect streets in the neighbourhood more directly, having a variety of housing options, and putting sidewalks on both sides of the street.

But these are not the sum total of all the changes that are possible or even necessary in making communities more walkable and may not even be applicable with particular communities. The consensus of the literature must be reviewed and then the plethora of options should be considered in terms of local practicality and palatability. Public health should work with the community of people where they are at and on the changes that they identify as important. But understand that the role of the health professional is to know the evidence of what has worked and to employ the best (or better) practices to achieve these local goals and to help the community see a new vision for itself beyond just the initial changes. In working with any community, the ability for the community to learn, grow, and make its own changes needs to be part of the process forward. The community needs to be the driver of its own change towards being more walkable. The health professional is there to help the group take its first steps but then lets the group practice walking towards the change it wants to see.

Additional areas of inquiry

Involvement in the *walkON Survey* has been a learning experience for all the members of the Walkable Communities Task Group. Additional work could be done in the areas of improving the questionnaire that was used for the survey and doing follow-up qualitative and quantitative work which would include but not be limited to:

- I. refinement of questions pertaining to utilitarian and recreational physical activity,
- II. conducting a survey to determine participant's levels of utilitarian and recreational physical activity,

III. carrying out focus groups with sub-populations not well represented in the survey results or for questions where the data was not releasable

IV. determination of other indicators for status, success, and the ability to provide for one's family beyond the location of the house, the size of the yard, and the distance it is away from vehicular traffic that fit into the walkable communities construct.

VI. RECOMMENDATIONS

The list of recommendations is meant to highlight key areas of action.

1. It is recommended that budgeted monies allotted to surveys reflect conducting the survey with a sufficient sample size beyond the minimum number needed to be statistically significant in order to capture data on sub-populations.
2. It is recommended that the Simcoe Muskoka District Health Unit be involved in the development of the questionnaire used for surveys it engages in and that if that is not possible, it requests a rationale behind the wording and ordering of the questions used in the questionnaire as appropriate.
3. It is recommended that the Simcoe Muskoka District Health Unit explore changing current core values on neighbourhood characteristics and design with other health units and non-governmental organizations so that a critical mass of involvement and resources is established to mount an effective approach over the next decade.
4. It is recommended that the Simcoe Muskoka District Health Unit partner with other agencies to add and build upon the findings of this survey.
5. It is recommended that the Simcoe Muskoka District Health Unit explore communicating different expectations for optimal neighbourhood characteristics on the basis of long-term health and sustainability with other health units and non-governmental organizations so that a critical mass of involvement and resources is established to mount an effective approach over the next decade.
6. It is recommended that the Simcoe Muskoka District Health Unit conduct social marketing campaigns that highlight the concept of walkable communities, introducing the concept of walking or cycling as the principle transportation mode for common trips to locations that are taken on an almost a daily basis and invite personal reflection by the hearer/viewer to think about their own ability to walk to a store, school, or work.
7. It is recommended that a walkability survey be promoted with community partners to facilitate the evaluation of people's own neighbourhoods, and to identify the existence or lack of supportive infrastructure and nearby services. For further progress, there needs to be a shift from personal or individual action towards community or group action on behalf of improving the walkability of the neighbourhood. Provision of tools to address any gaps would be useful for those people who are ready to take action.

Walk On Survey Simcoe Muskoka District Health Unit

Conducted by UW Survey Research Centre

Fall 2007

A: Introduction.

Hello my name is _____ and I am calling from the University of Waterloo on behalf of the _____ **public health unit**. We are conducting a short 10 minute **research** survey about neighbourhoods and health.

I'd like to speak to the adult who is at least 18 years old and whose birthday is coming up next. Would that be you?

If Yes: *go to consent*

If No: May I speak with this person now?

If Yes: *go to consent*

If No: Is there a better time to reach them? *Set up callback.*

If query birthday method:

We need to select someone at random. With each call we make, we ask to speak to the person whose birthday is coming up next. This helps us to ensure that we have a representative sample as some groups of people are less likely to answer the phone.

A2. Consent1

Your answers are important to us, and will be used to help the health unit develop public health programs and services. We have received clearance from the University of Waterloo Office of Research Ethics. The survey will take about 10 minutes to complete, and your answers will be kept confidential. We are not asking for your name or address. You do not have to answer any questions you don't want to. This call may be monitored by my supervisor to assess my performance.

Do you have a few minutes to speak with me now?

If Yes: Thank you. *Go to health unit screener.*

If No: When in the next day or two can we call you back? The survey only takes about 10 minutes. *Set up callback or go to refusal.*

If Refused:

Thank you for your time. Good bye.

If Concerns: go to A3

A3. Concerns

Read as needed.

More Info about Survey

This survey is being conducted by 7 central west Ontario health units to collect data on public knowledge and attitudes towards built environments and health. It will help health unit staff to develop a public information campaign about neighbourhoods, physical activity and walkable communities.

Ethics

Please be assured that all data is confidential and no names or addresses are collected. If you have any questions about your participation in this survey please contact Dr. Susan Sykes at the University of Waterloo Office of Research Ethics at (519) 888-4567 ext 36005.

Asks for more information/Health Unit

Ask for health unit. Use paper copy of contact names.

Your contact at _____ health unit is _____ at _____. Please feel free to contact them with any questions you may have.

Do you have a few minutes to speak with me now?

If Yes: Thank you. *Go to health unit screener.*

If No: When in the next day or two can we call you back? The survey only takes about 10 minutes. *Set up callback or go to refusal.*

If Refused:

Thank you for your time. Good bye.

Screen for Health Unit

QA1. Could you please confirm for me , the county or region in which you live? Is it...

Prompt: (If respondent unsure, use list of municipalities.)

- Simcoe County
- District of Muskoka
- Other (*out of sample*) –I'm sorry, this survey is not being conducted in your area. Thank you for your time. Good bye.

Health Unit Municipality

For **Simcoe County**

Which of the following places best describes the municipality in which you live ... *(Read main choices, but stop if respondent provides answer)*".

- City of Barrie

- City of Orillia

- North East Simcoe
 - Mnjikaning
 - Township of [Oro-Medonte](#)
 - Township of [Ramara](#)
 - Township of [Severn](#)

- North Simcoe
 - Christian Island
 - Town of [Midland](#)
 - Town of Penetanguishene
 - Township of Tay Township
 - Township of Tiny Township

- South Simcoe
 - Township of [Adjala-Tosorontio](#)
 - Town of [Bradford - West Gwillimbury](#)
 - Township of Essa
 - Town of [Innisfil](#)
 - Town of [New Tecumseth](#)

- North West Simcoe
 - Township of [Clearview](#)
 - Town of [Collingwood](#)
 - Township of Springwater
 - Town of [Wasaga Beach](#)

For **District of Muskoka**

Which of the following places best describes the municipality in which you live ... (*Read main choices, but stop if respondent provides answer*)”.

- Township of [Bracebridge](#)
- Township of [Georgian Bay](#)
- Township of [Gravenhurst](#)
- Township of [Huntsville](#)
- Township of [Lake of Bays](#)
- Township of Muskoka Lakes

AB: Knowledge about Walkable Communities

Thank you. I'm going to begin with a couple of general questions about neighbourhoods and physical activity.

AB1. In a typical week in the past 3 months, how many hours did you usually spend walking to work or to school or while doing errands?

Prompt: If last week was typical, think of last week.

- None
- less than 1 hour
- from 1-5 hours
- from 6 -10 hours
- from 11-20 hours
- more than 20 hours
- don't know
- refused

AB2. In a typical week in the past 3 months, how many hours did you usually spend cycling to work or to school or while doing errands?

- None
- less than 1 hour
- from 1-5 hours
- from 6 -10 hours
- from 11-20 hours
- more than 20 hours
- don't know
- refused

AB3. Have you ever read about or heard of the term "walkable community"?

- Yes if yes, go to AB3a
- No if no, go to section B

AB3an. What does a walkable community mean to you? *Check all that apply. Do not read list.*

Prompt: There is no right or wrong answer. What comes to mind when you hear "walkable community"?

- Places are within walking distance (shops, parks, restaurants, schools, etc)
- Walking in general/walking for physical activity or exercise
- Safety (including safe communities/safety for pedestrians)
- Pathways/walkways/trails/sidewalks
- Walk instead of using a car/walking for transportation
- Other (specify) _____
- Not sure
- Refused

B: Attitudes towards walkable communities

Whether you live in the city or the country, neighbourhoods have many qualities that make them attractive and enjoyable places to live. The first few questions are about how some of these qualities affect your **decision about where to live**. Suppose you were making a decision today about where to live...

B1. How important is to be within a 5-10 minute walk of public transportation – would you say very important, somewhat important, not very important, not at all important or are you not sure?

*Prompt: If they say they live in the country: That's fine, just answer thinking about where **you** would choose to live.*

- very important
- somewhat important
- not very important
- not at all important
- not sure
- refused

B2. What about being within a 5-10 minute walk of schools, would you say...

- very important
- somewhat important
- not very important
- not at all important
- not sure
- refused

B3. What about being within a 5-10 minute walk of stores and restaurants? Is it...

- very important
- somewhat important
- not very important
- not at all important
- not sure
- refused

B4. Suppose you were making a decision today about where to live, how important is it to be within walking or cycling distance of your place of work - would you say...

- very important
- somewhat important
- not very important
- not at all important
- not sure
- refused
- does not work/works from home (*do not read*)

B5. And having sidewalks and pathways that are connected to each other so you can walk or cycle to places within your neighbourhood? Is it...

- very important
- somewhat important
- not very important
- not at all important
- not sure
- refused

B6. What about having a sense of belonging; such as knowing your neighbours? Is it...

- very important
- somewhat important
- not very important
- not at all important
- not sure
- refused

B7. Suppose you were making a decision today about where to live, how important is it to be living in a neighbourhood with little or no traffic – would you say....

- very important
- somewhat important
- not very important
- not at all important
- not sure
- refused

B8. How about having a big yard or garden? Is it...

- very important
- somewhat important
- not very important
- not at all important
- not sure
- refused

B9. Finally, being within a 5-10 minute walk of parks? Would you say...

- very important
- somewhat important
- not very important
- not at all important
- not sure
- refused

BA1: Information about Neighbourhood

Now I'd like to ask you about your neighbourhood.

BA1. Would you say that your neighbourhood is ...

- located in the downtown centre or core of a city or town
- in a city or town, but not in the downtown centre or core
- outside of a city or town, including in the countryside *go to F7B*
- not sure
- refused

BA2. *(if live outside of a city or town, including the countryside)* Which of the following best describes where you live:

- on a farm
- in a hamlet or a small village
- in an residential estate home
- other (do not read)

Note: Skip for Sections C and D as follows:

- *If BA1 = "in a downtown centre or core" or "in a city or town, but not in the downtown centre or core" Ask section C and section D.*
- *If BA1 = "outside of a city or town, including the countryside" and BA2 = "in a hamlet or a small village" ask section C and section D*
- *If BA1 = "outside of a city or town, including the countryside" and BA2= "on a farm" or "in a residential estate home – ask "Country Questions"*
- *If BA1= "not sure" or refused – Go to section E*
- *if BA1= "outside a city or town, including the countryside" and BA2= "other" – Go to section E.*

C: Level of knowledge about how the built environment impacts health

Now I'm going to ask you some questions about how much you think your neighbourhood can affect your ability to be physically active. For this question, physical activity refers to activities like walking, jogging, running, cycling, or in-line skating **within your neighbourhood**.

Prompt: If respondent makes comment about ill health/disability/does not work out, clarify with:
For this portion of the survey, physically active means having a chance or opportunity to be active. *If there are further comments: We are not asking about your strength or ability.*

C1. Would you say that having stores, shops or restaurants within a 5-10 minute walk of your home could affect your ability to be physically active a lot, a little, not at all, or are you not sure?

- a lot
- a little
- not at all
- not sure
- refused

C2. How about having parks within a 5-10 minute walk of your neighbourhood, would you say a lot, a little, not at all, or are you not sure?

- a lot
- a little
- not at all
- not sure
- refused

C3. And having sidewalks or pathways that are connected to each other so you can walk or cycle to places within your neighbourhood?

- a lot
- a little
- not at all
- not sure
- refused

C4. Would you say having interesting things to look at could affect your ability to be physically active a lot, a little, not at all, or are you not sure?

- a lot
- a little
- not at all
- not sure
- refused

C5. And having roads, sidewalks and pathways that are in good condition, for example, free from bumps and holes?

- a lot
- a little
- not at all
- not sure
- refused

C6. Finally, would you say having well lit roads, sidewalks, and pathways at night could affect your ability to be physically active a lot, a little, not at all, or are you not sure?

- a lot
- a little
- not at all
- not sure
- refused

D: Barriers to walkable communities

Now I'd like to know your opinion about changes that could be made to make it easier to be physically active in your neighbourhood.

Prompt: Physical activity refers to walking, jogging, running, cycling, or in-line skating within your neighbourhood

D1 a) First, do you have sidewalks on both sides of the streets in your neighbourhood?

- yes
- no
- not sure
- refused

b) *If no*, would you strongly support, somewhat support, somewhat oppose or strongly oppose adding sidewalks to both sides of the streets in your neighbourhood?

- strongly support
- somewhat support
- somewhat oppose
- strongly oppose
- not sure
- refused

D2 a) Do you have a variety of housing options such as: detached homes, townhouses, apartments and condominiums in your neighbourhood?

- yes
- no
- not sure
- refused

b) *If no*, would you strongly support, somewhat support, somewhat oppose or strongly oppose adding new types of housing to your neighbourhood?

- strongly support
- somewhat support
- somewhat oppose
- strongly oppose
- not sure
- refused

D3 a) Do you have stores, shops or restaurants within a 5-10 minute walk of your neighbourhood?

- yes
- no
- not sure
- refused

b) *If no*, would you strongly support, somewhat support, somewhat oppose or strongly oppose adding stores, shops or restaurants to your neighbourhood?

- strongly support
- somewhat support
- somewhat oppose
- strongly oppose
- not sure
- refused

D4a) Are businesses, stores, shops, city/town owned spaces and parks designed to fit with the **overall look and design** or character of your neighbourhood?

Prompt: Character refers to the overall look, appeal and design of spaces

- yes
- no
- not sure
- refused

b) *If no*, would you strongly support, somewhat support, somewhat oppose or strongly oppose having guidelines for the development of commercial and municipal spaces in your neighbourhood?

- strongly support
- somewhat support
- somewhat oppose
- strongly oppose
- not sure
- refused

D5 a) Streets are usually built on either a grid system or a cul de sac system. A grid system refers to a set of streets that cross one another, while a cul de sac system refers to a set of streets with intersections on one end and closed turning areas on the other end. Is your neighbourhood built on a grid or a cul de sac system, or a mixture, or neither?

- grid
- cul de sac
- mixture
- neither
- not sure
- refused

b) *If cul de sac system or mixture:* Would you strongly support, somewhat support, somewhat oppose or strongly oppose creating sidewalks or pathways to connect the streets in your neighbourhood more directly to one another?

- strongly support
- somewhat support
- somewhat oppose

- strongly oppose
- not sure
- refused

Section CC: Country Questions

Now I am going to ask you some questions about the roads and pathways in your neighbourhood or community.

CC1.a) First, do you have paved shoulders on both sides of the road in your neighbourhood or community?

- Yes
- No *if no, go to 1b)*
- not sure
- refused

CC1b) *If no* Would you strongly support, somewhat support, somewhat oppose or strongly oppose adding paved shoulders to both sides of the road?

- strongly support
- somewhat support
- somewhat oppose
- strongly oppose
- not sure
- refused

CC2. Would you say that having paved shoulders on both sides of the road could affect your ability to be physically active a lot, a little, not at all or are you not sure?

- a lot
- a little
- not at all
- not sure
- refused

CC3a) Do you have trails or pathways within a 5-10 minute walking or cycling distance of your home?

- Yes
- No *if no, go to 1b)*
- not sure
- refused

CC3b) *If no* Would you strongly support, somewhat support, somewhat oppose or strongly oppose adding trails or pathways to your neighbourhood or community?

- strongly support
- somewhat support
- somewhat oppose

- strongly oppose
- not sure
- refused

CC4. Would you say that having trails or pathways within a 5-10 minute walking or cycling distance of your home could affect your ability to be physically active a lot, a little, not at all or are you not sure?

- a lot
- a little
- not at all
- not sure
- refused

E: Level of knowledge of Walk On Campaign

Now I'm going to ask you a few questions about a public health project.

E1. Walk-On is a project that promotes the development of communities that support walking, running, jogging, cycling, and in-line skating as forms of transportation within neighbourhoods and communities. Have you ever seen or heard about Walk-On?

- yes
- no
- not sure
- refused

E2n. *If yes to E1.* Where did you see or hear about Walk-On? *Check all that apply. Do not read list.*

- Newspaper
- Television
- Radio
- Print Materials (pamphlets, brochures, newsletter, flyers, magnet, mail, postcard, bills)
- Passive Visual Media (posters, signs, billboards, bus/transit/subway ads, movie theatre, mall display)
- Word of Mouth (family, friends, colleagues at work/school, etc)
- Internet/Website/On-line (includes the health department website)
- Other (specify) _____
- not sure
- refused

F: Demographics

For the following questions, we are asking about all your physical activities, which may include playing sports, jogging, dancing, yoga, and lifting weights, as well as walking, cycling or in-line skating within your neighbourhood?

F1. Over the past 7 days, on how many days were you physically active for a total of 60 minutes or more per day?

- 0 days
- 1 day
- 2 days
- 3 days
- 4 days
- 5 days
- 6 days
- 7 days

F2. Over a TYPICAL week, on how many days were you physically active for a total of 60 minutes or more per day?

- 0 days
- 1 day
- 2 days
- 3 days
- 4 days
- 5 days
- 6 days
- 7 days

These last few questions are for statistical purposes only.

F3. What is your gender? (*Ask only if unsure*)

- Male
- Female

F4. In what year were you born? _____

F4b. How many adults over the age of 18 are living in your household? _____

F5. Do you have any children under the age of 18 living in your household?

- yes
- no

F6. What is the highest level of education you have obtained? (*Do not read*)

- did not graduate from high school
- graduated from high school
- some post-high school education
- college/university diploma/degree
- don't know
- refused

F7. What type of dwelling do you live in...

- detached house

- semi-detached house
- attached house (townhouse)
- apartment building/condo building
- mixed use building
- other (specify)
- not sure
- refused
- retirement/nursing home/ seniors's complex

F8a. Were you born in Canada?

- Yes
- No

F8b. (if no to F8a.) In what year did you first come to Canada to live? _____

F9. Could you please tell me how much income you and other members of your household received in the year ending December 31st 2006, before taxes. Please include income FROM ALL SOURCES such as savings, pensions, rent, as well as wages. Was the total

household income from all sources: *Do not read brackets*

- ...less than \$20,000,
- ...\$20,000 to \$30,000, (29,999)
- ...\$30,000 to \$40,000, (39,999)
- ...\$40,000 to \$50,000, (49,999)
- ...\$50,000 to \$60,000, (59,999)
- ...\$60,000 to \$70,000, (69,999)
- ...\$70,000 to \$80,000, (79,999)
- ...\$80,000 to \$90,000, (89,999)
- ...\$90,000 to \$100,000, (99,999)
- ...\$100,000 to \$120,000, (119,999)
- ...Greater than \$120,000
- Don't know
- Refused

Thank you for your time. If you would like more information, or to see the results of the survey, the results will be posted in early 2008 at www.walkon.ca.

If requested: provide contact info for people without web access.
