



RRFSS

Rapid Risk Factor Surveillance System

Eastern Ontario Health Unit

2008-2009

December 9, 2010



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List of Abbreviations

MOHLTC	Ministry of Health and Long-Term Care
LHINs	Local Health Integration Networks
RRFSS	Rapid Risk Factor Surveillance System
CATI	Computer Assisted Telephone Interview
RDD	Random Digit Dialling
CCHS	Canadian Community Health Survey
ISR	Institute of Social Research (York University)
PHPDB	(originally) Provincial Health Planning Database (now renamed: IntelliHEALTH: Intelligence of Health Data)
WHO	World Health Organization
SPSS	(originally) Statistical Package for the Social Sciences (now renamed: PAWS Statistics)
EOHU	Eastern Ontario Health Unit
UC-SDG	United Counties of Stormont, Dundas and Glengarry
UC-PR	United Counties of Prescott and Russell

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Introduction

The Rapid Risk Factor Surveillance System (RRFSS) is an ongoing telephone survey used to gather surveillance data, monitor public opinion on key public health issues, and collect information on emerging issues of importance to public health in Ontario¹. Each month, a randomly selected sample of adults aged 18 years and older is interviewed regarding risk behaviours, knowledge, attitudes and awareness about health-related topics of importance to public health.

The purpose of the RRFSS is to provide timely data relevant to local public health needs. The results are used to support program planning and evaluation, advocate for public policy development, and improve community awareness regarding the risks of chronic diseases, infectious diseases and injuries.

The Rapid Risk Factor Surveillance System (RRFSS) is carried out by the Institute for Social Research (ISR) at York University. It includes both “core” and “optional” modules. All participating health units ask a set of questions from core modules selected by the health units’ RRFSS representatives. Meanwhile, each health unit selects additional optional modules. Any participating health unit can initiate or create new optional modules based on their local public health needs.

The RRFSS began as a pilot project in 1999. By the end of 2008, 22 of the 36 health units in Ontario were participating.

Initially, the Eastern Ontario Health Unit (EOHU) opted to implement its own version of the project locally, and has released reports based on this data from 2002 to 2007. In 2008, the EOHU joined the other participating health units in RRFSS because of the value of comparing local results to those of other health units in the province. EOHU shared the same “core” questions and selected a number of “optional” modules during the 2008–2009 cycle.

Please use caution when comparing results from the present report to the previous EOHU RRFSS reports, as these surveys differed significantly both in methodology and questionnaire design.

¹ Rapid Risk Factor Surveillance System (RRFSS) <http://www.rfss.on.ca/index.php?pid=21>

Methodology

The Rapid Risk Factor Surveillance System (RRFSS) uses computer-assisted telephone interviewing (CATI) technology. Survey respondents are selected using a two-stage probability selection process. Random digit dialling (RDD) procedures are utilized to produce a random sample of households in each health unit region. The interview is completed with one randomly selected adult (18 years of age or older) from each household.

The RRFSS questionnaire is comprised of groups of questions or “modules”; core modules are required for all health units and optional modules can be selected by one or more health units. The interview typically includes about 115 questions and lasts approximately 20 minutes.

Interviews are completed with about 100 respondents from every participating health unit each month (also referred to as one wave of data collection). A typical cycle consists of 12 waves of data collection and each health unit may have about 1200 respondents per cycle. The health units receive the data in SPSS (Statistical Package for the Social Sciences) format on a monthly basis, and the SPSS is commonly used for data analysis.

From March 2008 to February 2009, the Eastern Ontario Health Unit (EOHU) had 1208 respondents in the 2008–2009 cycle (from wave 87 to wave 98). It should be noted that some of the optional questions were added or removed from the survey between waves 87 and 98. These questions will be identified throughout the report, as the results from these questions will be based on a smaller sample than questions where data from the full 12 waves is available.

A Note on Sampling

Sampling in Age Groups

In the 2008-2009 RRFSS, respondents aged 75 years and over were over-represented in the sample compared to previous surveys (Figure 1). Consequently, the sampling weights were adjusted to compensate for this abnormal representation of the current population.

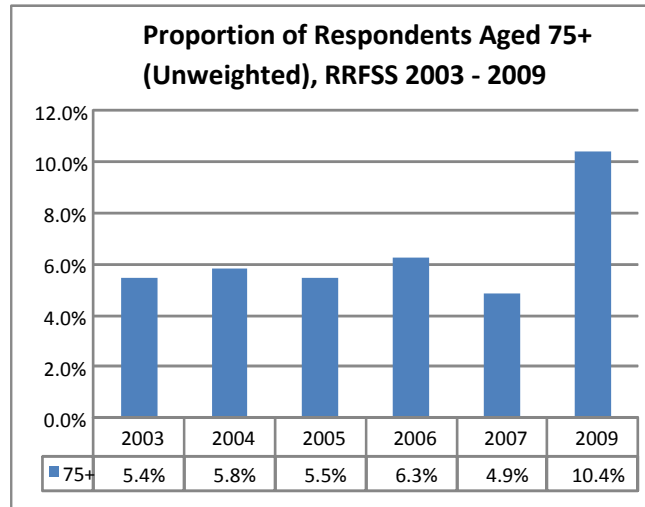


Figure 1 - Proportion of Respondents Aged 75 Years and Over (Unweighted), RRFSS 2003-2009

Results

Demographics

The first section of this report presents information about the participants' age, gender, marital status, home language, education, employment status and household income.

Age and Gender

The sampling frame for the 2008-2009 RRFSS survey included all households with residents aged 18 years and older in the five counties of Eastern Ontario. The majority of the participants in the sample were between the ages of 40 and 64 years old (Figure 2).

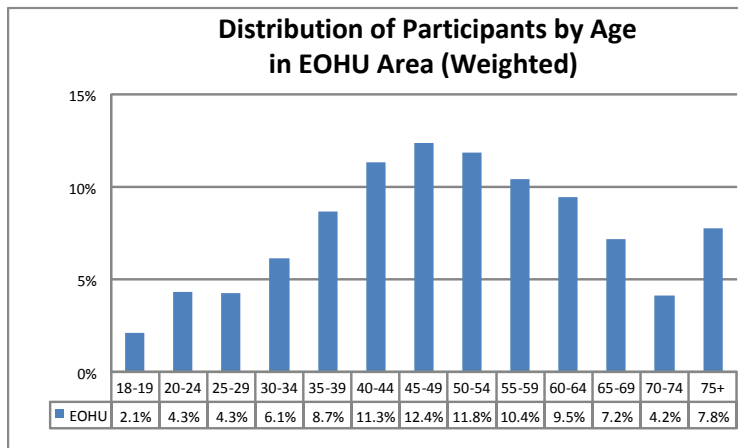


Figure 2 - Distribution of Participants by Age (Weighted)

In UC-SDG, almost half of the participants were between the ages of 45 and 64 years (46.7%). There was also a higher proportion of respondents aged 65 years and up in UC-SDG compared to UC-PR. As a result, the proportion of respondents aged 25 to 44 was lower in UC-SDG than that in UC-PR (Figure 3).

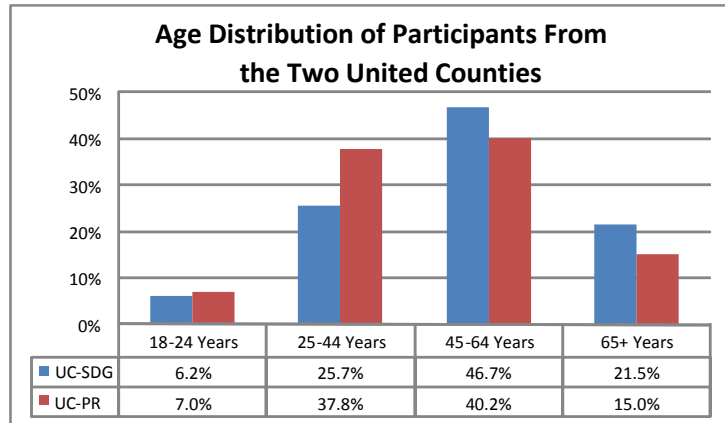


Figure 3 - Distribution of Participants by Age, in the United Counties

There were more females represented in the total sample than males (male: female was 46.9%: 54.1%). The only exception was for male participants aged 18-24 years who were represented in a higher proportion than female participants in that same age group (male: female = 60.5%: 39.5%) (Figure 4).

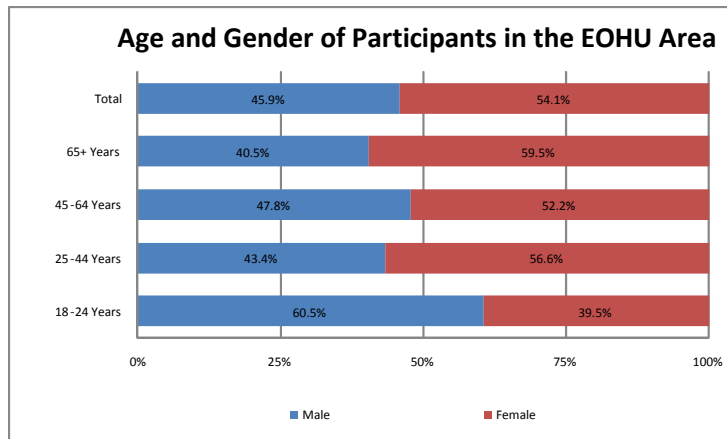


Figure 4 - Age and Gender of Participants

Home Language

Home language in this survey is defined as the single language spoken most often at home. As expected, the two most common home languages in the EOHU region were English and French (Figure 5). Participants who reported all other languages and those who reported having multiple home languages were included in the 'Other' group.

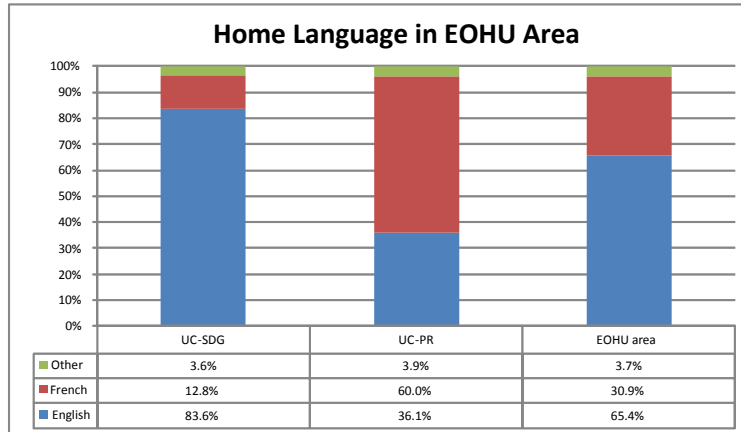


Figure 5 - Home Languages in EOHU Area

Home language is an indicator of interest in the EOHU area because the distribution of English and French speaking families typically shows variation between the two main census divisions (the united counties) within our catchment area.

For the area as a whole, 65.4% of the respondents reported speaking English most often at home, 30.9% reported French as their home language, and the remaining 3.4% reported speaking another (or multiple) languages. Furthermore, in UC-SDG, 83.6% of respondents reported English as their home language while only 12.8% reported French (Figure 6). On the other hand, in UC-PR the proportion of respondents who reported English was 36.1% compared to 60% who reported French as the language spoken most often at home (Figure 7). These results are similar to results from the 2006 Census.

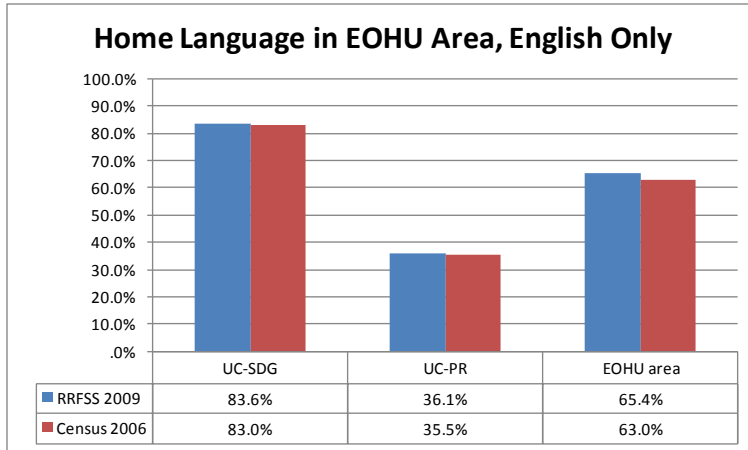


Figure 6 - Home Language in EOHU Area, English Only

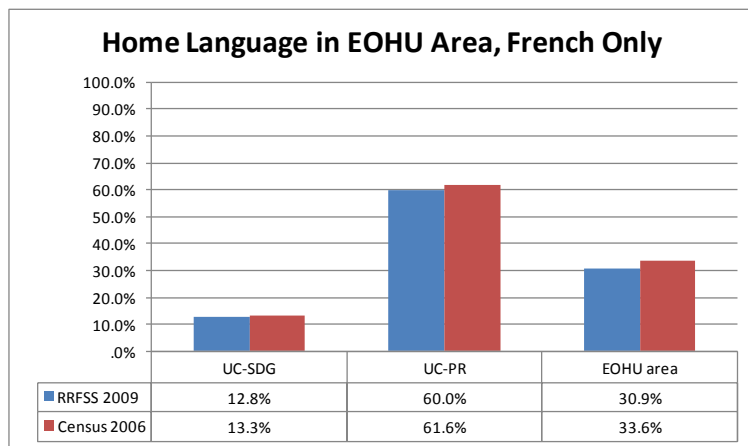


Figure 7 - Home Language in EOHU Area, French Only

Marital Status

The responses for marital status are grouped into three categories: 'Couples', which includes married and common-law couples, 'Separated' which includes separated or divorced individuals and 'Single' for those who have never been married.

In the EOHU region, 74.5% of all participants were part of a couple; this represents almost three quarters of the total respondents. 13.4% were separated and 12.1% reported being single (Figure 8).

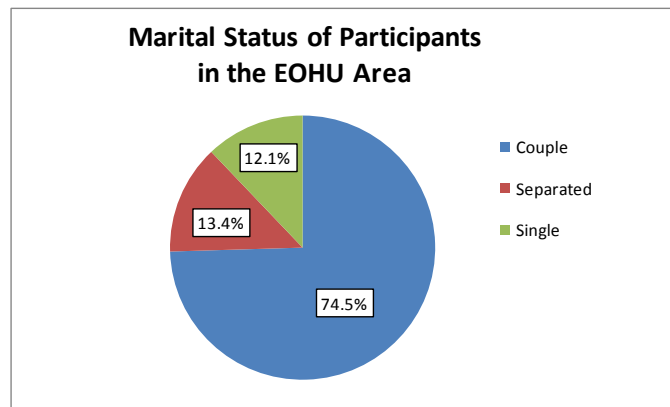


Figure 8 - Marital Status of Participants

More female than male respondents were currently classified as separated. Slightly more males than females reported being in a couple or single (Figure 9).

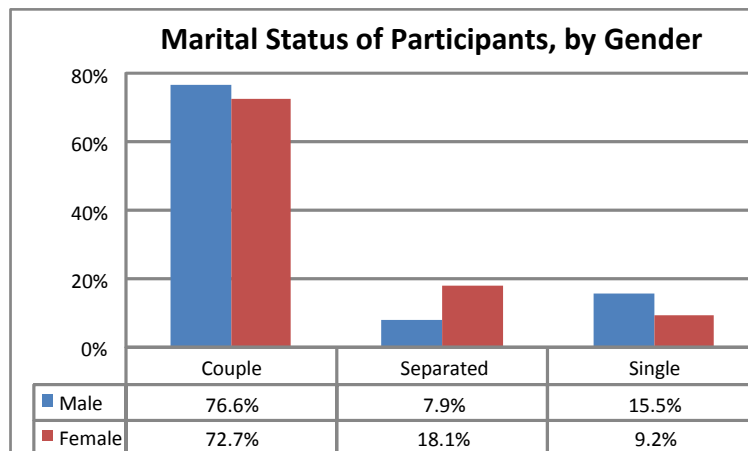


Figure 9 - Marital Status, by Gender

Compared to the 2006 Census, the proportion of couples was higher in the 2008-2009 RRFSS, and the proportion of single and separated or divorced individuals was lower (Figure 10). There are more couples in this survey sample than in the general population and this could be due to age or other socioeconomic factors that affect the response rate of surveys in general. People who are older, with a higher household income and currently in a couple are more likely to participate in a telephone survey.

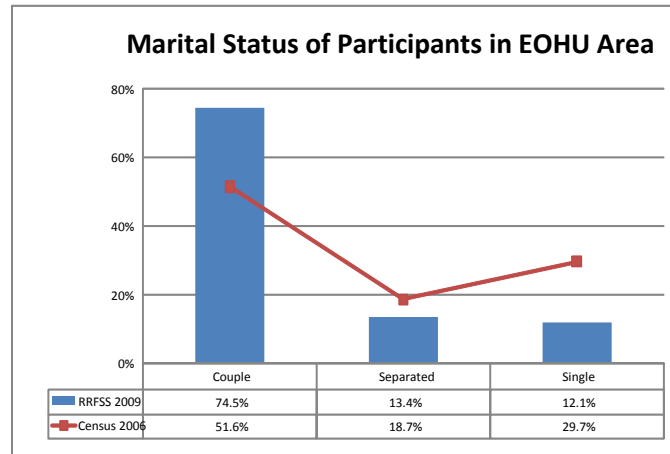


Figure 10 - Marital Status, Comparing 2008-2009 RRFSS and 2006 Census

Education

For the purposes of this report, the highest educational attainment of participants is divided into three different categories: ‘Less Than High School’, ‘High School’ and ‘College and Up’.

In the EOHU area, 17.6% of all respondents reported having less than a high school education, 35.1% completed high school, and 47.3% had a college diploma or university degree (Figure 11).

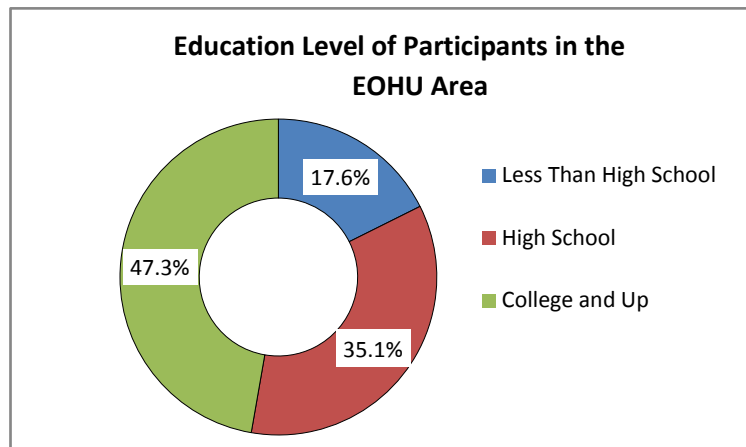


Figure 11 - Level of Education

The proportion of respondents with less than a high school diploma generally increases with age starting with respondents aged 25-44 years old. Only 5.6% of participants aged 25-44 years had less than a high school education, compared to 17.6% of respondents aged 45-64 years and 39.2% aged 65 years and up (Figure 12).

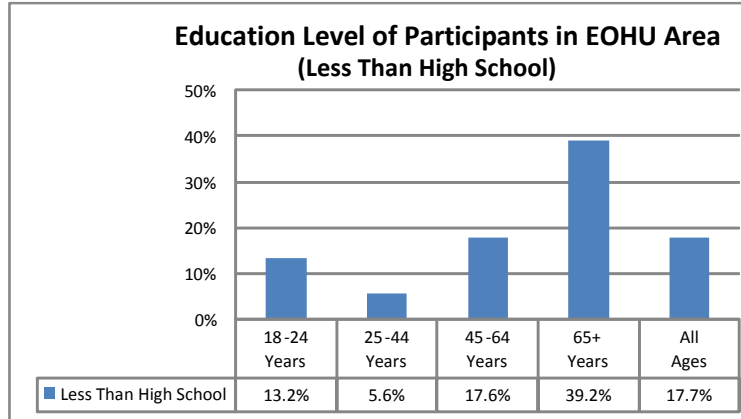


Figure 12 - Participants With Less Than High School

Overall, the proportion of respondents with a college education or more was highest among respondents aged 25-44 years (67.3%), and decreased for the older age groups (43.8% among those aged 45-64 years and 25.3% for those aged 65 years and up) (Figure 13).

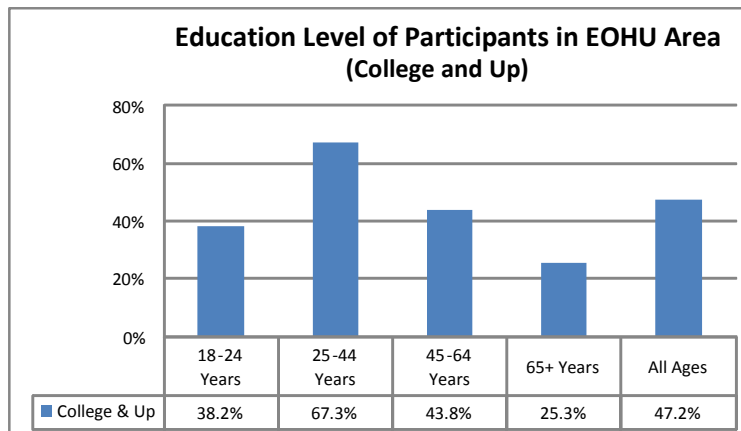


Figure 13 - Participants With College or More

Employment

Employment status is divided into five categories. The largest category, ‘Employed’ includes those who are employed fulltime, part-time or who are self-employed. The other four

categories are 'Retired', 'Out of Work', 'Student' and 'Other', for responses that did not fit into the previously mentioned categories.

Approximately two thirds of the respondents were employed (61.0%), one quarter were retired (24.4%), 11.8% were out of work and 2.3% were students (Figure 14).

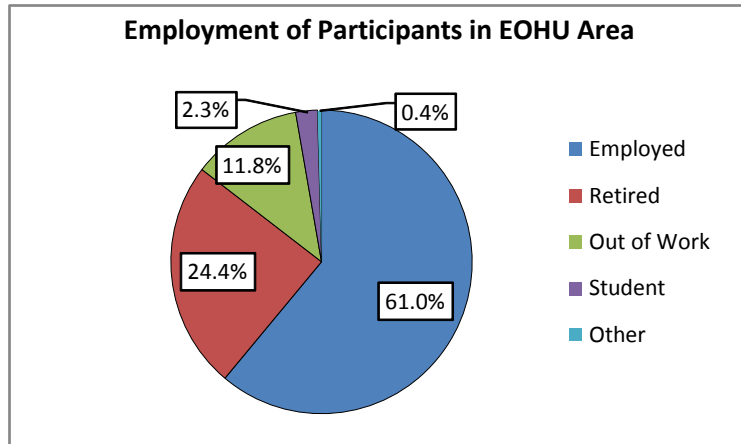


Figure 14 - Employment Status of Participants

Overall, 65.6% of male and 57.1% of female respondents were employed, 22.1% of males and 26.4% of females were retired, and 9.9% of males and 13.6% of females reported being out of work (Figure 15).

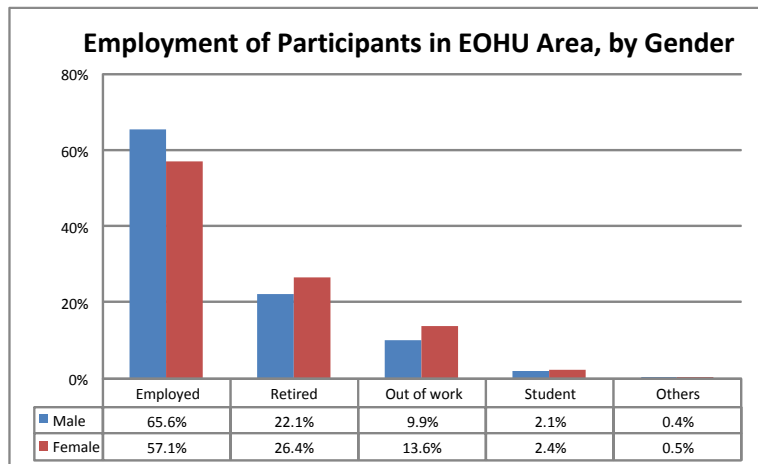


Figure 15 - Employment Status, by Gender

The number of adults in a household can have a significant effect on the household income. Among the participants from the EOHU region, 78.5% had 1-2 adults in the household, 18.7% had 3-4 adults, and less than 3% reported more than 5 adults in one household (Figure 16).

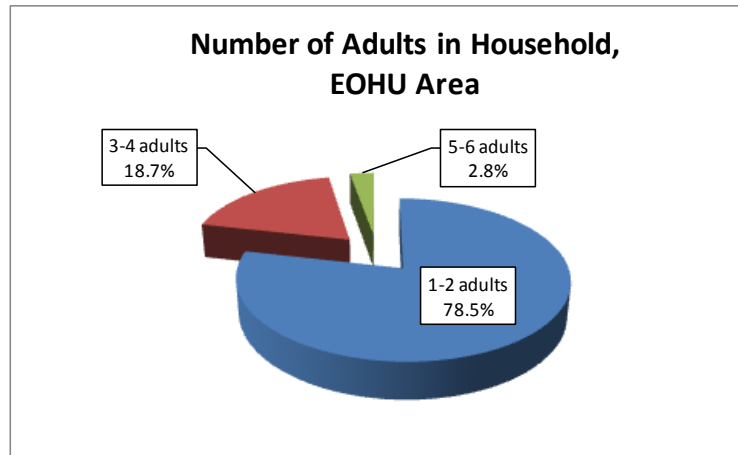


Figure 16 - Number of Adults in the Household

Household Income

In the RRFSS 2008-2009 survey, the median household income before taxes of all respondents was \$50,509 (Male:Female=\$53,163:\$48,305), which is similar to but slightly lower than the median income found in previous RRFSS surveys (Figure 17). In the 2006 Census, the median household income before taxes in the EOHU area was \$52,803.

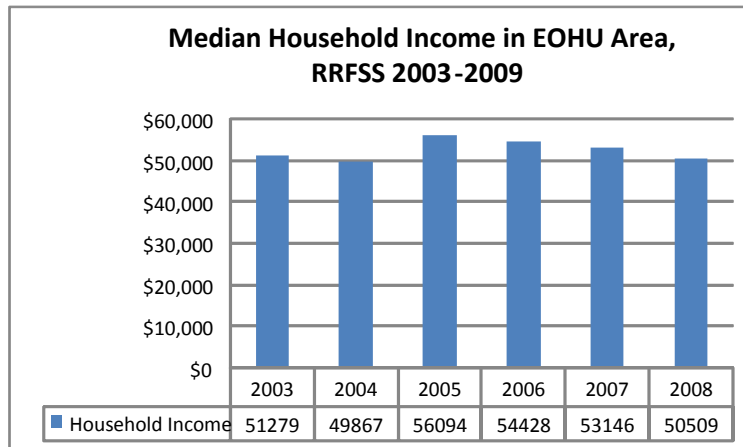


Figure 17 - Median Household Income, RRFSS 2003-2009

While the median income is similar to past RRFSS surveys, the distribution of household income for participants in the current survey is significantly different from the distribution seen in

previous RRFSS surveys. The highest income group (more than \$100,000 per year) is more strongly represented in the RRFSS 2008-2009 than in previous RRFSS surveys (Figure 18).

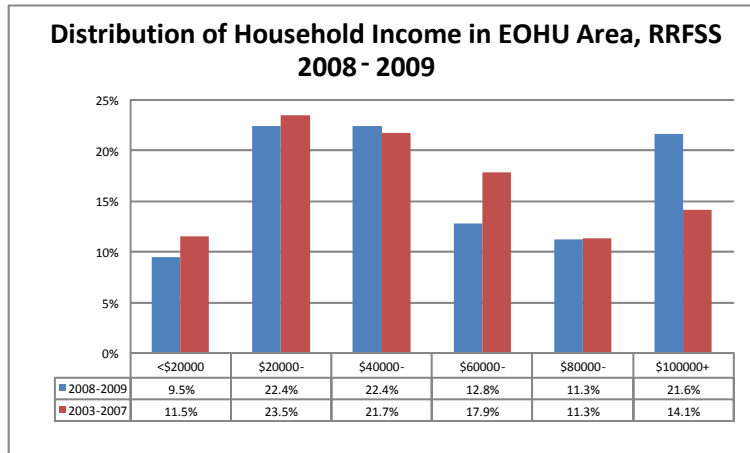


Figure 18 - Distribution of Household Income in EOHU Area, RRFSS 2003-2009

The distribution of household income in the RRFSS 2008-2009 was also different when compared to the 2006 Census. The proportion of respondents with a household income of more than \$100,000 per year was 5 percent higher in the current survey than was seen in the 2006 Census. On the other hand, respondents with a household income of less than \$20,000 per year was 5 percent lower than was found in the 2006 Census (Figure 19).

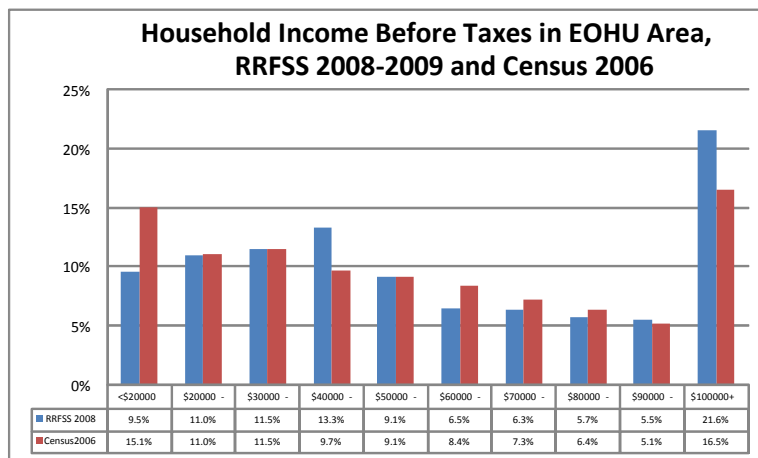


Figure 19 - Household Income Before Taxes in EOHU Area, RRFSS 2008-2009 and Census 2006

General Health Status

Self-Reported Health Status

The self-reported health status is an important indicator of how participants feel about their own health. Strong associations have been reported between self-reported health status and both socioeconomic status and subsequent mortality². People with a higher income and higher level of education are more likely to report being in better health than people with a lower socioeconomic status. McGee et al. also found that self-reporting fair or poor health was associated with at least a two-fold increase in the risk of mortality for all ethnic groups as well as a strong indicator of subsequent mortality for both sexes⁵.

In the EOHU region, 84.5% of all respondents reported their health status as good, very good or excellent compared to 15.5% who reported their health status as fair or poor (Figure 20).

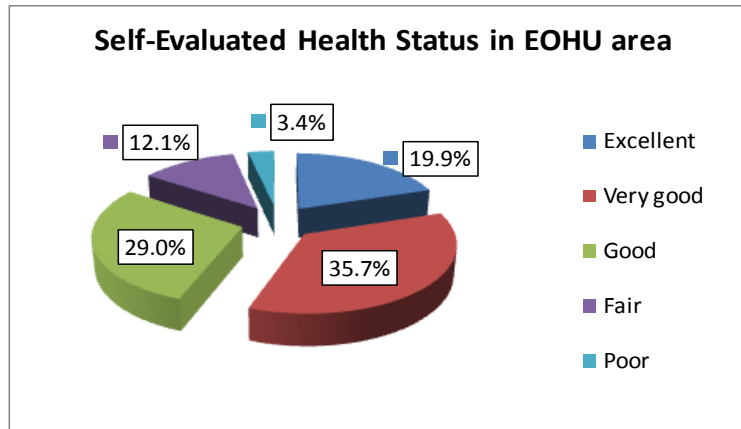


Figure 20 - Self-Evaluated Health Status in EOHU Area

² McGee D.L. et al. American Journal of Epidemiology 1999; Vol. 149, No. 1: 41-46

The responses for self-evaluated health status were not significantly different between males and females (Figure 21).

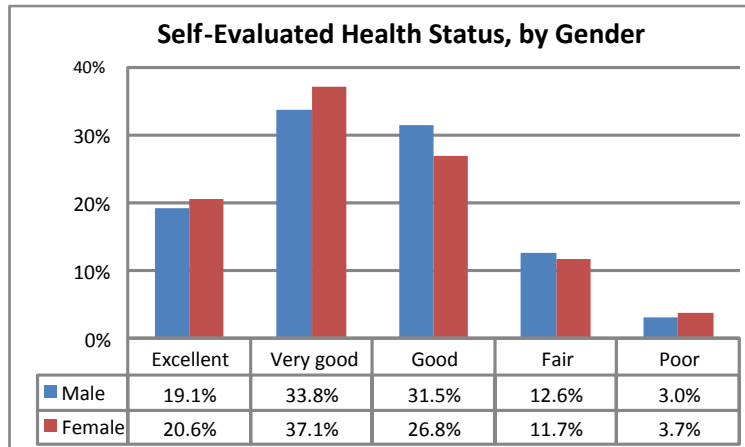


Figure 21 - Self-Evaluated Health Status, by Gender

Body Mass Index (BMI)

The Body Mass Index (BMI) is calculated by taking an individual's body weight and dividing it by his or her height squared. Due to the ease of measurement and calculation, BMI is the most widely used tool to identify weight problems within a population. In this report, BMI results are divided into four categories; 'Underweight (<18.5)', 'Healthy Weight (18.5-24.9)', 'Overweight (25.0-29.9)' and 'Obese (30.0 or higher)'.

Please note that the following questions about BMI were only asked of respondents in 11 of the 12 waves of this cycle of the survey. Participants in the last wave, February-March 2009, were not asked about their BMI so the sample does not include results from all participants mentioned in the demographics section of the report.

In the EOHU area, 35.4% of respondents were classified in the healthy weight category (BMI: 18.5-24.9), 41.4% as overweight (BMI: 25.0-29.9) and 21.8% were obese (BMI \geq 30). In addition, 1.4% of respondents were underweight (BMI $<$ 18.5) (Figure 22).

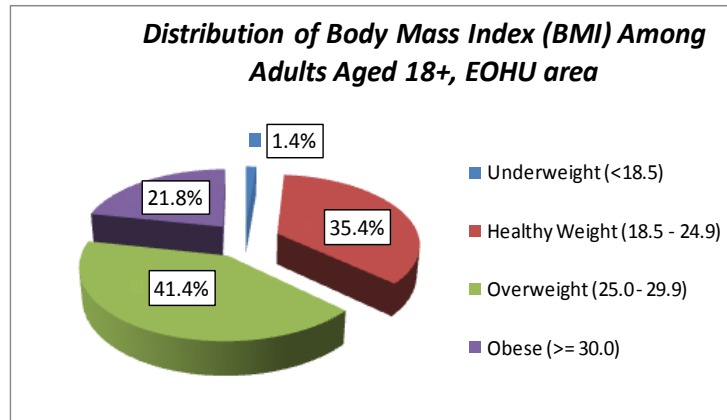


Figure 22 - Body Mass Index (BMI) of Adults (18+)

According to the BMI classifications, more than three quarters of males in the EOHU area were overweight or obese (53.4% overweight and 22.9% obese). Only 23.1% of males fell into the healthy weight category.

Slightly less than half of all females were classified as having a healthy weight. The proportion of women who reported being overweight or obese was significantly lower than males, but still represented more than half of the study respondents (Figure 23).

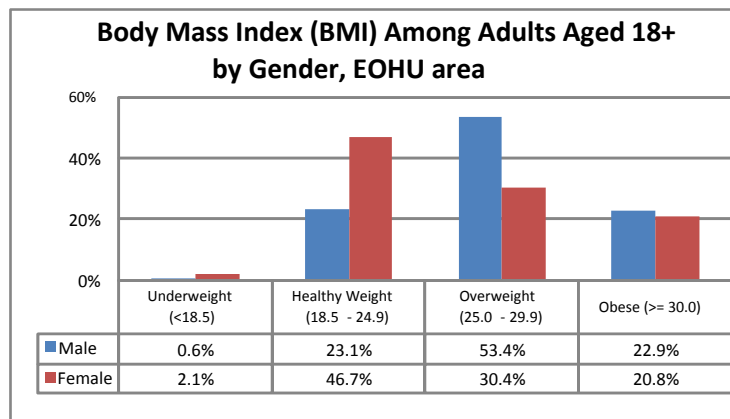


Figure 23 - Body Mass Index (BMI) of Adults (18+), by Gender

Being overweight or obese in childhood is strongly associated with being overweight or obese as an adult. The proportion of younger respondents (18-24) in the EOHU area who were overweight or obese was lower than the proportion among adults. Overweight and obesity

starts to increase in the population after the age of 25 and appears to peak between 45 and 64 years of age. There is a slight decline seen after the age of 65 (Figure 24).

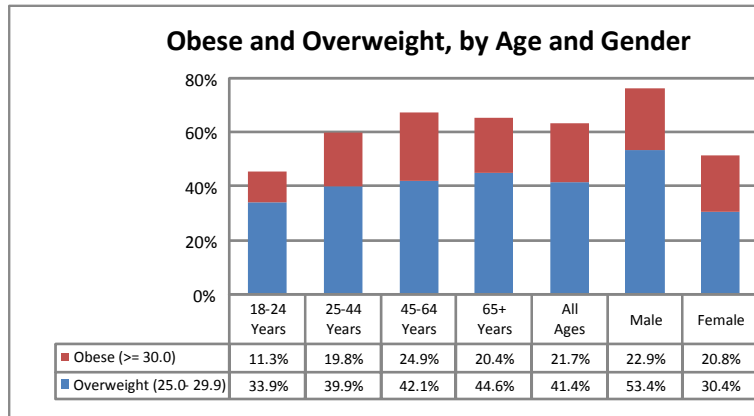


Figure 24 - Obesity and Overweight, by Age Group

Health Information

The questions about health information were asked during the last 5 of the 12 waves of the survey. These results have a total sample of 139 participants and should be interpreted with caution due to the small size of the available sample.

Participants were asked if they had received or gathered any health-related information from the EOHU in the last 21 months; 33.9% of respondents said that they had done so. The respondents who were the most likely to have received this health-related information were between 25 and 44 years of age (45.1%). Respondents aged 18 to 24 years were the least likely to have sought out health information from the EOHU (

Figure 25).

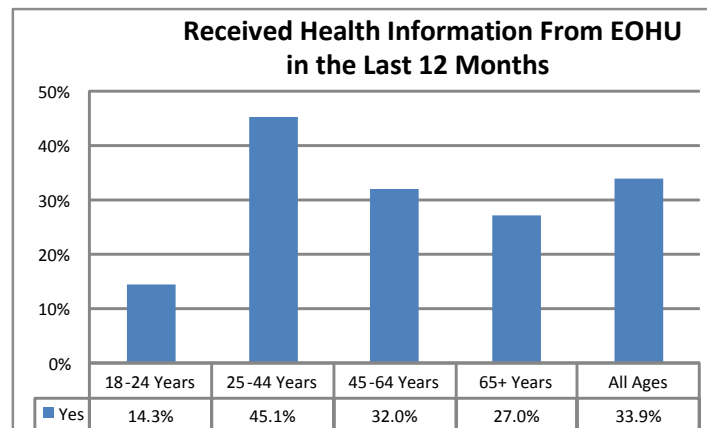


Figure 25 - Received Health Information From EOHU in the Last Year

Participants were asked to list the type of information that they received from EOHU in the last 12 months. Information about influenza and flu shots were the most common responses (32.4%), followed by information about vaccinations (18.1%), general health (15.2%), prenatal/child health (14.3%) and healthy water (6.4%) (Figure 26).

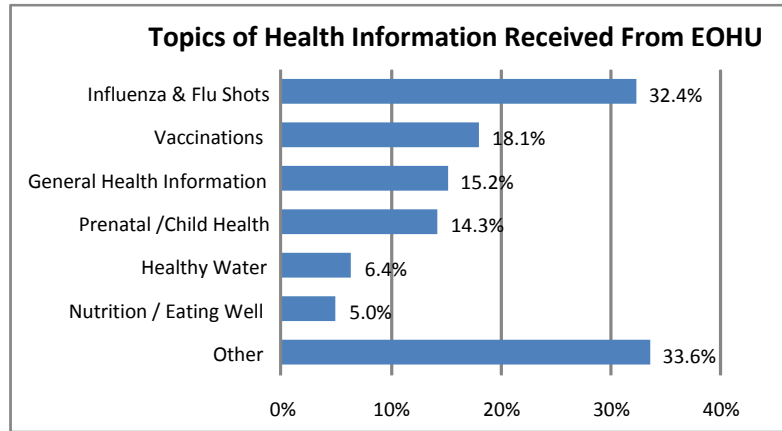


Figure 26 - Topics of Health Information Received From EOHU in the Last Year

Participants were also asked where they would get health-related information, other than from a doctor or other healthcare professional. The Internet or a website was the most commonly reported source (45.4%), followed by books or magazines (11.9%), newspapers (10.7%), TV (9.9%) and workplace (8.0%) (Figure 27).

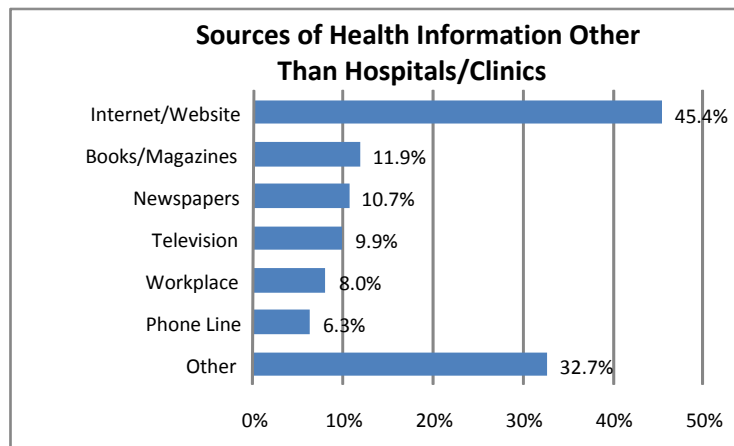


Figure 27 - Sources of Health Information

The local newspaper is a good source of health information and when the participants were asked how often they read the local community newspaper, 64.2% said always or often, 17.3% said sometimes and 18.5% said rarely or never (Figure 28).

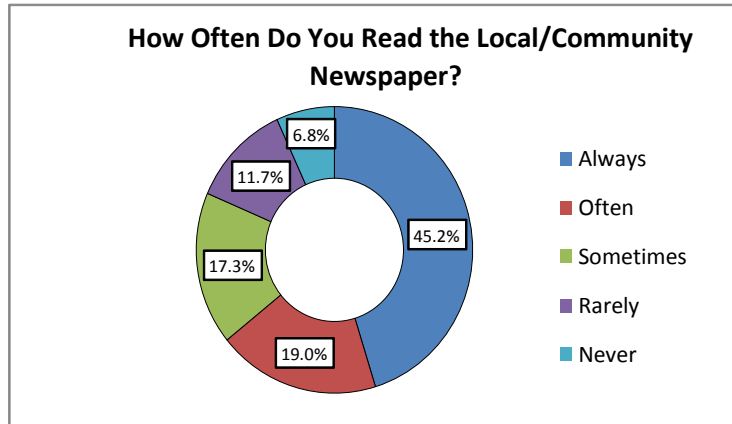


Figure 28 - How Often Respondents Read the Local Newspaper

Reading habits regarding the local newspaper varied by age group and gender. Respondents who said that they always read the local newspaper ranged from 14.3% among those aged 18-24 years up to 66.3% among those aged 65 years and older. Although the proportion of respondents who said they always read the local newspaper was slightly lower among females than males, the proportion of those who reported that they often read the local newspaper was significantly higher among females (21.5% in females vs. 15.8% in males, $P < 0.05$) (Figure 29).

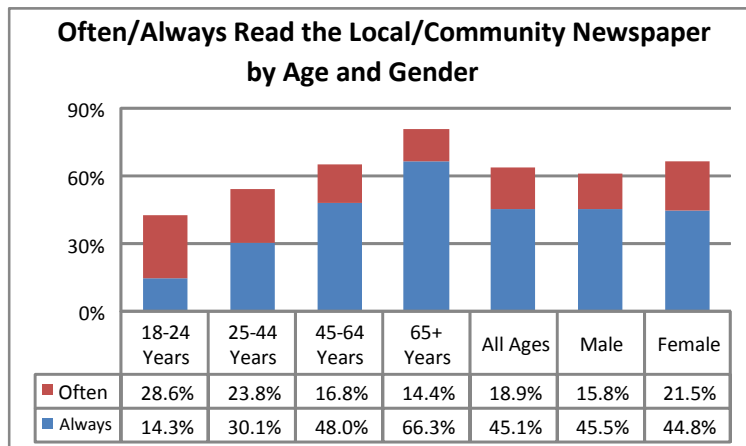


Figure 29 - Respondents Who Often/Always Read the Local Newspaper, by Age and Gender

Immunization and Flu Shots

Flu shots are the most effective method of protection against contracting influenza. The flu season typically lasts from November to April, with most cases of flu occurring between late December and early March. As a result, the influenza vaccine is usually offered between September and mid-November³.

The immunization questions were not asked throughout all 12 waves of this cycle of the RRFSS survey. The question was only asked during the 2008-2009 flu season. This resulted in a much smaller sample than was used in other sections of this report.

In the 2008-2009 RRFSS, participants were asked if they had ever had a flu shot; 60.2% said that they had and 39.8% had not. Of those who were vaccinated, 30.3% had their last flu shot after September 2008, while 29.9% had their last flu shot before September 2008 (Figure 30).

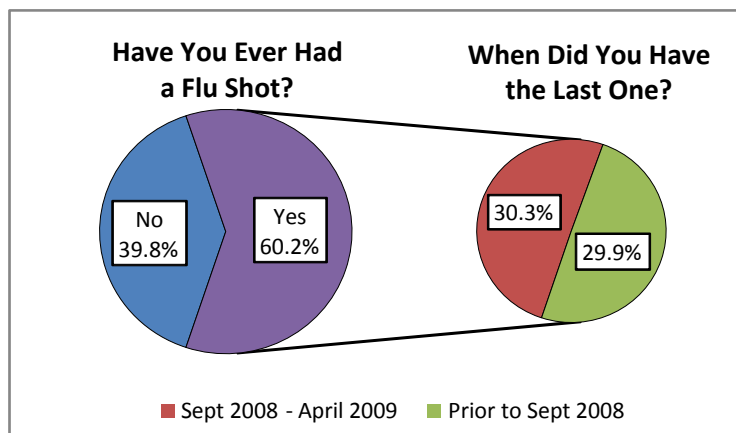


Figure 30 - Ever Had a Flu Shot

Overall, 37.3% of respondents said they received their flu vaccine. There was variation by age group with the lowest proportion of people receiving the vaccine among those aged 18-24 (10.3%), and the highest among those 65 years and up, where 58.9% received their flu shot. There was also a gender difference as more females than males were vaccinated (32.6% of males vs. 41.1% of females) (Figure 31).

³ Influenza Immunization - "the flu shot" <http://www.phac-aspc.gc.ca/im/iif-vcg/index-eng.php>

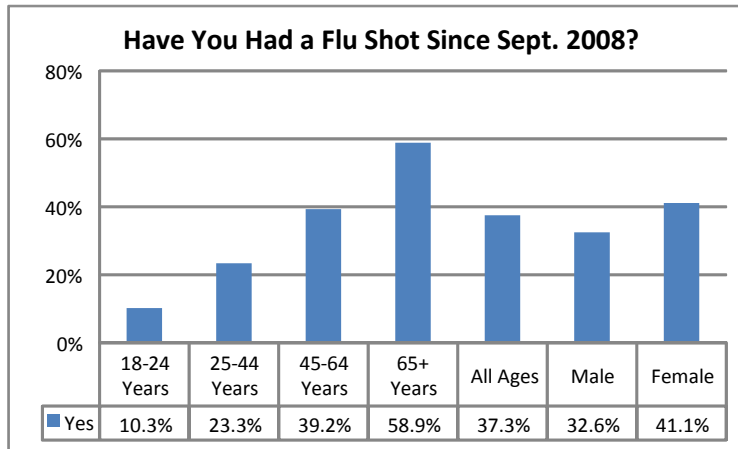


Figure 31 - Had a Flu Shot Since September 2008, by Age and Gender

Among respondents who did receive their flu shots, approximately 60.5% received them at the doctor's office or hospital, 16.2% from the Health Unit (EOHU) or a community health centre, and 15.0% from their workplace or school (Figure 32).

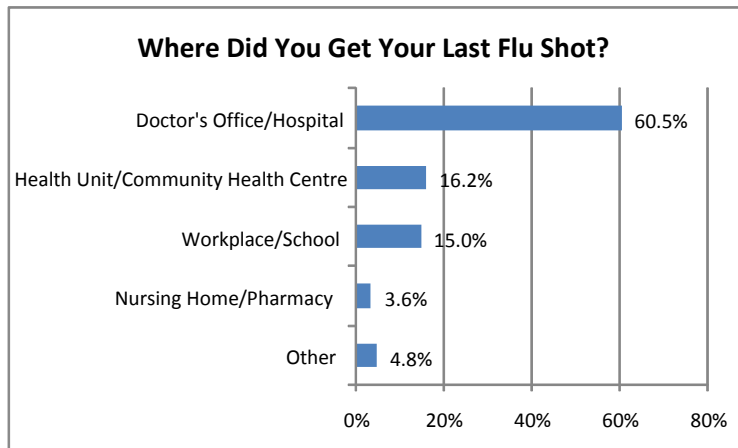


Figure 32 - Locations Where Participants Received the Flu Shot

More than half of the respondents (56.2%) received their last flu shot as a preventative measure. Some respondents reported that they received it as part of their annual routine (14.2%), or because it was recommended by their healthcare provider (6.5%). A small percentage (5.3%) also reported receiving their flu shot because they had a chronic condition that put them at increased risk for complications due to influenza (Figure 33).

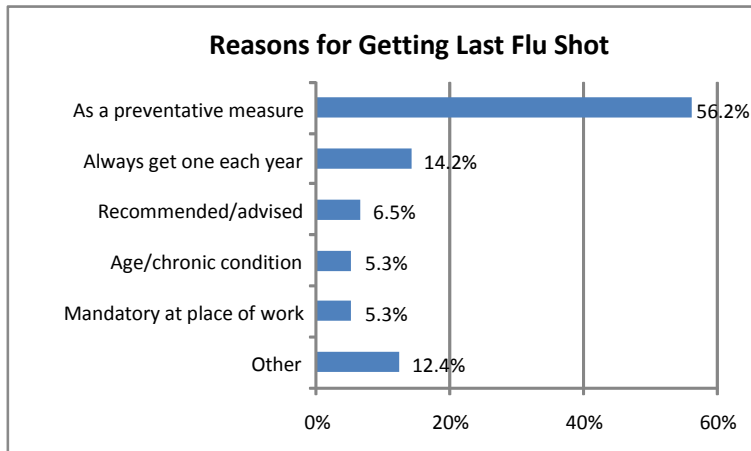


Figure 33 - Reasons for Getting Last Flu Shot

Participants who had not received a flu shot since September 2008 were asked for their reasons for not being vaccinated. A quarter of respondents (25.4%) said that they did not think it was necessary, 17.2% mentioned that they did not believe in the flu shot, 14.1% said they did not have time or that they forgot. 8.6% were concerned about negative side effects. A few respondents missed their flu shot because they were sick, because of a health professional recommendation (3.4%) or because of a fear of needles (1.7%) (Figure 34).

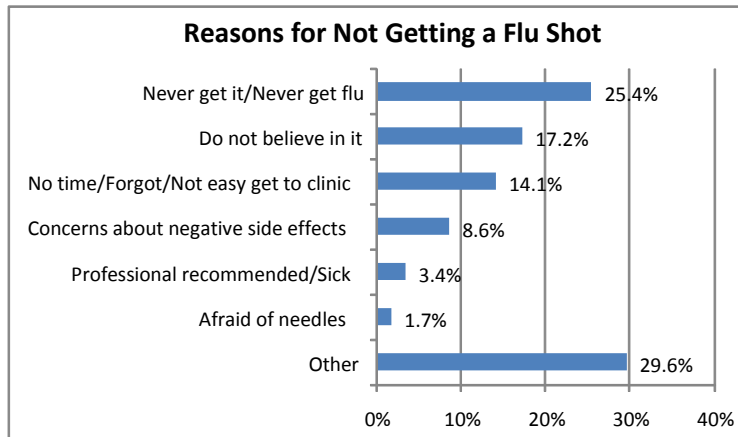


Figure 34 - Reasons for Not Getting a Flu Shot

Chronic Disease

Prevalence of Chronic Disease

Chronic diseases typically have a long duration and a slow progression. Some examples of chronic diseases are heart disease, cancer, chronic respiratory diseases and diabetes. Chronic diseases are by far the leading causes of mortality in the world, representing 60% of all deaths⁴. Consequently, these diseases have become a focal point in public health.

The following chronic disease questions were asked during 4 of the 12 waves of this cycle of the RRFSS survey and resulted in a total sample of 415 respondents.

In the 2008-2009 RRFSS, participants were asked if they had ever been diagnosed with a chronic disease by a healthcare professional. The chronic disease questions focused primarily on a few of the most common chronic diseases that are of public health interest. The most prevalent of these self-reported chronic diseases were: high blood pressure (28.1%), asthma (9.9%) and diabetes (9.2%) (Figure 35).

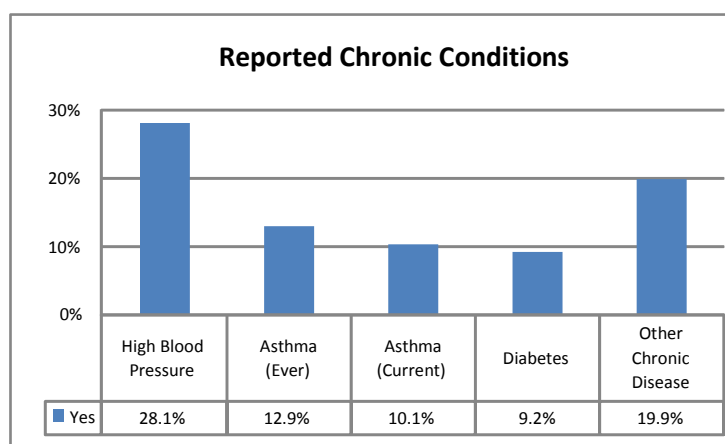


Figure 35 - Reported Chronic Diseases

The respondents' age and gender had a clear association with the rates of chronic disease. Respondents aged 65 years and over reported higher rates of high blood pressure (Figure 36) and diabetes (Figure 37). Asthma was the most prevalent chronic disease among respondents aged 18 to 24 years (Figure 38). These results follow expected trends; high blood pressure and diabetes tend to appear more frequently among older age groups and asthma is more commonly associated with childhood and typically shows a decrease with age.

⁴ Chronic diseases. WHO. http://www.who.int/topics/chronic_diseases/en/

The rates of chronic diseases differed by gender, especially among the older age groups. A higher proportion of females reported having high blood pressure than males (Figure 36).

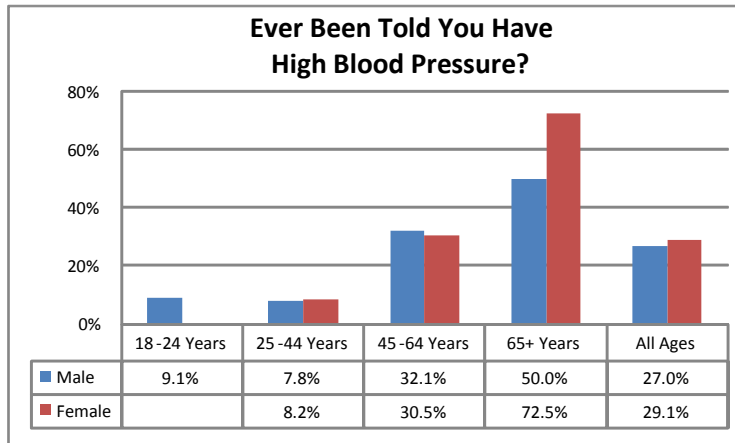


Figure 36 - High Blood Pressure

Diabetes in females was lower than in males (Figure 37) and asthma showed an opposite trend with more females reporting this disease than males in all age groups (Figure 38).

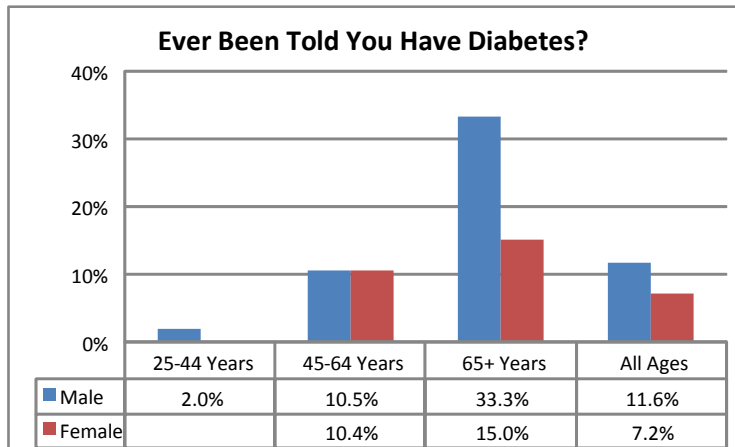


Figure 37 - Diabetes

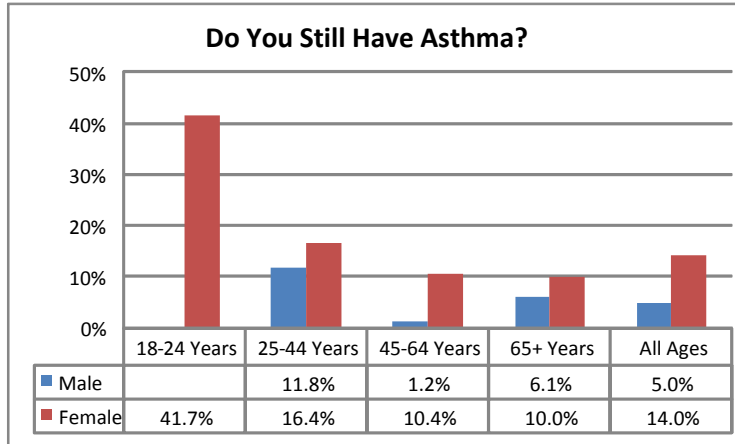


Figure 38 - Asthma

Chronic Disease and the Flu Shot

Individuals with certain chronic conditions may be more vulnerable to the flu and its associated infections and complications; therefore it is strongly recommended that they receive a flu vaccine each year in the fall.

In the 2008-2009 RRFSS, 31.5% of respondents in the EOHU area stated that they have a chronic condition that would make it important for them to get their flu shot. Among them, seniors (aged 65 year and over) and the younger population (18-24 years) had the highest proportions. Females also had higher proportions of chronic diseases relevant to the flu shot than males (Figure 39).

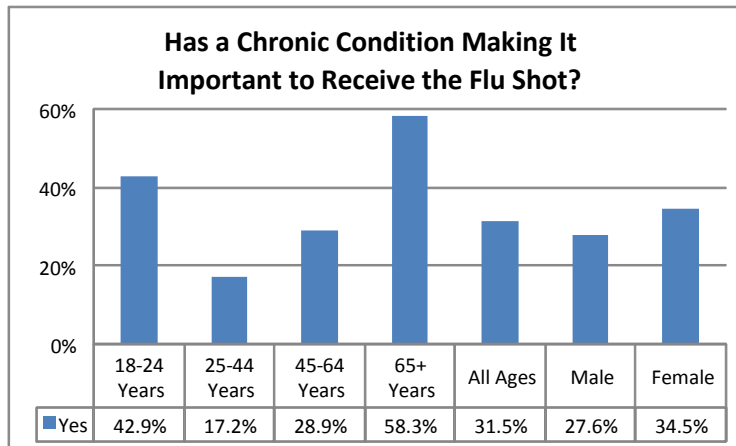


Figure 39 - Chronic Conditions Important to Flu Shot

Colorectal Cancer Screening

Colorectal cancer is the second leading cause of cancer death in Canada, after lung cancer. The earlier colorectal cancer is discovered, the easier it is to treat. The colorectal cancer screening test is effective at detecting colorectal cancer early.

In the 2008-2009 RRFSS, participants over the age of 40 were asked about colorectal cancer screening. These questions were added to the survey during the last 2 of the 12 waves of the cycle. The results presented in this report are based on a sample of 167 respondents who were asked the initial screening question.

In total, 41.9% of respondents reported having had a colorectal screening test; 23.1% in the past 12 months, 10.0% 1 to 2 years ago, and for just under 9% of respondents, 3 or more years ago (Figure 40).

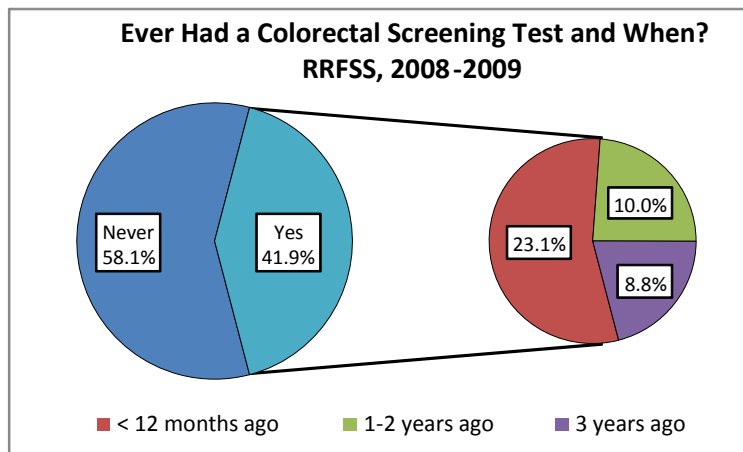


Figure 40 - Colorectal Cancer Screening

Regarding the reasons for having a colorectal screening test, 21.3% of respondents were screened as part of a regular check-up and 14.4% had the test because of concern about a possible problem (Figure 41).

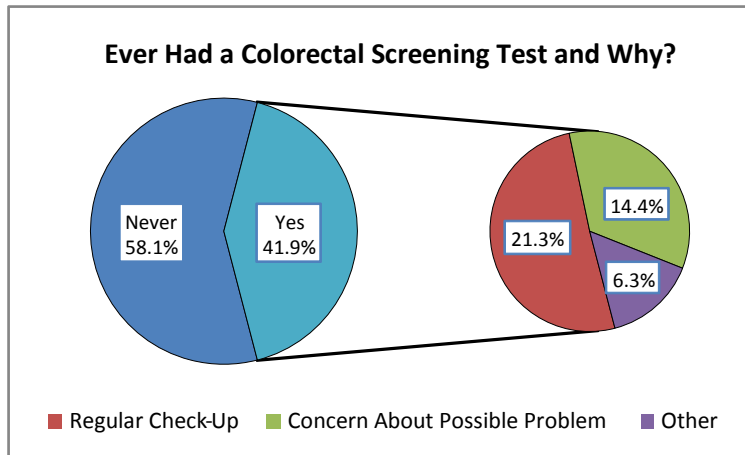


Figure 41 - Reasons for Having a Colorectal Cancer Screening Test

Injury

Injury is the leading cause of death in children and youth in Canada⁵. As for the elderly, according to the Public Health Agency of Canada, “each year, one third of all seniors experience at least one fall, with approximately half of these falls resulting in minor injury, and 5% to 25% resulting in a serious injury such as a fracture or sprain. Among Canadian seniors aged 65 and older, falls accounted for 57% of deaths due to injuries among females and 36% among males. Of seniors who do survive their injuries, many never fully recover, leaving them with chronic pain, reduced functional abilities, restriction of activities that may lead to future falls, and a fear of falling again.”⁶

In the 2008-2009 RRFSS, 21.1% of respondents reported having fallen in the last 12 months, and 32.2% of these falls resulted in an injury (

Figure 42).

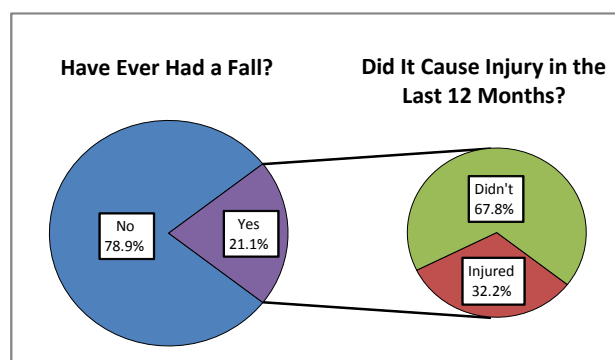


Figure 42 - Ever Fallen and the Consequences of the Fall

⁵ Public Health Agency of Canada. *Unintentional Injuries in Childhood: Results from Canadian Health Surveys*. http://www.phac-aspc.gc.ca/dca-dea/publications/unintentional_e.html; Accessed December 2007

⁶ Public Health Agency of Canada. *Interventions for Preventing Falls and Fall-Related Injuries Among Community Dwelling Seniors: A Systematic Review of the Literature*. http://www.phac-aspc.gc.ca/seniors-aines/pubs/best_practices/bp_introduction_e.htm; Accessed December 2007

Respondents aged 18-24 years were the most likely to have experienced a fall, however these falls were less likely to cause injury in the younger respondents. Compared to male respondents, females had a similar chance of experiencing a fall but they were much more likely to be injured when they fell (Figure 43).

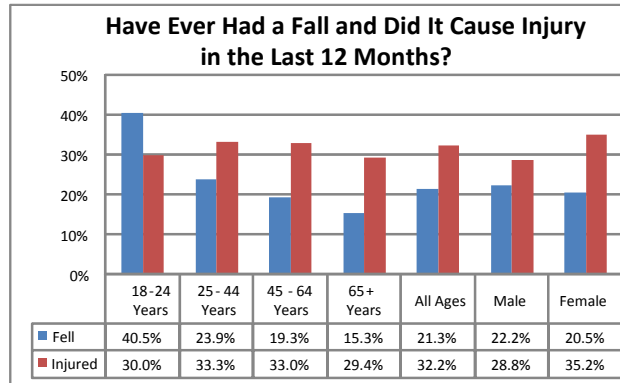


Figure 43 - Ever Fallen and the Consequences of the Fall, by Age and Sex

Women’s Health

A pap test is a screening test used for the early detection of cervical cancer. It is recommended that testing be done on an annual basis for all women over the age of 18, or when a woman first becomes sexually active.⁷

In the 2008-2009 RRFSS, 95.4% of female respondents reported ever having a pap test. Of these respondents, 42.7% had the test within the last year, 28.9% of them in the past 1-2 years and 21.3% had the test 3 or more years ago (Figure 44).

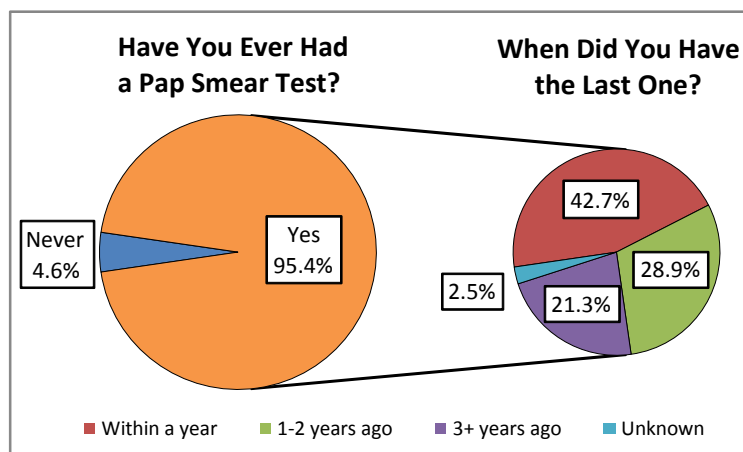


Figure 44 - Ever Had a Pap Smear Test and Timing of Previous Test

⁷ Canadian Women's Health Network <http://www.cwhn.ca>

When asked about their reasons for getting their last pap test, 85.6% of respondents had the test as part of a regular check-up, 7% were concerned about a problem and 2.9% had the test for other reasons (Figure 45).

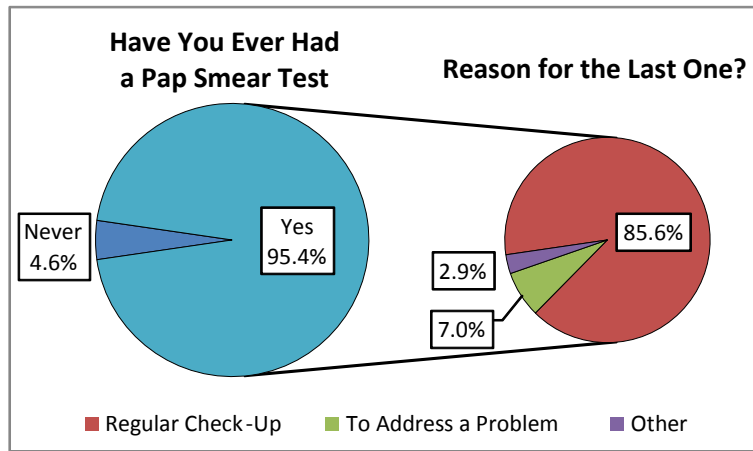


Figure 45 - Ever Had a Pap Smear Test and Reason for the Last One

The respondents who reported not having a pap test within the last 3 years were asked about their reasons for not having the test done. For 44.3% of respondents the reason was that they had a hysterectomy and did not need the test anymore or because they were told that they did not need it (10.7%). Another 18.3% reported that did not know they needed it or they did not want to have it (13.0%) and 8.4% reported not having a pap test because of their age (Figure 46).

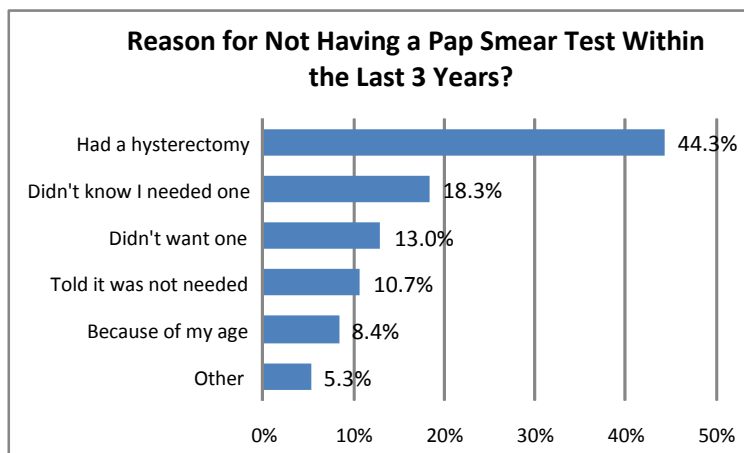


Figure 46 - Reasons for Not Having a Pap Smear Test

Physical Activity

Physical activity not only improves health and reduces the risk of chronic diseases, but it can also have a positive economic and social impact on human life. However, based on data from the Canadian Community Health Survey, in 2007-2008, more than half (52%) of Canadians over 19 years of age were inactive⁸. Enhancing the awareness of health and encouraging physical activity in the local community are still big challenges facing public health professionals today.

Awareness of Recreational Facilities

In the 2008-2009 RRFSS, 84.7% of respondents in the EOHU region were aware of local recreational facilities such as walking, biking, or nature trails, however, only 44.6% of residents had taken advantage of these local physical activity resources in the last 12 months (Figure 47).

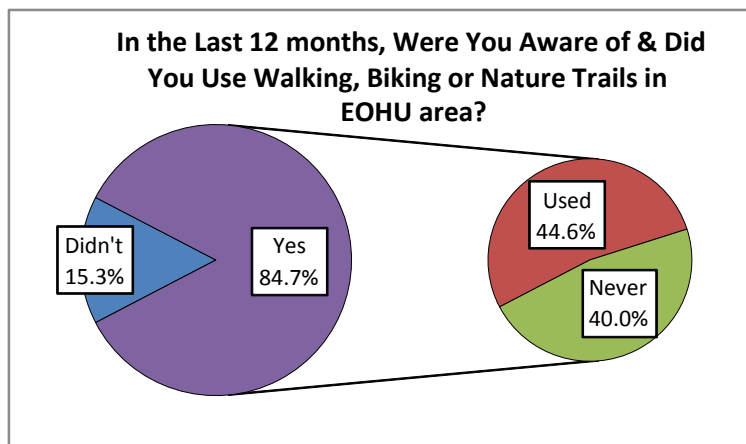


Figure 47 - Awareness of Local Physical Activity Resources

When respondents were asked if they had used other municipal facilities such as pools, ice rinks, playing fields, and parks for their physical activities, sports, or other recreational activities in the past 12 months, 53.1% said that they had.

Among respondents between the ages of 18 and 44 years old, more than 75% said they had used community recreational facilities in the past year. The proportion declined for respondents 45 years and older; and only a quarter of respondents aged 65 years and over said they had used community recreational facilities for physical activity (Figure 48).

⁸ Physical Activity Levels among Canadian Adults, http://www.cflri.ca/eng/levels/adult_levels.php

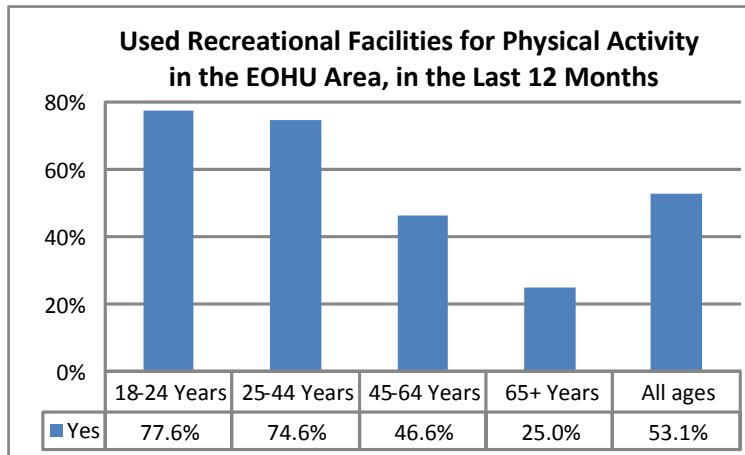


Figure 48 - Use of Other Recreational Facilities for Physical Activity

Level of Physical Activity

Every participant under the age of 70 years was asked about the amount of time they spend doing physical activity in their leisure time. Based on the calculation method from the International Physical Activity Questionnaire (IPAQ)⁹, 53.4% of respondents reported high levels of physical activity, 25.8% had moderate levels, and 20.9% reported low levels of physical activity (Figure 49).

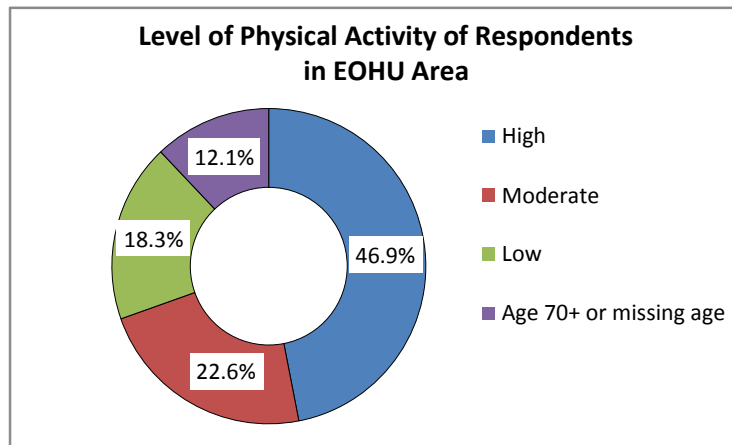


Figure 49 - Physical Activity Levels of Participants

⁹ Guidelines for Data Processing and Analysis of the International Physical Activity Questionnaire (IPAQ), <http://www.ipaq.ki.se/scoring.pdf>

The reported levels of physical activity were significantly different for males and females in the EOHU region. More males reported high levels of physical activity than females (59.9% for males, 47.8% for females). On the other hand, more females reported moderate and low levels of physical activity than males (Figure 50).

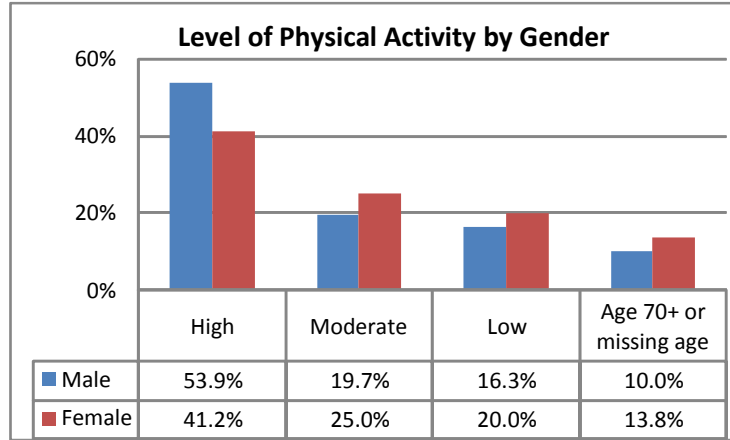


Figure 50 - Level of Physical Activity, by Gender

More than 70% of males and 60% of females reported doing vigorous physical activity at least one day every week. Moreover, 16.7% of males and 10.8% of females reported doing vigorous physical activity every day (Figure 51).

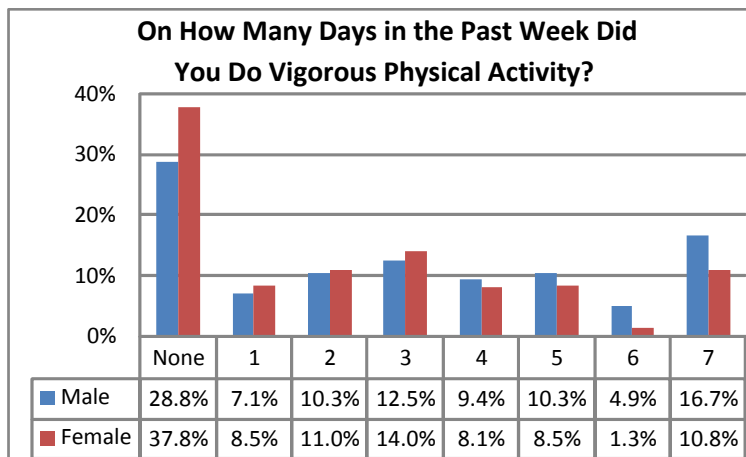


Figure 51 - Vigorous Physical Activity of Participants

Similarly 70.8% of males and 64.7% of females reported doing moderate physical activity at least one day every week (Figure 52).

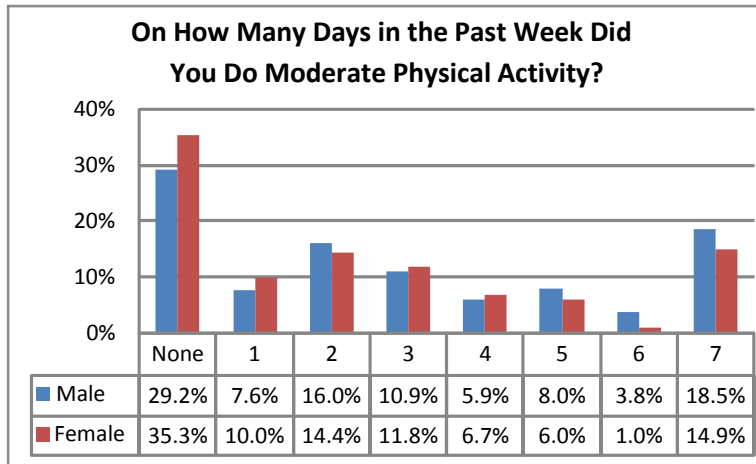


Figure 52 - Moderate Physical Activity of Participants

More than half of respondents reported walking for at least 10 minutes at a time every day. Approximately 10% of respondents reported that they did not walk at all during the week (Figure 53).

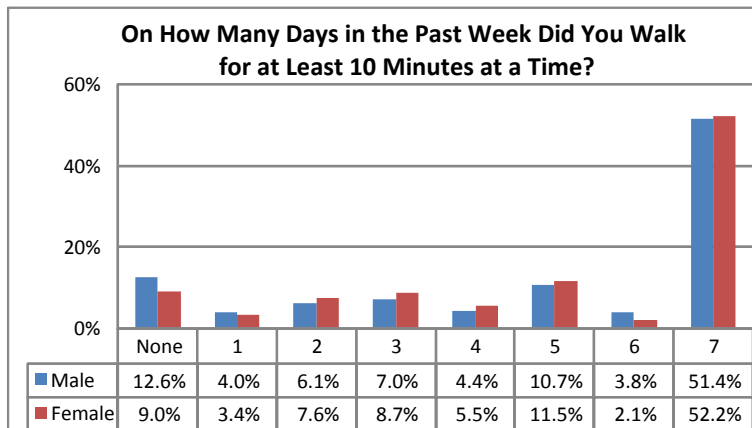


Figure 53 - Walking for at Least 10 Minutes at a Time

Behavioural Risk Factors

This section provides an overview of risk behaviours such as tobacco use, alcohol use, driving safety, and sun safety.

Smoking

Prevalence of Smoking

The World Health Organization (WHO) estimates that tobacco caused 5.4 million deaths in 2004¹⁰ and 100 million deaths over the course of the entire 20th century¹¹. In Canada, there has been a clear drop in smoking prevalence over the last decade. From 2000 to 2006, the prevalence of smoking has decreased from a high of 25% of the population to less than 18% of the population¹².

The prevalence of smoking in the EOHU area is still high. In the 2008-2009 RRFSS, the prevalence of current smokers was 23.2% of all respondents, which includes 18.8% daily smokers and 4.4% occasional smokers (Figure 54). This is more than 5% above the national average.

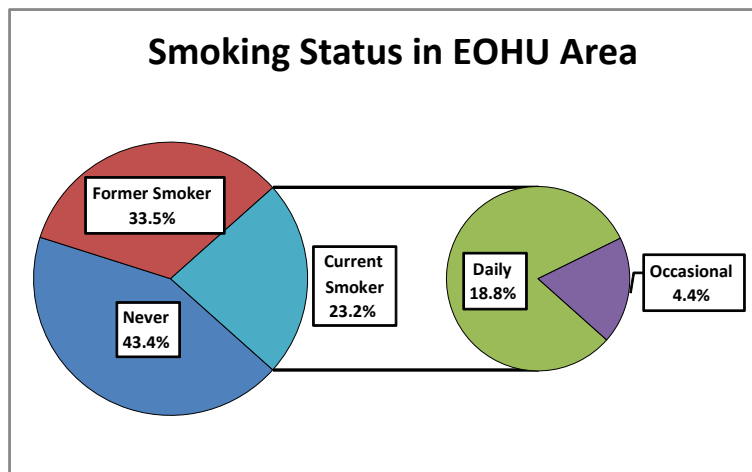


Figure 54 - Smoking Status in the EOHU Area

Age and sex were strongly associated with the prevalence of smoking. The highest rate of smoking was among 25-44 year olds and was lower in the other age groups, especially for occasional smokers. The proportion of current smokers was lowest among seniors. The

¹⁰ WHO *global burden of disease report 2008*
http://www.who.int/healthinfo/global_burden_disease/GBD_report_2004update_full.pdf

¹¹ WHO *Report on the Global Tobacco Epidemic, 2008* http://www.who.int/tobacco/mpower/mpower_report_prevalence_data_2008.pdf

¹² Statistics Canada. *2000 to 2006 Canadian Tobacco Use Monitoring Survey*. <http://www.statcan.ca/english/freepub/82-003-XIE/2006008/articles/smokingbans/findingsmokingbans-en.htm>

proportion of daily smokers was consistent from 45-64 years of age to 65 years and up. There were also more male current smokers than female current smokers (Figure 55).

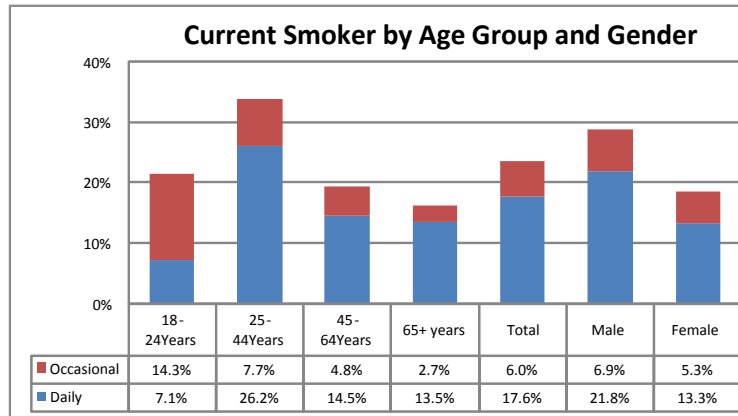


Figure 55 - Current Smoker, by Age Group and Gender

Comparing previous RRFSS smoking results over time, the prevalence of smoking showed a decrease between 2003 and 2005 from 26.8% to 22.4%. However, after 2005 there was no further decrease; the proportion of current smokers remained between 22% and 24% from 2005 to 2009 (Figure 56).

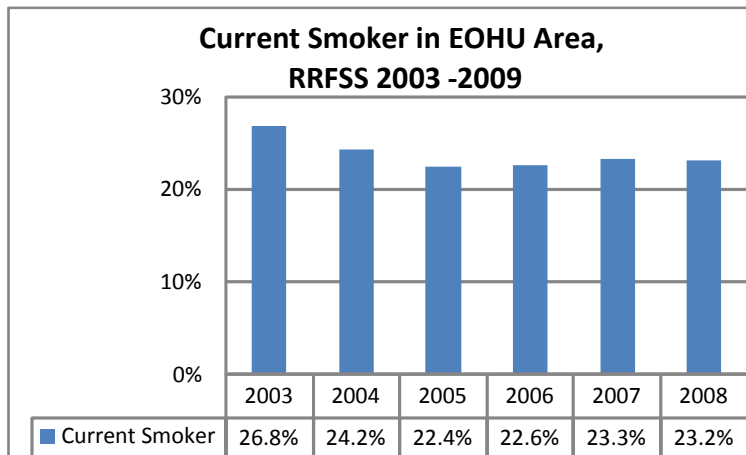


Figure 56 - Current Smoker, RRFSS 2003-2009

Second-Hand Smoke

Second-hand smoke (SHS) is also known as passive smoking or environmental tobacco smoke (ETS). There is plenty of scientific evidence showing that second-hand smoke is probably the most serious indoor pollutant, especially for young children¹³.

Second-hand smoke is also a serious problem for residents in the EOHU area. In the 2008-2009 RRFSS, 18.2% of respondents reported that someone regularly smokes inside their home. Age and gender were strongly associated with the prevalence of passive smoking, especially among young adults. 26.7% of male respondents aged 18-24 years reported that someone regularly smokes inside their home, compared to 20.0% for females. Respondents aged 45-64 years also reported higher proportions of regular indoor smoking than other age groups (Figure 57).

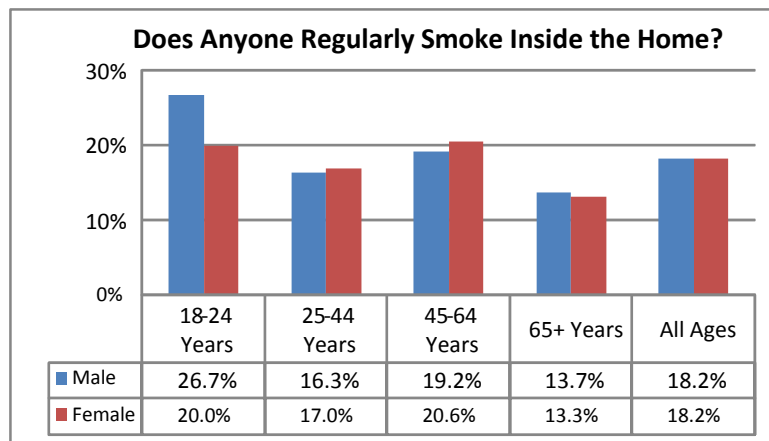


Figure 57 – Second-Hand Smoke Inside the Home, by Age and Gender

¹³ *Health Effects of Indoor Air Pollution* <http://www.nationalasthma.org.au/content/view/41/101/>

In addition, 24.6% of respondents reported that they allow visitors to smoke inside the home, and 7.4% of respondents allow visitors to smoke inside the home without any restrictions (Figure 58).

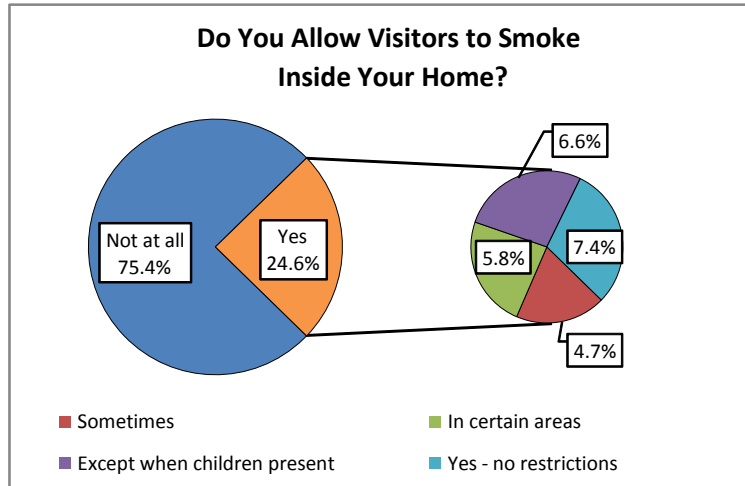


Figure 58 - Visitors Smoking Inside the Home

19.7% of respondents reported that they allow smoking in the vehicle when they are driving (Figure 59).

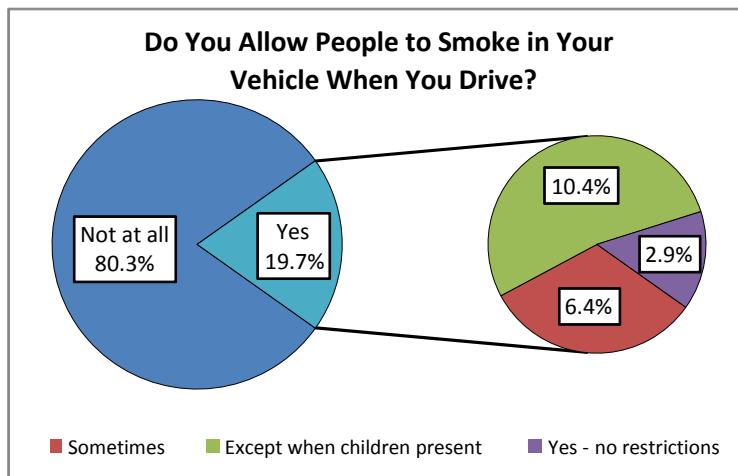


Figure 59 - Allow Smoking in Vehicle

Alcohol Use

Alcoholic beverages are consumed by large proportions of adults in most countries of the world. Though consuming alcohol does not cause significant problems for most drinkers, over consumption of alcohol is problematic because it reduces attention and slows reaction speed. The World Health Organization (WHO) reported that globally alcohol causes 3.2% of all deaths or 1.8 million deaths annually. About half of the deaths attributable to alcohol are the result of injuries sustained while intoxicated¹⁴.

In the 2008-2009 RRFSS, participants reported on their alcohol consumption and more than 80% of respondents said that they had had at least one alcoholic beverage in the last 12 months (Figure 60).

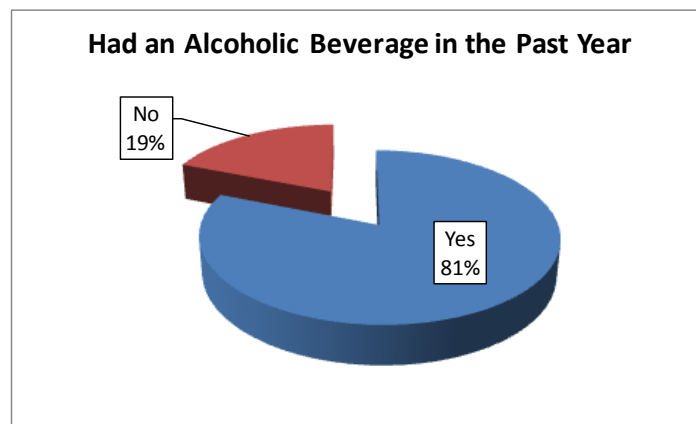


Figure 60 - Had an Alcoholic Beverage in the Last Year

¹⁴ Alcohol and Injury in Emergency Departments: *Summary of the Report from the WHO Collaborative Study on Alcohol and Injuries*. 2007. http://www.who.int/substance_abuse/publications/alcohol_injury_summary.pdf

Almost half of respondents reported drinking an alcoholic beverage on less than one day per week. However, 16.7% of respondents reported drinking alcoholic beverages on more than 3 days every week (Figure 61).

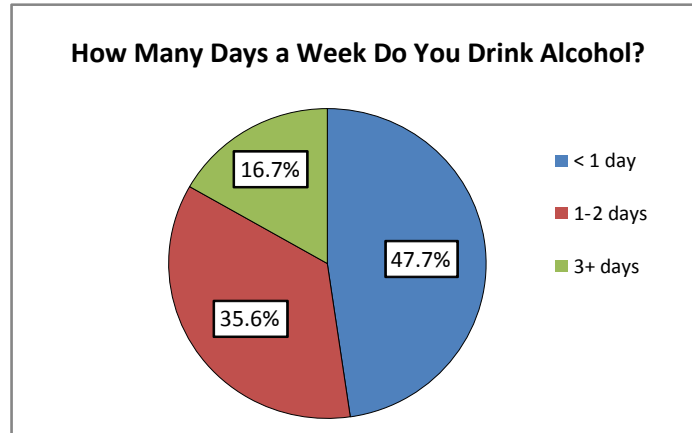


Figure 61 - Frequency of Alcohol Consumption

There is a difference in alcohol consumption between male and female respondents. Males reported that they drink more often and drink larger quantities than females (Figure 62, Figure 63).

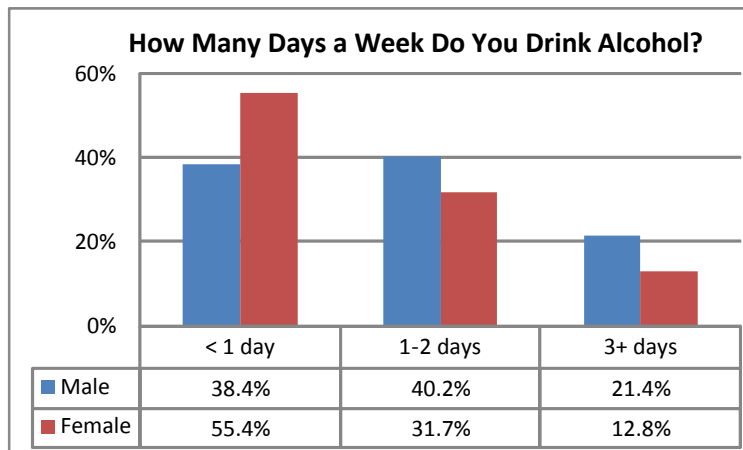


Figure 62 - Number of Days per Week Alcohol Was Consumed

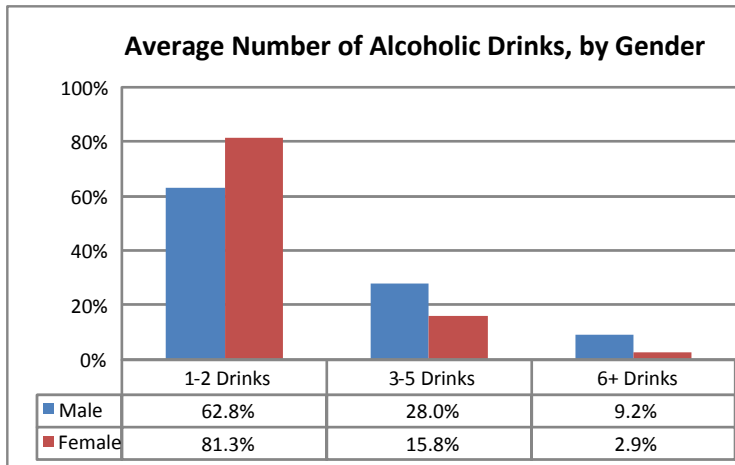


Figure 63 - Average Number of Alcoholic Drinks, by Gender

Younger drinkers, between the ages of 18 and 24, also report having more drinks on each occasion than respondents from other age groups (Figure 64).

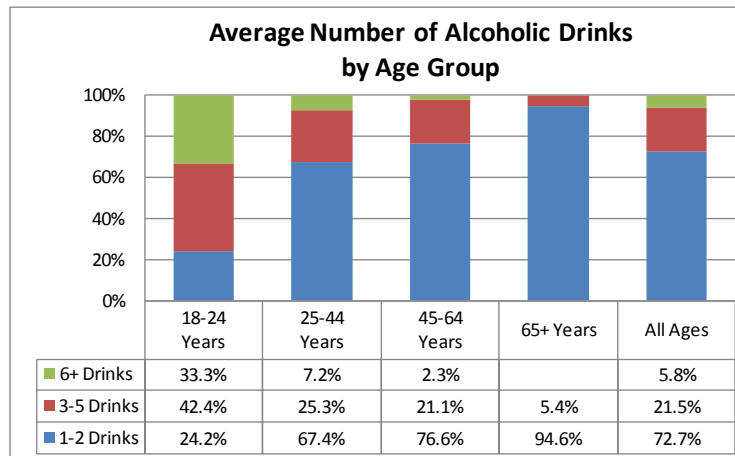


Figure 64 - Average Number of Alcoholic Drinks, by Age Group

Driving Safety

The results of the 2008-2009 RRFSS indicate that 86.9% of respondents drove a motor vehicle in the last year and that 54.8% of them drove it every day (Figure 65).

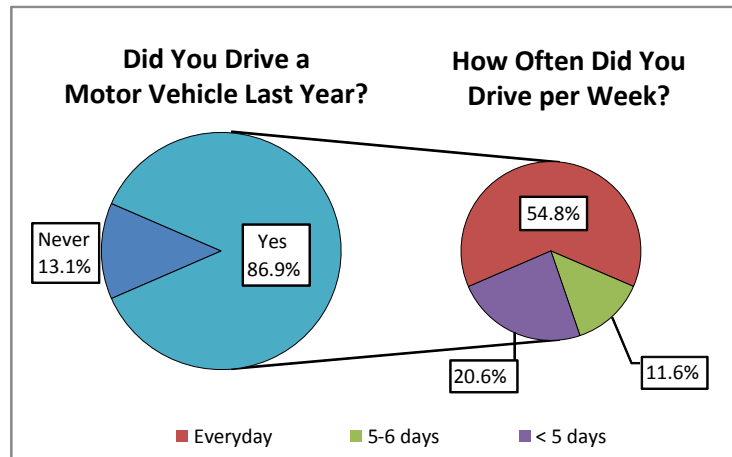


Figure 65 - Driving in the Past Year

Overall, 27.1% of respondents reported that they had driven a recreational vehicle such as a snowmobile, boat or all-terrain vehicle in the last 12 months. More than 40% of respondents less than 45 years of age said that they had driven a recreational vehicle in the past year¹⁵ (Figure 66).

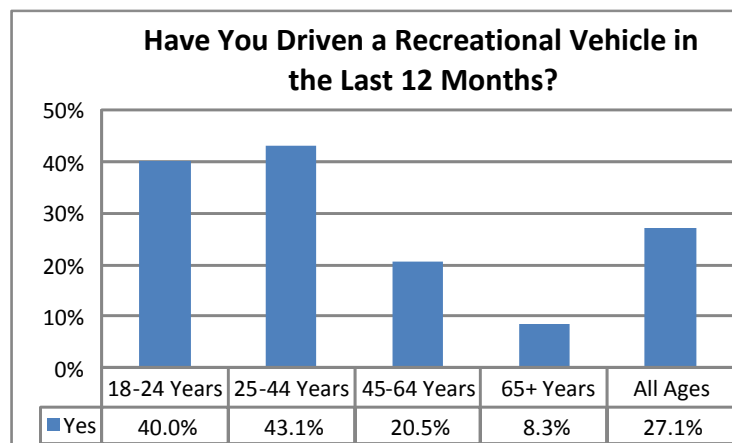


Figure 66 - Recreational Vehicle Driving in the Past Year

¹⁵ Note: Results are based on a small sample size as only 17.1% of the responses for Figure 65 and Figure 66 were valid.

More than 40% of respondents reported using a cell phone or other mobile device while driving. Approximately one fifth of respondents said they always or almost always use their cell phones while driving (Figure 67).

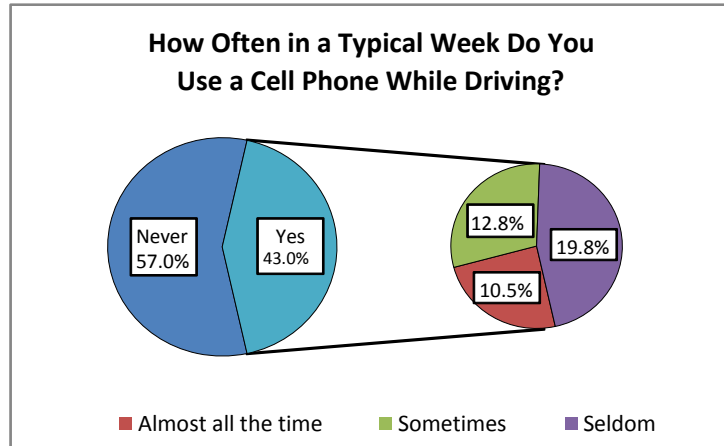


Figure 67 - Cell Phone Use While Driving

Almost half of the respondents reported ever using a hands-free mode on their cell phone while driving. 22.7% of respondents use their cell phone in a hands-free mode almost all of the time while driving (Figure 68).

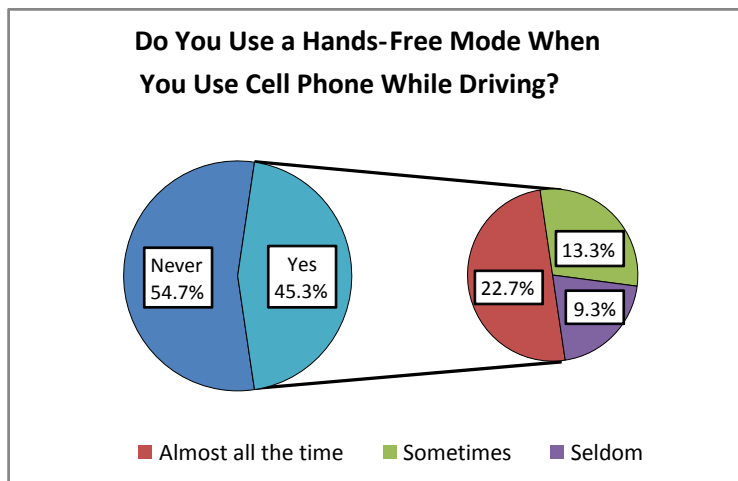


Figure 68 - Use of Hands-Free Device While Driving

Just under 10% of respondents reported using text messages for communication while driving; 1.7% said they always or almost always use text messages when they drive (Figure 69).

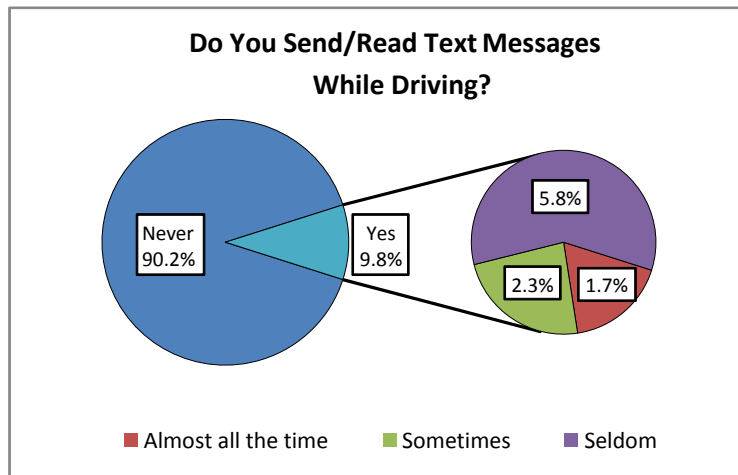


Figure 69 - Text Messaging While Driving

Sun Safety

Sunburns are caused by overexposure to ultraviolet (UV) radiation, commonly from the sun's rays. Since UV radiation can damage the DNA in living tissue such as skin cells, it is believed that there is a strong relationship between sunburns and malignant melanoma. Sunscreen is widely recommended to prevent sunburn. Clothing, including hats, is considered the preferred skin protection method¹⁶. Overexposure to ultraviolet (UV) radiation can also cause damage to eyesight.

In 2008-2009 RRFSS, 30% of respondents said they had been sunburned in the last 12 months. The most affected age group was individuals less than 45 years. Males reported more sunburns than females (Figure 70).

¹⁶ World Health Organization, International Agency for Research on Cancer "Do sunscreens prevent skin cancer" Press release No. 132, June 5, 2000

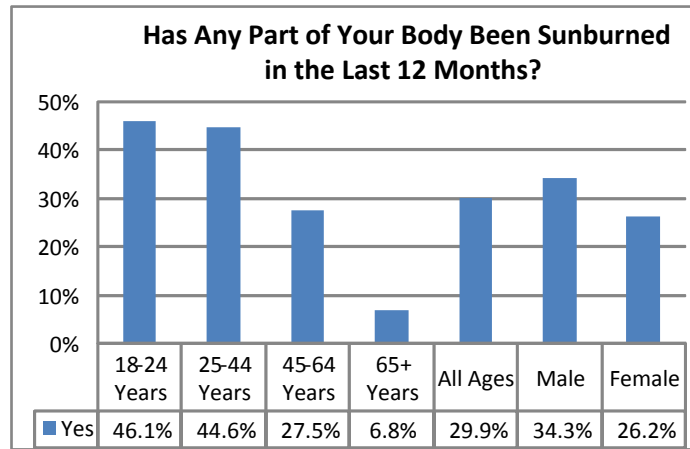


Figure 70 - Sunburned in the Last Year

Despite the dangers associated with sun damage, only 11% of respondents reported that they always put effort into avoiding the sun. On the other hand, more than 38% of respondents rarely or never avoid the sun (Figure 71).

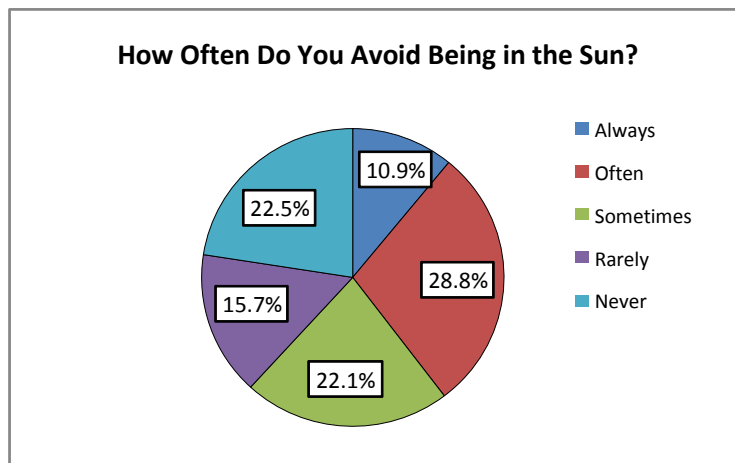


Figure 71 - Sun Avoidance

Almost half of respondents reported that they always wear sunglasses with UV protection when in the sun. However, more than 20% of respondents rarely or never wear sunglasses with UV protection when in the sun (Figure 72).

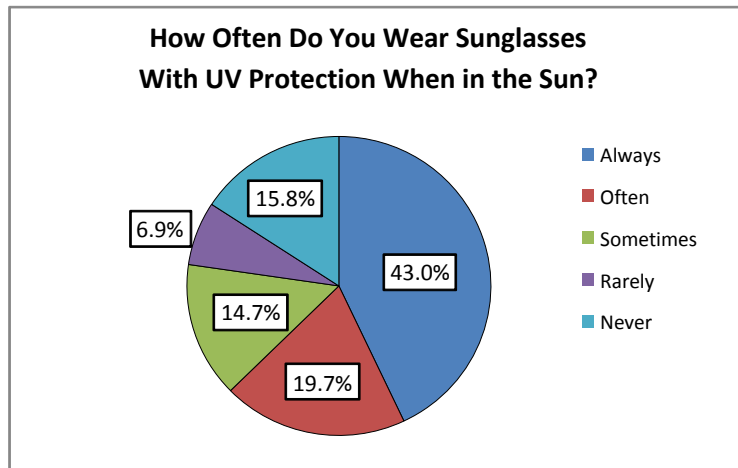


Figure 72 - Sunglasses With UV Protection When in the Sun

Only about half of respondents said they always or often wear protective clothing when in the sun and about one third rarely or never wear protective clothing as a precaution during sun exposure (Figure 73).

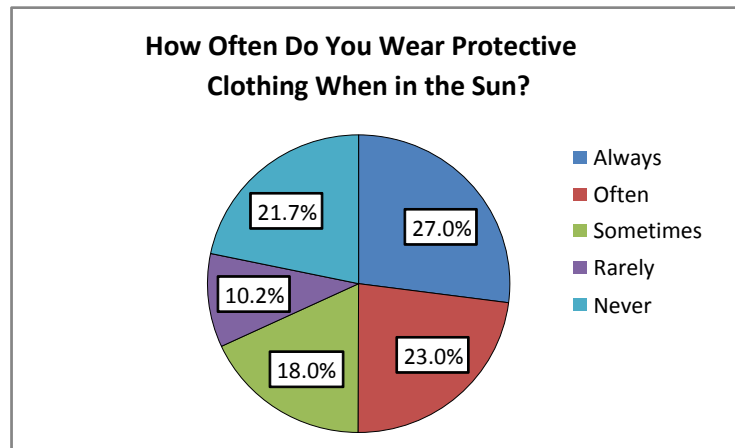


Figure 73 - Protective Clothing When in the Sun

In comparison to people who reported wearing sunglasses with UV protection and protective clothing in the sun, far fewer people reported using sunscreen on a regular basis during sun exposure. 36.2% of respondents reported always or often using sunscreen, while 42.6% of respondents said they rarely or never use sunscreen when out in the sun (Figure 74).

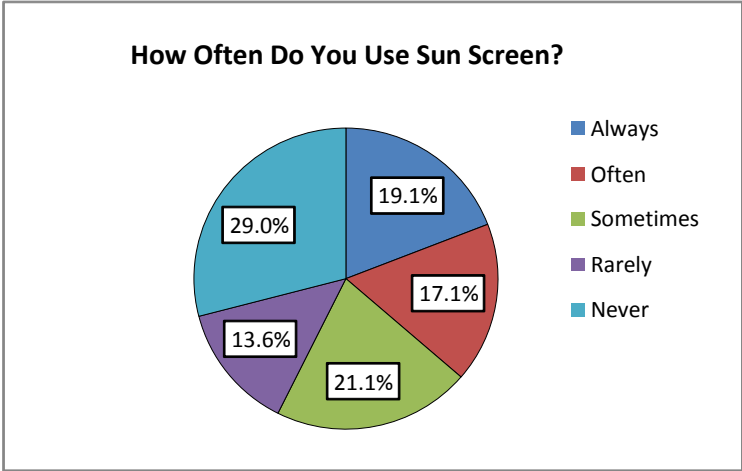


Figure 74 - Sunscreen Use

Approximately 6.9% of respondents said they had used artificial tanning equipment in the last 12 months; of those respondents, the majority (4.6%) used artificial tanning equipment less than 10 times in the last year (Figure 75).

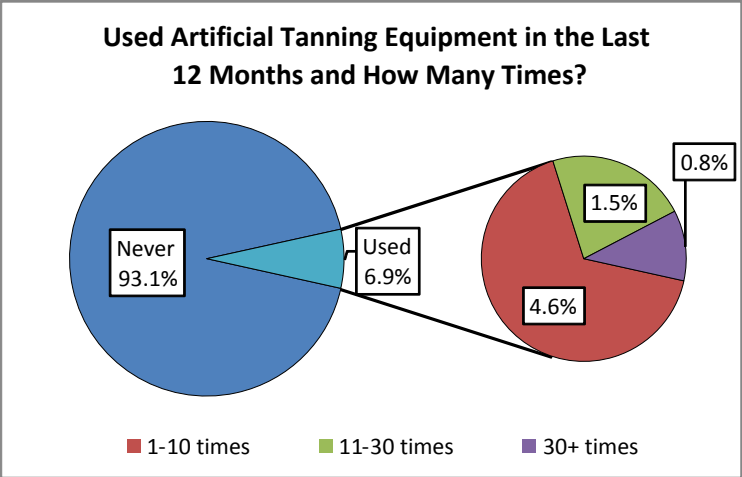


Figure 75 - Artificial Tanning in the Past Year

Emergency Planning

In the 2008-2009 RRFSS, participants were questioned about their awareness of emergency planning and disaster preparation for their families and the local community.

In the EOHU region, 84.1% of respondents said that they were aware of the emergency plan. Based on their municipality of residence, respondents from Cornwall had the most awareness of their local emergency plan (Figure 76).

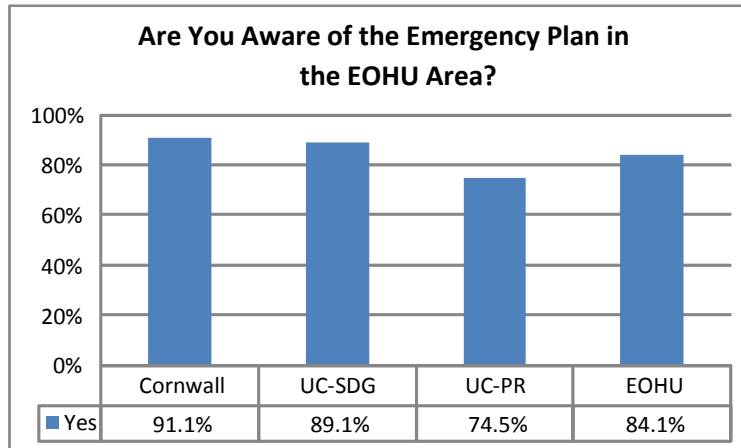


Figure 76 - Awareness of the Emergency Plan in the EOHU Area

Of the respondents who knew about their local emergency plan, 38.6% had heard about it from a newspaper or magazine. Other important sources of information included friends, pamphlets, the radio and information from health professionals (Figure 77).

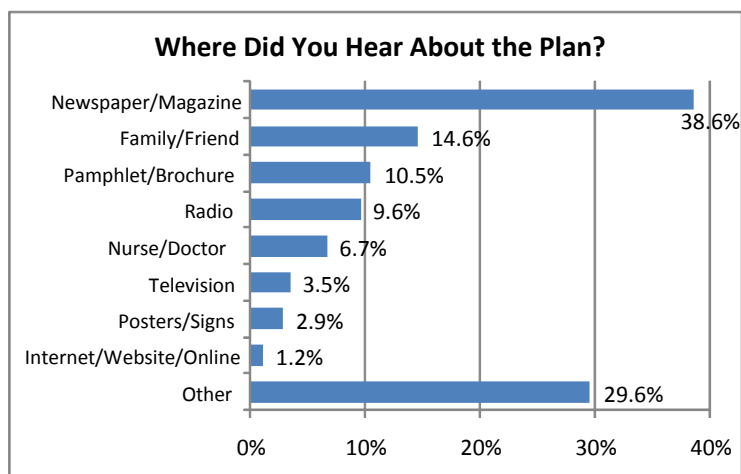


Figure 77 - Sources of Information for the Local Emergency Plan

In case of a disaster, approximately 60% of respondents reported that they would prefer receiving information from the television or radio and from a municipal office (Figure 78).

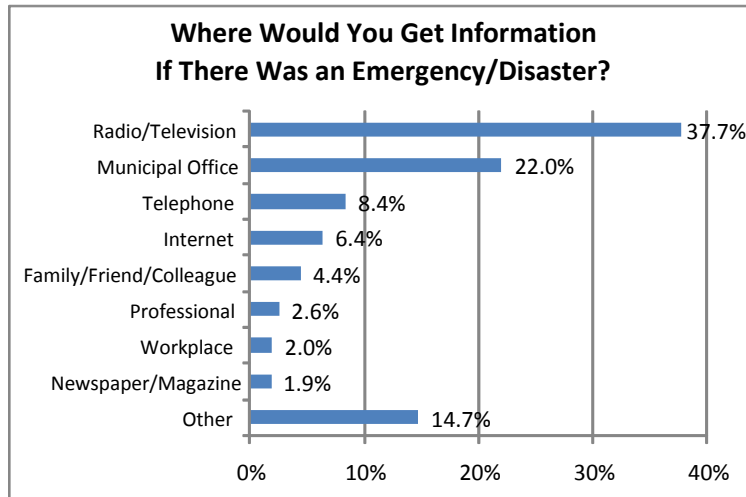


Figure 78 - Sources of Emergency/Disaster Information

43.6% of respondents said that they have a family plan for emergencies (Figure 79). Additionally, 82.8% of respondents have set aside food in case of a disaster; more than 70% have stored bottled water and essential medication, and more than half have set aside some emergency money (Figure 80).

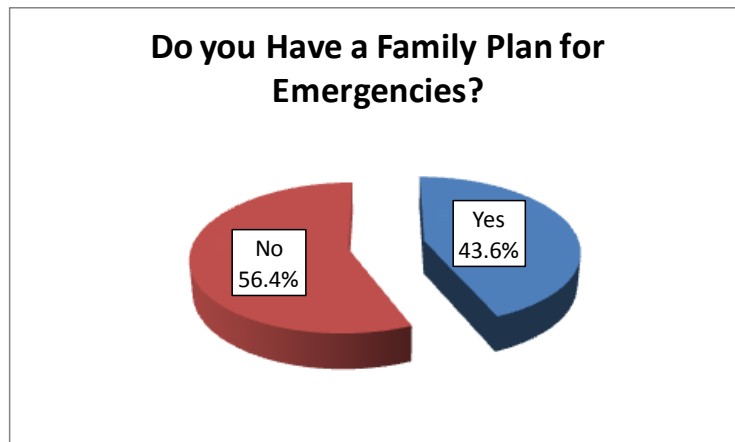


Figure 79 - Family Emergency Planning

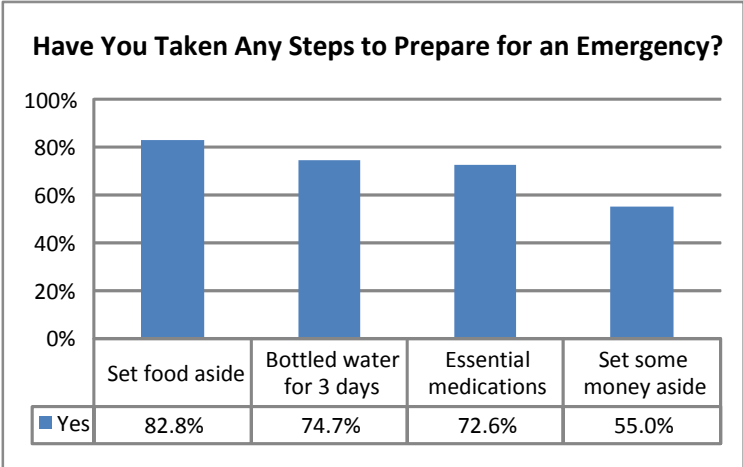


Figure 80 - Steps Taken to Prepare for an Emergency

Summary

For the 2008-2009 cycle of the RRFSS, the Eastern Ontario Health Unit (EOHU) joined with the other participating health units in Ontario. This cycle had a total of 1208 respondents.

Socio-Demographics

Overall, in the 2008-2009 RRFSS, the five counties of the EOHU area were all well represented. The age distribution, however, reveals that seniors, especially those 75 years and up, were overrepresented compared to both the previous RRFSS surveys and the 2006 Census data. Overall, there were also more females than males who participated in the survey (Male:Female=45.9%: 54.1%).

The distribution of home language in the EOHU area showed expected variation across the two united counties. More than half of the population in UC-PR speaks French at home while the majority of the population of UC-SDG speaks English at home.

Household income is often associated with a number of other socio-demographic factors such as education, age, employment and marital status. In the 2008-2009 RRFSS, the median household income before taxes was \$50,509, which is slightly lower than median reported in previous RRFSS surveys or in the 2006 Census. However, the proportion of respondents with a household income of more than \$100,000 per year was significantly higher than what was seen in previous surveys.

General Health and Chronic Disease

Self-reported health status is strongly associated with both socioeconomic status and subsequent mortality. In the EOHU region, 84.5% of all respondents reported their health status as good, very good or excellent compared to 15.5% who reported their health status fair or poor.

According to BMI classifications more than three quarters of males and half of females in the EOHU area are overweight or obese. Information from other sources supports these findings that the proportion of obesity in the EOHU area is higher than the provincial average and has made obesity prevention a focal point in the public health of this region¹⁷.

Age and gender are strongly associated with the prevalence of chronic disease. Seniors aged 65 years and up reported higher rates of high blood pressure and diabetes; more females had high

¹⁷ EOHU Area Health Statistics: http://www.eohu.ca/EOHUHealthIndicators/pdf/7_Behaviour_Health.pdf#pagemode=bookmarks&view=FitH

blood pressure and more male had diabetes. Asthma, on the other hand, was more commonly reported in the younger population.

Screening tests are effective in the early detection of cancer. In the 2008-2009 RRFSS cycle, 41.9% of respondents aged 40 years and up reported having had a colorectal screening test. Over 95% of female respondents aged 18 years and up reported having had a pap test; 70.6% of them were tested in the past 2 years.

Overall, 37.3% of respondents received a flu shot for the 2008 flu season. Seniors and respondents with chronic conditions were the most likely to have received their vaccine.

Behavioural Risk Factors

Smoking is still a serious problem in the EOHU area. In the 2008-2009 RRFSS, the prevalence of current smokers was 23.2% of all respondents, which is 5% higher than the national average. The prevalence of current smokers was highest among those aged 25-44 years and lower among seniors and respondents under 25 years of age.

Overall, 18.2% of respondents reported that someone regularly smokes inside the home. 24.6% of respondents also allow visitors to smoke inside the home and 19.7% said they allow smoking in the vehicle when they are driving.

The overconsumption of alcohol is strongly associated with mortality and morbidity due to disease and injury. In the 2008-2009 RRFSS, 16.7% of respondents in the EOHU area reported drinking alcoholic beverages on more than 3 days every week. Males reported drinking alcohol more often and in larger quantities than females. Younger drinkers (those 18 to 24 years of age) also have more drinks on each occasion than respondents from other age groups.

In the 2008-2009 RRFSS, more than 40% of all respondents reported using a cell phone while driving and half of them use it almost all of the time when driving. Around 10% of respondents use text messages for communication while driving.

Sun exposure and sunburns are strongly related to malignant melanoma as well as eyesight damage. In the 2008-2009 RRFSS, 30% of respondents in the EOHU area reported being sunburned in the last 12 months and approximately 38% of respondents reported rarely or never avoiding the sun. Only 36.2% of respondents reported always or often using sunscreen, while 42.6% said that they rarely or never use sunscreen when out in the sun.

Physical Activity

Enhancing the awareness of health and encouraging physical activity in the local community are still big challenges facing public health professionals today. While 84.7% of respondents in the EOHU region were aware of local recreational facilities, only 44.6% of residents had taken advantage of these resources in the past 12 months.

Based on the calculation method from the International Physical Activity Questionnaire (IPAQ)¹⁸, 53.4% of respondents reported high levels of physical activity, 25.8% had moderate levels, and 20.9% reported low levels of physical activity. Males reported overall higher levels of physical activity than females.

Around 70% of males and 60% of females reported doing vigorous physical activity at least one day per week. Moreover, 16.7% of males and 10.8% of females reported doing vigorous physical activity every day.

Injury Prevention and Emergency Plan

In the 2008-2009 RRFSS, 21.1% of respondents reported having fallen in the last 12 months, and 32.2% of these falls resulted in an injury. The younger the respondents, the more likely they were to have experienced a fall. On the other hand, falls were less likely to cause injury in younger respondents compared to respondents from older age groups.

84.1% of respondents in the EOHU region were aware of the local emergency plan and 43.6% have a family plan for emergencies. Most respondents have set supplies in case of a disaster, including food, bottled water, essential medication and emergency money.

¹⁸ *Guidelines for Data Processing and Analysis of the International Physical Activity Questionnaire (IPAQ)*, <http://www.ipaq.ki.se/scoring.pdf>