AN EXPLORATORY STUDY OF SUBJECTIVE MENTAL HEALTH AND FREQUENCY OF LEISURE ENGAGEMENT

by

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Abstract

Mental health has traditionally been understood as the presence or absence of disease – however, research shows it is much more. Mental health is a complete state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make contributions to her or his community (WHO, 2007). As an aspect of health, the study of subjective mental health and leisure engagement is emerging in the literature. Researchers are beginning to acknowledge the importance of subjective mental health as an important facet of peoples' lives.

The purpose of the current study was to examine how subjective mental health; socioeconomic status; presence or absence of a partner; sex and age associate with leisure engagement frequency. Through the use of a secondary data set and regression analysis the results of the study, guided by Avedon's (1974) patterns of social interaction reveal that there are many complexities involved in choosing and engaging in leisure activities. Practitioners and researchers often forget these complexities of leisure engagement, along with the social and cognitive requirements for engagement. Recommendations as a result of this study include the use of Avedon's (1974) model to understand the complexities of leisure engagement and to ensure a meaningful and satisfying leisure lifestyle. This was done by proposing Avedon's (1974) postulates as a possible way to explain the social, psychological and physical requirements of an activity, which allowed the researcher to understand possible explanations for subjective mental health and leisure engagement.

List of Abbreviations Used

ANOVA – Analysis of Variance
TR – Therapeutic Recreation
CIW – Canadian Index of Wellbeing

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Chapter 1

Introduction

Background of Study

The term leisure has been studied from physical, social and psychological perspectives (Iwasaki, Zuzanek, & Mannell, 2002) and has been found to enhance the wellbeing of people across their life course (Carruthers & Hood, 2004; Iwasaki, et al., 2002; Nimrod, Kleiber & Berdychevsky, 2012). People are confronted with everyday events from school, work, and family obligations, to retirement that may affect their subjective wellbeing. Approximately 20 percent of the Canadian population has been identified with needing some type of mental health support (Hopper & Ferries, 2014) and as the levels of mental health challenges and illness continue to rise among the Canadian population, researchers have begun assessing the importance of understanding mental health from a more holistic approach (Nimrod et al., 2012). If scholars wish to give individuals their voice back, research should begin moving towards a more holistic approach, one that understands that mental health is more than just the absence of disease. The literature has demonstrated that individuals' self-reported (subjective) rating of their mental health status may be a better indicator of health than that of standardized medical assessment tools. This is important because mental health has been recently discussed by a variety of scholars as an important predictor of peoples' leisure lifestyle (Berdychevsky, Nimrod, Kleiber, & Gibson, 2013; Nimrod et al., 2012).

Mental health according to the World Health Organization (2007) is defined as a "state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community (np)."

The study of leisure and its influence on people's mental health provides insights into the benefits of leisure to the participants' overall health by showing that individuals begin identifying feeling a stronger sense of wellbeing (Carruthers & Hood, 2004). One's mental health status plays a key role in the determination of other facets of overall health such as physical and psychosocial (Caldwell, 2005; Nimrod et al., 2012; Ponde & Santana, 2000; Searle, Mahon, Iso-Ahola, Srolia, & van Dyck, 1995). For example, an individual who has a high level of subjective mental health may have more motivation to engage in leisure opportunities than people with a lower level and who may not have that same level of motivation. The study of leisure and its effects on mental health and wellbeing has been well documented by a variety of scholars (Berdychevsky, et al., 2013; Carruthers & Hood, 2004; Iwasaki et al., 2002; Nimrod et al., 2012). Leisure has benefits to individuals' mental health by providing opportunities for social engagement, release from work-family obligations, and pure enjoyment (Harvey, Delamere, Prupas, & Wilkinson, 2010; Kull, 2002). The benefits of leisure do not single out one age group or sex, but rather any prospective leisure participant. Leisure engagement and time spent in leisure may however differ among age groups, abilities and sex (Harvey & Singleton, 1988; Kelly, 1990; Shaw, 1985). Further, it is known that people who have lower levels of perceived mental health or a mental health "challenge" typically engage in lifestyles that are sedentary in nature (McCormick, Snethen, Smith, & Lysaker, 2012). A mental health "challenge" can be defined as a formal diagnosis of an illness that affects the individuals' ability to live their life fully and fruitfully. This level of inactivity and sedentary behaviours has been linked to comorbid illness such as obesity, heart disease and diabetes (Hopper & Ferries, 2014).

Leisure can be defined in many ways, ranging from leisure as time, leisure as activity, leisure as s subjective experience and leisure as a state of mind (Kelly, 1990). The following definitions, according to Hurd and Anderson (2011) have been utilized in understanding leisure as time: "leisure is time free from obligations, work (paid and unpaid), and tasks required for existing (sleeping, eating)" (p.60). Leisure time is residual time and some people argue it is the constructive use of free time. While many may view free time as all nonworking hours, only a small amount of time spent away from work is actually free from other obligations that are necessary for existence, such as sleeping and eating (Hurd & Anderson, 2011). So, engagement in leisure can include anything that is done during unobligated, un-coerced time, which is separate from activities based around life maintenance tasks such as doing laundry, cleaning and general house maintenance.

Purpose of Study

The purpose of this study was to understand the associations between varying perceived subjective levels of mental health and frequency of engagement in leisure, as the literature shows that individuals' self-rated (subjective) mental health status may in fact be a better predictor of health than traditional forms of diagnosis (Keyes & Westerhof, 2012). Leisure practitioners will need to consider developing and implementing their programs with an understanding of their participants' level of mental health and how they use their leisure engagement and his may allow for outcomes that are both measureable and meaningful. It is known that leisure engagement has benefits for people's overall subjective mental health; however little is known about how people of varying levels of subjective mental health actually are engaged in leisure. The perceived level of mental health and leisure time engagement was investigated through a secondary data sample of the Canadian Index of Wellbeing.

Key Terms

The original data (Canadian Index of Wellbeing-KFLA, 2012) (CIW) measured the wellbeing of Canadians by gathering data on several variables. For the purpose of this study, the use of variables that measured overall subjective mental health and leisure engagement were used.

Mental health is a complete state of psychological wellbeing where individuals are able to actively participate in daily life and can function with an optimal level of happiness. Mental health should not be confused with mental illness, which is a diagnosed illness that inhibits people's ability to function and cope with daily stressors. Mental health is not a euphemism for mental illness and should be considered separately when studying the mental wellbeing of individuals. Mental health has a formal definition of a "state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community" (World Health Organization, 2007). However, there may be various levels of this definition, where individuals do not fulfill all characteristics of the definition, but rather just a select few of them.

Leisure is engagement in activities that are freely chosen, meaningful and un-coerced. These opportunities can be engaged in inside and outside of the home, depending on what is chosen by the individual. Active and passive leisure has not been divided for the purpose of this study and leisure has a formal definition of "leisure is time free from obligations, work (paid and unpaid), and tasks required for existing (sleeping, eating)" (Hurd & Anderson, 2011, p.60). Further, these activities may occur simultaneously, for example going to a restaurant with family to eat dinner.

Research Questions and Research Objectives

It is known that leisure has benefits for people's mental health, but what is unknown is how people of differing levels of subjective mental health are engaged in leisure.

Engagement in leisure activity has benefits in promoting mental health. The dominant area of focus to date has measured how leisure has associations with a person's mental health and what types of constructs (Sex, marital status, ability to cope and socioeconomic status) influence that person's engagement in leisure (Berdychevsky, et al., 2013; Nimrod, et al., 2012; Harvey & Singleton, 1995; 1988; Shaw, 1985; Zuzanek, 1998).

It is possible that leisure engagement patterns vary throughout the life course. The patterns of leisure engagement and engagement patterns according to stage of lifecycle appear to be related to the presence or absence of children, or the presence or absence of a partner (Harvey & Singleton, 1995). Furthermore, factors such as financial support and work constraints also impede or promote the pursuit of leisure engagements. What does this all mean for people's level of subjective mental health and its role in engagement of leisure activities?

Gaitz and Gordon (1972) and Avedon's (1974) theoretical models assisted in framing the pre-requisite knowledge and skills required for engagement in leisure. Avedon (1974) postulated social, physical and cognitive requirements for engagement in leisure and his categories were used to regroup the leisure activities from the CIW data.

Research Question

How does perceived, self-rated (subjective) mental health, presence or absence of a partner, socioeconomic status [income, highest level of education achieved, main activity

(employment status)], age and sex associate with how frequently people engage in leisure opportunities?

Significance of Study

The analysis of leisure engagement among different cohorts according to varying levels of perceived mental health provides another means of comparison for future leisure research. Leisure engagement is typically measured according to its benefit on mental health, and how people's time spent engaged in leisure benefits their perceived level of mental health. This research provided an opportunity to look at the dominant leisure research and to develop an alternative view, an assessment of how people of varying levels of mental health spend their time in leisure opportunities. Further, this research built on existing research by the author that looked into how physical activity as a therapeutic recreation modality is used among individuals faced with a serious mental illness (Hopper & Ferries, 2014). Analyzing a larger set of data in the current research provided an opportunity to assess engagement patterns across varying cohorts in leisure engagement.

The results of this research have the potential to influence therapeutic recreation practice and policy by enabling the understanding of how perceived levels of mental health associates with leisure engagement.

Subsequent Chapters

The subsequent chapters are outlined here. In chapter two, the relevant literature from the mental health and leisure domain is analyzed. Relevant literatures from the leisure patterns of engagement domains are highlighted as well as time use research and potential statistical procedures. In chapter three, information on proposed statistical procedures as well as information on the data set being utilized is provided. Chapter four outlines the statistical

analysis modeling and data results and finally chapter five discusses results and how they are relevant to the literature assessed.

Chapter 2

Review of Literature

The review of literature was divided into the following two sections. The first section analyzed the literature on secondary data analysis. The second section provided information of the benefits of leisure to mental health and how subjective mental health associates with leisure engagement. This section also included information about how people of differing sexes, socioeconomic status and marital status are engaged in leisure. These sections will assist in developing a better understanding of subjective mental health and leisure engagement frequency.

This literature review was inclusive to the association between subjective mental health and leisure engagement in both directions i.e. a person's subjective mental health depicting their leisure engagement and how people engage in leisure and their subjective mental health. However, for the purpose of this study, the literature review was framed to understand subjective mental health and its association with leisure time engagement.

Secondary Data

Secondary data can be defined as "any further analysis of a survey or social data set that presents interpretations, conclusions or knowledge in addition to, or different from those presented in the first report on the inquiry as a whole and its main results" (Singleton, 1988, p.233). The analysis of secondary data means that the researcher is looking at the data from another lens and is not simply mirroring the original study; rather the researcher is examining new questions that were not previously analyzed in the original survey. The data set selected reflects the cohort studied and it provides a researcher the opportunity to harvest further

insights surrounding that cohort. The use of secondary data provides answers to questions that may have been overlooked in the past.

Secondary data analysis provides many benefits to research. Secondary analysis of the data may bring information about a variable that was not previously observed. Hyman (1972) discussed the benefits that secondary data may play in contributing to the greater body of knowledge. The author stated, "if a researcher is given access to data that is available, they may enlarge the total body of knowledge of a field in ways that would not be conceived or elaborated by initial researchers" (p.6).

In the era of technology in which we live, it would be thought that with the vast amount of electronic resources available this would allow for data transmission. Hyman (1972) discusses the implications the future holds on secondary data by stating "the future will weigh heavily on pollsters as they see their surveys being deposited in archives and being held for secondary analysts to utilize" (p.11). Researchers today may be more apt to utilize secondary data rather than collect it themselves and this may be contributed to by the accessibility of such data sets through electronic and technological resources and databases. A lack of resources devoted to conducting particular research may also contribute to the selection of secondary data and can economize on research resources, saving money on researcher salary, survey design and data collection.

Singleton (1988, p.235) outlined five key guidelines that a researcher should use in presenting their secondary data. The author of this proposal has since modified the suggested criterion to six (Hopper, 2014). The criteria are as follows:

1. Identify data source in article (Singleton, 1988).
2. Present data set using the same method as the initial investigation (Singleton, 1988).

3. Identify the question or questions used from the data (Singleton, 1988).

4. Identify the demographics of the study and compare them to the demographics of the present study (Singleton, 1988).

5. If using multiple data sets, present the analysis using the above steps (Singleton, 1988).

6. Provide an explanation to your reader as to why you chose this data set over others. What about it drew your attention to it? Is there a particular survey question(s) that relate heavily to your current research question? (Hopper, 2014).

Leisure and Mental Health among Varying Age Cohorts across the Life Course

Although most of the literature around mental health and leisure is focused on physical activity (Harvey et al., 2010; McCormick et al., 2012), this section of the literature review is focused on leisure activities. Whether it is active or passive leisure, there has been no delineation between physical activity and leisure (Nimrod et al., 2012). Researchers have used physical activity measures and equalized this to leisure engagement (McCormick et al., 2012) and this is only one component of a person's leisure repertoire. Providing background on the benefits of leisure using an all-encompassing definition of leisure will allow for a larger scope of leisure activity engagement and its benefits for mental health. The first section discusses briefly, the benefits of leisure for mental health. The section assessed the intersection between subjective mental health and leisure engagement among various age cohorts.

Benefits of leisure and mental health. It was important to begin by highlighting the benefits that leisure plays in subjective mental health. The growing literature on the use of positive experiences to enhance mental health suggests that leisure could be appropriately applied to enhancing engagement and mood (Berdychevsky et al., 2013; Carruthers & Hood, 2004; Nimrod et al., 2012). Individuals' engagement in leisure provides a means for better

adjustment in everyday life. If a person is aware of the benefits of engagement, they may be more willing to strive for participation opportunities to seek the mental health benefits. This has implications when offering leisure activities for individuals unaware of leisure engagement and the benefits it may have on one's mental health. One way to try and reduce this lack of awareness is through leisure education.

Leisure education provides an avenue in which to provide information to people about the benefits they may experience during leisure engagement (Searle et al., 1995). Coleman and Iso-Ahola (1993) argued that leisure engagement facilitates coping with low levels of mental health or a mental health challenge by facilitating the development of a leisure companion. The sense of control and competence that leisure activities provide are skills easily transferrable to other life situations and help people to cope with lower levels of perceived mental health. These skills that are learned through leisure education and engagement may lead to building on strengths and ability for individuals with a lower subjective mental health rating.

Nimrod et al. (2012) studied depression and leisure engagement and found that participants seemed to recognize that positive experiences they felt during leisure might enhance their mental health status (similar to the findings of Carruthers & Hood, 2004 and Berdychevsky et al., 2013). Participants also felt that the protective effects experienced in leisure engagement were positive, as they valued the social support and leisure companionship (Berdychevsky et al., 2013; Coleman & Iso-Ahola, 1993). Kull (2002) determined that physically active women experienced better mental health than that those who reported having a lower level of mental health. Even a low level of physical activity as an opportunity chosen during leisure time was positively related to the women's mental health level. Engagement in

leisure activity has demonstrated that it has benefits beyond increasing mental health status and for maintaining it. Cassidy (2005) found in the study of leisure and coping that leisure engagement correlated positively and significantly with exercise frequency, assertiveness, problem-solving style, optimism, perceived control, and perceived social support, and significantly and negatively with psychological distress. Exercise frequency is one component of leisure repertoire. Overall, there are a variety of benefits to peoples' mental health status through their leisure engagement.

Subjective mental health and leisure engagement. Mental health has traditionally been understood as the presence or absence of disease. However, there is now evidence that demonstrates mental health is much more than that – a complete state of health that takes into account people's ability to flourish and contribute to their community (World Health Organization, 2007). This preference is based on the theoretical concept that mental health and mental illness is based on a continuum and that simply being disease free does not imply a presence of high mental health status (Keyes & Westerhof, 2012; Snowden, Dhingra, Keyes, & Anderson, 2010). The Canadian Mental Health Association (2012) indicates that mental illness is defined as "…characterized by alterations in thinking, mood or behaviour (or a combination), and impaired functioning over an extended period of time. The symptoms vary from mild to severe depending on the type, the individual, the family and socio-economic environment."

Terms within the literature have often been used interchangeably. Figure 1 illustrates conceptual definitions of mental health, mental illness, subjective wellbeing and subjective mental health.

Term	Conceptual Definition
Mental health	A complete state of health that takes into account people's ability to flourish and contribute to their community
Mental illness	Characterized by alterations in thinking, mood or behaviour (or a combination), and impaired functioning over an extended period of time. The symptoms vary from mild to severe depending on the type, the individual, the family and socio-economic environment.
Subjective well being	A person's self-perception of his/her own overall state of wellbeing – which may include mental health. Their physical, emotional and social environments may influence this.
Subjective mental health	A person's self-perceptions of their complete state of health that takes into account their ability to flourish and contribute to their community.

Figure 1. Conceptual definitions found within the reviewed literature

Since the 1980s, the study of mental health and leisure engagement has been addressed in terms of the benefit that leisure engagement has on one's mental health – typically in the treatment of mental illness through the use of physical activity (McCormick et al., 2012). While the study of leisure engagement and its benefit to mental health are varied, one commonality is leisure has inherently good properties in the treatment and remediation of mental illness and increasing mental wellbeing (Berdychevsky et al., 2013; Iwasaki et al., 2002). This area of research has revealed much about the positive effects leisure has in the association with a person's mental health.

Minimal research has been completed in the area of subjective (self-reported) mental health in relation to the time spent engaged in leisure opportunities across varying age cohorts. People with high levels of subjective wellbeing often show positive outcomes in the myriad of areas and circumstances of life (Heo, Lee, McCormick, & Pedersen, 2010). Although the issue of how does this subjective wellbeing, or in this case, subjective mental health associate with

leisure time engagement specifically has not been widely addressed within the literature. People with high subjective mental health are likely to cope with stress well, succeed in building relationships and do well on the job (Heo et al., 2010). However, attempting to understand the two has implications for the future of leisure research and practice.

Figure 2 provided a framework on which this current section of the literature review is based as well as how the research question was formed. The themes found within the framework include those we already know about the association between leisure engagement (right quadrant) and those that are hoped to emerge (left quadrant) in relation to influences on subjective mental health. It is however possible for the concepts to move in and out of the quadrants depending upon both the individual and the research constructs.

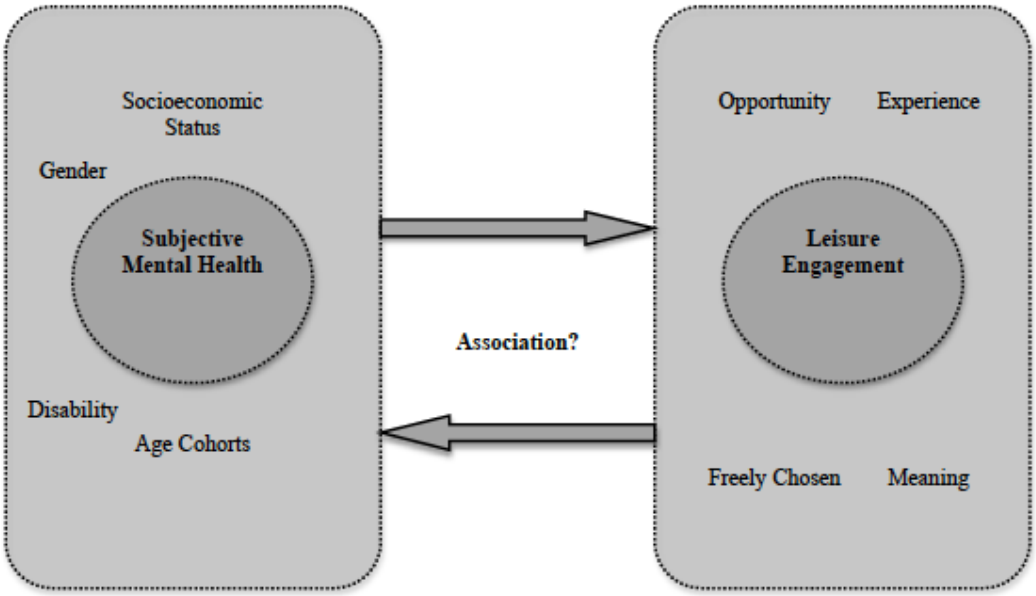

Figure 2. Visual representation of the literature review

Most of the literature reviewed examined subjective mental health of individuals as they age (Happell, 2011; Keyes & Westerhof, 2012; Snowden et al., 2010), the use of leisure time

among varying cohorts (Heo, Lee, Kim, & Chun, 2012; Herrera, Meeks, Dawes, Hernandex, Thompson, Sommerfeld, Allison, & Jeste, 2011; Sagatun, Sogaard, Bjertness, Selmer, & Heyerdahl, 2007; Paillard-Borg, Wang, Winbald, & Fratiglioni, 2009) and the influence of certain leisure activities on subjective mental health (Heo et al., 2010). Although some studies did not directly address the research questions proposed in the current study, they still provided insight into the purpose of this review. For example, Heo et al. (2010) utilized experience sampling methods, which is a common data collection method for time use, to measure how flow and serious leisure contribute to the subjective wellbeing in the daily lives of individuals in varying cohorts. In their study, the authors identified that for decades, researchers have investigated the social wellbeing of individuals across their life course. Positive affect and negative affect (mental health) are components of social wellbeing that researchers often investigate (Heo et al., 2010). Leisure scholars are one of the varieties of researchers who investigate the phenomenon, but fail to understand how flow and serious leisure theories play a part in this wellbeing (Heo et al., 2010).

Serious leisure (Stebbins, 2007), flow theory (Heo, et al., 2010), activities of daily living (ADLs), and selective optimization and compensation (Paillard-Borg et al., 2009) are examples of the theories used in the articles reviewed. Heo et al. (2010) used serious leisure (Stebbins, 2007) and flow theory as a lens in which they measured activities to see if they contributed to subjective wellbeing. Serious leisure and flow theory have been shown to contribute to psychological health. Flow theory is a leisure perspective that focuses on the person's psychological state in which they are so intensely involved in an activity that nothing else seems to matter (Heo et al., 2010). Where serious leisure (Stebbins, 2007) involves individuals becoming committed, and those commitments to leisure activities are linked to a

number of personal benefits such as, psychological growth, physical benefits and enjoyment – which may contribute to subjective wellbeing. Heo et al. (2010) stated that both serious leisure and flow are essential components of subjective wellbeing. For example, when an individual is engaged in a core activity, such as a serious leisure pursuit, they gain improvements in self-confidence, self-esteem and social network improvements (Heo et al., 2010).

Snowden et al. (2010) and Keyes and Westerhof (2011) did not utilize a theory to frame their study – however a model was used. The dual continua model was utilized as a method of conceptualizing mental health (Keyes & Westerhof, 2011). The dual continua model understands mental health and mental illness as fluid and an intricate interaction between people and their subjective mental health where the absence of disease does not always imply the presence of high levels of mental health. This is an important concept when attempting to understand mental health and mental illness.

Paillard-Borg et al. (2009) utilized theories that have developed concerning participation in activities by the older population. The theory of activities of daily living (ADL) provides the basic competencies for actual leisure involvement (Paillard-Borg et al., 2009). As a result, the activities (washing, eating, financial management) affect the kinds of activities in which older adults engage. As individuals move through varying age cohorts, they may find themselves requiring more time to complete their ADLs. This may be a result of decreased cognitive ability, physical ability for the older population and if we look at middle adulthood, children, work and financial stress. Consequently, time spent involved in leisure opportunities may suffer due to time required to complete ADLs (Paillard-Borg et al., 2009).

The author could not find a theory in the remaining articles (Happell, 2011; Heo et al., 2012; Herrera et al., 2011; Janke, Nimrod, & Kleiber, 2008; Sagatun et al., 2007; Wyshak,

2003). The lack of theory among the remaining literature could be left up to a variety of assumptions. For example, as an emerging area of research, leisure has a relatively small body of leisure-specific theories and this may pose challenges to scholars attempting to find a suitable theory to frame their studies. However, as demonstrated above, it is not entirely impossible to propose merging or adapting existing theories in order to understand other sample frames and purposes.

The studies used quantitative collection procedures (Happell, 2011; Heo et al., 2012; Herrera et al., 2011; Janke et al., 2008; Sagatun et al., 2007; Wyshak, 2003), with four of the studies utilizing secondary data sets (Janke et al., 2008; Herrera et al., 2011; Snowden et al., 2010; Happel, 2011). Finally, a few studies used experiential sampling method (Heo et al., 2012; Heo et al., 2010).

Experiential Sampling Method (ESM) was used by Heo et al (2012; 2010) that was developed by Csikszenmihalyi, Larson, and Prescott (1977). This methodology is a way of collecting data about time use and with this methodology researchers are able to collect data about participants' feelings in situations that naturally occur (Heo et al., 2012; 2010). The advantage of using ESM is that participants are able to record ongoing events and immediate cognitive responses for those events. Another advantage of using ESM is the minimizing of memory biases that often come from retrospective recall because of the short interval between the signal and response (Heo et al., 2012; 2010).

However, the ESM does not come without limitations. It is the opinion of the author that without direct observation of study participants, the experiences that they documented in the ESM is subjective – and may not be a true or accurate depiction of engagement. In other

words, is what they write down actually what they are doing, or are they documenting what they think they should be doing (laying on the couch vs. physical activity).

Several studies utilized formal assessment tools as a method to measure both leisure engagement and subjective mental health (Herrera et al., 2011; Snowden et al., 2010; Keyes & Westerhof, 2011; Happell, 2011). In Herrera et al. (2011), the authors utilized the Cognitive Assessment Screening Test. This test is a self-administered test, which assesses global cognitive functioning. In order to measure leisure engagement, the authors asked participants to report how many days they engaged in a range of leisure activities for at least half an hour a day. Leisure activities included a comprehensive list of 25 common individual and social leisure activities, such as listening to the radio. Although the use of formal assessment tools may come with validity and reliability – they do not come without limitations. Some studies utilized formalized assessment tools that resulted in weak Cronbach's Alpha on their Likert scale questions (Sagatun et al., 2007). Using formalized assessment tools does not allow for an accurate depiction of participant experience. As what happens often is that participants will score themselves higher than how they truly feel in fear of judgment and prejudice (Sagatun et al., 2007).

As a data collection procedure for collecting information on mental health and leisure engagement, studies utilized secondary data sets (Happell, 2011; Herrera et al., 2011; Janke et al., 2008; 2010; Keyes & Westerhof, 2011; Sagatun et al., 2007; Snowden et al., 2010). In most cases, it was the presentation of the secondary data that contributed to the gaps in the methodologies of these studies. The authors failed to acknowledge the use of secondary data and which survey questions from the original study were being utilized to contribute to the current study's research question. Further, the authors did not identify which variables were

harvested from the original data set, as well they did not discuss the use of recoding of variables. This creates difficulty for readers when trying to link findings from the current study to the use of the secondary data set.

The following figure (Figure 3*)* symbolically reflects the findings of the literature from this part of the literature review.

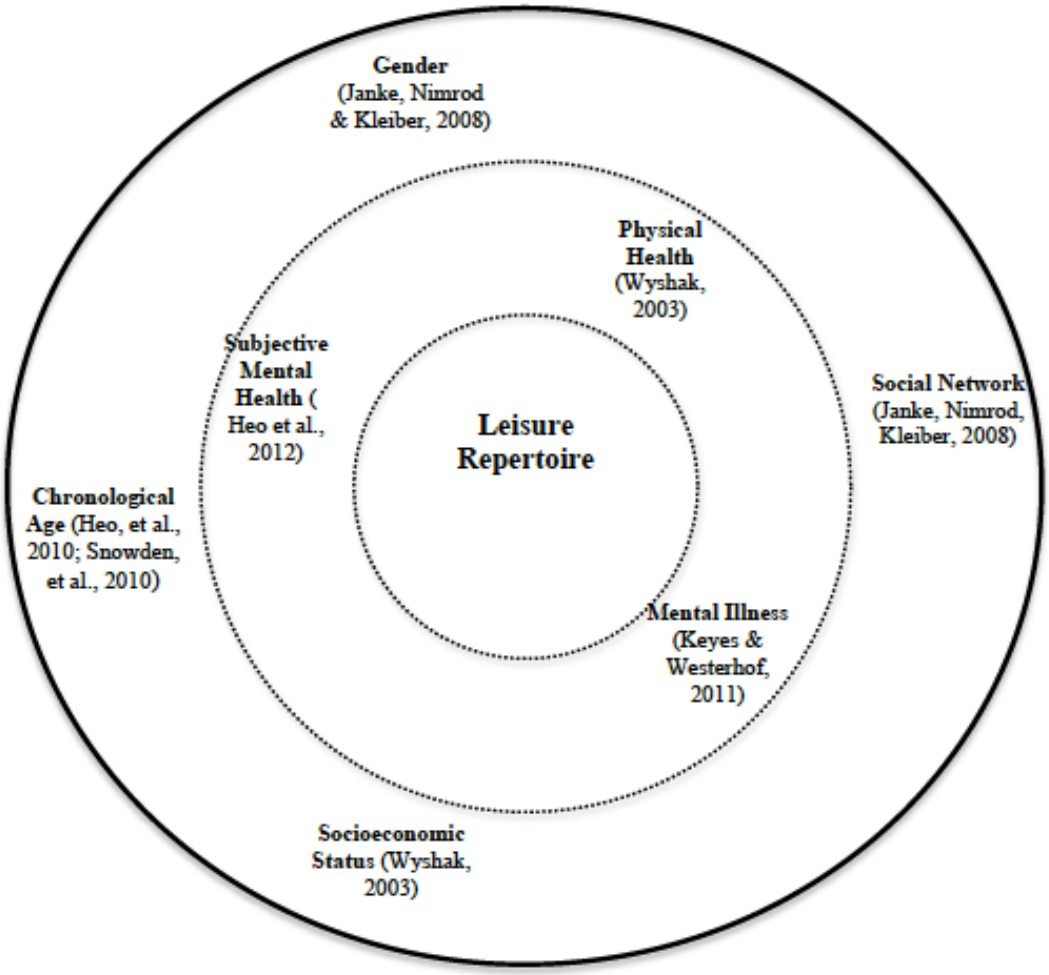

Figure 3. Summary of the reviewed mental health and leisure literature

The themes found within the inner-circle perhaps have more of a direct link to the individuals' leisure repertoire. The themes found in the outer-circle have more of an indirect link to subjective mental health. However, note that the rings have a "broken" line that indicates that any of these themes can move in and out of the direct-indirect association with

subjective mental health – depending on the person, opportunity, level of subjective mental health, etc. For example, in some study participants, it is possible that the individuals' physical health and chronological age were more associated or impactful on their subjective mental health. However, in another participant, perhaps their mental illness and Sex is more associated or impactful on their subjective mental health. Figure 3 is simply designed to demonstrate the findings of the reviewed literature and how individuals' lived experiences and demographic information may impact their subjective mental health

Keyes and Westerhof's (2011) study measured mental health and wellbeing among different age-cohorts. The study found that there is a negative correlation between age and major depressive episodes. Although the older adults had been diagnosed with major depressive episodes, their self-related (subjective) mental health was higher than the youth who reported low subjective mental health and had not been diagnosed with an illness. The prevalence of major depressive episodes was found to be highest in older cohorts and the rate of low subjective mental health is highest in younger cohorts. So, mental health appears to be highest between the ages of 45-74 where subjective mental health is higher than major depressive episodes. This demonstrates the concept of understanding mental health as much more than the presence or absence of disease and indicates that major depressive episodes and high subjective mental health are not each other's opposite. According to the dual continua model, mental illness (in this case major depressive episodes) does not imply the presence of mental health (Keys & Westerhof, 2011; Snowden et al., 2010). However, this could also be a result of social cohort effects – where some cohorts experience mental health more commonly. If major depressive episodes and flourishing mental health are not each other's opposites, the promotion of increased flourishing mental health should be promoted as adults begin to age,

with less attention given to specific diagnoses. Similar findings were found in Heo et al's (2010) study that assessed how serious leisure and flow contributed to the subjective wellbeing in the daily lives of older adults. The findings reported older respondents were more likely to report more positive affect than younger.

Dissimilar findings were demonstrated in Snowden et al. (2010). They suggested that declines in mental wellbeing may be a result of late-life transition. Decline in mental wellbeing remained high among oldest participants after controlling for physical ailments, chronic conditions and mental disorder (Snowden et al., 2010; Wyshak, 2003; Happell, 2011). Findings suggested that improving mental health outcomes to the point of recovery will aid in wellbeing and is not usually achieved with "usual-care" and that "wellbeing" therapies should be explored as ways to promote mental health.

In Sagatun et al. (2007), the purpose was to investigate how many weekly hours of physical activity in boys and girls age 15-16 are associated with mental health. The study was a three-year follow up study and the participants were now 18-19. At baseline, girls reported having more mental health difficulties than boys and boys reported more conduct disorders and peer problems. Emotional symptoms and peer problems at 18-19 years of age were inversely associated with physical activity at age 15-16 in both sexes. These findings demonstrate that individuals use time differently over varying age cohorts (Sagatun et al., 2007; Paillard-Borg et al., 2009).

As the rate of individuals being faced with lower levels of subjective mental health continues to increase, the importance of understanding subjective mental health across the life course becomes more relevant. The findings of this literature review section demonstrated that studies harvested utilized various methodologies, had varying and conflicting findings and all

aimed to measure different things. However, all had two commonalties – understanding the mental health of varying cohorts is important and they all measured subjective mental health and time use independently from one another. The second common theme from the reviewed literature is important for future research. Subjective mental health and its association with leisure engagement should be considered dependently with one another and attempts should be made to understand this phenomenon.

The further comprehension of this dynamic and individualistic phenomenon could have implications for leisure practitioners. Understanding how people of varying levels of mental health are engaged in leisure would allow them to tailor and develop programs to be inclusive for varying abilities.

Mental health. Leufstadius, Erlandsson, and Eklund (2006) and Yanos and Robilotta (2011) discussed how a mental health challenge often acts a barrier to engaging in not only leisure but also other life activities. The majority of the participants in these studies found themselves engaging in sedentary behaviour such as relaxing, personal care and managing their symptoms. It was difficult from a leisure perspective to measure what constitutes "leisure" when in fact a lot of individuals with lower levels of perceived mental health do not engage in work or other forms of obligations, due to the nature of their health (Leufstadius et al., 2006; Yanos & Robilotta, 2011). Little is still known about people of varying levels of perceived mental health and the time spent engaged in leisure within various age cohorts across the life course.

Sex. Shaw (1985) illustrated that males are shown to have more time to engage in leisure than their female counter parts, on the weekends. However, sex differences were shown to demonstrate small time differences during the week. Shaw (1985) attributes this to the general

status differences between males and females in society, which leads to inequalities in access to leisure time. Meanwhile, women who comprise part of today's working force continue to assume responsibilities as the family's primary caregivers (Taniguchi & Shupe, 2014). Juggling between work and family-related tasks would likely impose constraints on time left for women's leisure opportunities. As a result, women generally have lower levels of participation in leisure activities and may perceive leisure as a secondary concern (Taniguchi & Shupe, 2014). The gap still remains in measurement of leisure time engagement. Other studies (Harvey & Singleton, 1988) have also demonstrated a clear difference between Sex and time allocation for leisure time engagement.

Presence or absence of a partner. Many people feel the need to engage in leisure activity with a social support (Shinew, 1996). Thus, a small amount of encouragement from social supports (friends/family) may affect the time spent in leisure. Shinew (1996) discussed how many people found social interaction a key component of leisure engagement. The main reason the person was engaging in leisure was for a social connection they identified with the group or person within the opportunity. Kelly (1990) indicated that family members were the most common form of leisure companionship and leisure is spent in the home has certain impacts on this finding. Playing games as a family or watching a movie would be considered leisure engagement for some with children, who may have a large work commitment. People, who identify as being single, or without family, may engage in less home based leisure (Kelly, 1990). This speaks to the stage of people's life course and their engagement in leisure opportunities look quite different across these stages. Leisure involvement has often been measured by activities outside the home. However, Kelly (1990) indicated that the majority of opportunities are engaged within the home.

Socioeconomic status. Individuals with few social and economic resources, may find leisure to be a time of high stress and reduced leisure opportunity. Low socioeconomic status or even poverty does not often provide opportunities for leisure resources. A lack of financial funding will act as an impediment to freely chosen leisure opportunities. Authors have indicated the importance of socioeconomic status in the patterning of leisure engagement opportunities (Harvey & Singleton, 1995; Robinson & Godbey 1997). Further, rates of leisure engagement and level of education grow almost linearly (Robinson & Godbey, 1997). Typically, people with more education may have more leisure engagement and in most cases, this is a result of higher work obligations and studies show that there is a positive linear relationship between education and leisure engagement because of higher socioeconomic status and increase availability of leisure related resources (Robinson & Godbey, 1997).

Framework of Understanding

Conceptually, leisure opportunities involve varying levels of psychological, physical and emotional involvement (Avedon, 1974; Gaitz & Gordon, 1972). Authors discussed characteristics of leisure engagement using words such as relaxation, meaning, enjoyment and self-development. These terms are asserted to be forms of personal objectives (Gaitz & Gordon, 1972; Shaw, 1985). Gaitz and Gordon (1972) indicate that there are five levels of personal expressive involvement that include, very low, medium low, medium, medium high and very high. Activities that involve a high level of expressive involvement require a high level of subjective mental health, such as highly competitive games. Opportunities that require a very low level of expressive involvement may require a lower level of subjective mental health, such as solitude and quiet resting (Gaits & Gordon, 1972).

Recreation activities require some form of interaction, and often require a certain degree of social skills. The nature of the interaction may be cooperative or competitive, and there may be any number of individuals involved (Stumbo & Peterson, 2008). Often, an analysis of these interaction patterns within the leisure opportunity act as significant component in selecting activities appropriately and for the individuals to succeed (Stumbo & Peterson, 2008). Avedon (1974) developed a classification system of interaction patterns found in leisure activities. Since many leisure opportunities involve social interaction, it is advantageous to comprehend as much as possible about an activities contribution in this area. In Avedon's (1974) model, he discusses interaction patterns on a continuum from intra-individual (action taking place within the mind of a person or action involving the mind and a part of the body). At the other end of the spectrum, intergroup activities include engaging in competitive nature between two or more intragroups (two or more persons striving for a common goal). This type of opportunity could be that of a team sport, such as soccer, which involves a high level of social interaction.

Avedon's model of social interaction includes the following categories by which activities may be organized:

- Intraindividual: Action takes place within the mind or involving the mind and a body part, but no contact with another person or object occurs. Meditating or daydreaming are examples of an intraindividual activity.
- Extraindividual: Action directed by a person toward an object in the environment, with no contact with other people. An example of an extraindividual activity may include reading at home for leisure.
- Aggregate: Action directed by a person toward an object while with other people who are directing their attention towards objects. No interaction is required, but spontaneous

interaction may result. Aggregate activities may include attending musical concerts where interaction is optional.

- Interindividual: Action of a competitive nature directed by one person towards another. Requires continuous interaction with opponent. Assists people to deal with stress, pressure, winning and losing. An example of this type of activity may include a game of chess.
- Unilateral: Action of a competitive nature among three or more people, one of whom is the antagonist. This provides opportunities for role differentiation and may include a game of tag or hide-and-go-seek.
- Multilateral: Action of a competitive nature between three or more individuals with no one as an antagonist. Every player is against one another and the responsibility of control is placed on each individual. Multilateral activities may include a board game of Monopoly.
- Intragroup: Action of a co-operative nature by two or more persons with the intent of reaching a common goal and helps to establish social skills. An intragroup activity may include completing a puzzle together with the end goal of completion.
- Intergroup: Action of a competitive nature between two or more intragroups. Difficult because they involve competition and co-operation, but helps participants learn to be team members. Intergroup activities would be an activity such as soccer where everyone is cooperating as a team, yet competing against another group.

From a methods standpoint, variables need to be further measured to understand this dynamic life construct. Subjective mental health has been used a predictor variable, along with other life

constructs to hopefully measure this concept. And although causality won't be able to be inferred, directionality will provide some insight into predicting factors.

Chapter 3

Methods

This chapter begins by describing the background of the study and provides an overview of the original data set harvested from an Ontario Municipality Community Wellbeing Survey (Canadian Index of Wellbeing, 2013), which was used as the secondary data source for this research. Specific questions from the Community Wellbeing survey pertaining to subjective mental health, leisure activity engagement and time spent in leisure were used in the present study. Within the secondary data analysis, it is hoped the results will depict a better understanding of how people of varying levels of perceived mental health use their time in leisure. An overview of the methodology is provided through the sections of the municipality's survey design, sample size, data collection procedures and subject data collection.

The Community Wellbeing survey (Canadian Index of Wellbeing, 2013) will herein be referred to as KFLA that presents the Canadian Index of Wellbeing categories.

Background

The current study was designed to obtain further information on leisure engagement among subjects of varying levels of perceived mental health. More specifically, the research examined how frequently individuals engage in leisure activities in the past week, month and year.

Canadian Index of Wellbeing – KFLA Design

The secondary data set utilized was the KFLA survey conducted by the Canadian Index of Wellbeing. The primary vision of the KFLA and the Canadian Index of Wellbeing is to "enable all Canadians to share in the highest wellbeing status by identifying, developing and publicizing statistical measures that offer clear, valid and regular reporting on progress toward

wellbeing goals and outcomes Canadians seek as a nation" (Canadian Index of Wellbeing, 2013).

The population for the survey included residents of a municipality within Ontario, excluding;

1. Residents outside of the municipality.
2. Residents under the age of 18.
3. Residents living in institutional settings.

Sample Size, Data Capturing and Coding

There were a total of 1,515 respondents for the KFLA survey. The survey data from the KFLA (Appendix A) was completed by each respondent and consisted of the following criteria: Community Vitality (Section A), Healthy Populations (Section B), Democratic Engagement (Section C), Environment (Section D), Leisure and Culture (Section E), Education (Section F), Living Standards (Section G), Overall Health and Wellbeing (Section I), and Personal Characteristics (Section J).

As previously mentioned, one questionnaire was used to conduct the survey (Appendix A) and field-testing was conducted by trained staff and was conducted in Canada. Online and mail data collection methods were used.

The following section outlines the areas of the KFLA that were used in order to answer the research questions. Data was transmitted to the Canadian Index of Wellbeing at a Canadian University.

The following sections from within the KFLA were utilized (Appendix A):

1. Section B: Healthy Populations
2. Section E: Leisure and Culture

3. Section I: Overall Health and Wellbeing

Subjects

All subject data was collected through secondary data analysis of the KFLA. The population within the study analyzed 1,515 respondents within the municipal area. Survey invitations were distributed to 11,000 randomly selected households within the municipality and one person from each household, age 18 years or older, was invited to complete the survey. Among the 1,520 questionnaires completed and submitted by the residents, 1,515 were deemed usable (1, 345 online and 170 paper). This represents a response rate of 13.8% (Canadian Index of Wellbeing, 2013).

Data Collection Procedures

The following are questions that will be used for the KFLA (Appendix A) in order to answer the research question.

Current Research Question	Original KFLA Survey Questions
1. How does a person's perceived, self-rated (subjective) mental health, presence or absence of a partner, socioeconomic status [income, highest level of education achieved, main activity (employment status)], age and sex associate with the how frequently they engage in leisure opportunities?	**B2:** *In general, would you say your mental health is* (Poor (1) → Excellent (5), p.51) **E1:** *For each of the categories of physical activities listed below, please indicate the total number of times you participated in each activity in a typical month. If you do not participate in each activity, please report "0" (zero) or leave the space blank* (Number of times in a month, p.55). **E2:** *For each of the activities listed below, please indicate the total number of times you participated in each activity in a typical month. If you do not participate in the activity, please report "0" (zero) or leave the space blank* (Number of times in a month, p.55). **E3:** *For each of the activities listed below that are typically not at home, please indicate the total number of times you participated in each activity in a typical week (be sure to count each separate time you participated)* (Number of times in a week, p.55). **E4:** *For each of the cultural activities listed below, please indicate the total number of times you participated in each activity in the past year. If you don't participate in the activity, please report "0" (zero) or leave the space blank* (Number of times in a week, p.55). **E5:** *For each of the online activities listed below, please indicate the total number of times you participated in each activity for leisure on a typical day (please be sure to count each separate time you participated* (Number of times per day and hours and minutes per day, p.56). **E6:** *Thinking about your typical television viewing…How much time in total on a typical day to you spend watching television, DVDs, or shows/movies online* (Hours and minutes per day, p.56)? **E7:** *Thinking about all of the holidays you have taken in the past year…How many days in total were away on a holiday in the past year* (Number of days on trips, p.56)?
	J1: *What is your sex* (Male (2), Female (1) or TransSexed, p.62)?
	J4: *What is the highest level of education you have* ***completed*** (Elementary School (1) → Graduate Degree [MA, PhD], p.62)? **J5:** *Which one of the following categories best describes your main activity* (Employed full-time (1) → On leave from work (8), p.62)? **J6:** *What was your total household income from all sources last year* (Under $10,000 (1) → $150,000 and over (10) p.63)?
	J3: *What is your marital status* (Single, never married (1) → Widowed (7), p.63)?
	J2: *What is your age* (Indicate in years of age, p.63)?

Data Analysis and Instrumentation

An analysis of variance (ANOVA) will be used in order to determine the association between the independent and dependent variables. The ANOVA had the potential to determine the hierarchical association of each variable on leisure engagement and was conducted using the newest package of IBM's SPSS. The aim of the data analysis was to distinguish an association between each of the variables and to further understand the degree to which the variable contributes to the frequency of being engaged in leisure.

After further review of the data set and conducting the initial Analysis of Variance (ANOVA) modeling it was determined that ANOVA was no longer an appropriate approach to utilize for the chosen data set. Due to the amount of variables being analyzed at once and taking into account interaction terms between specific independent variables (sex and education status) the ANOVA could not be completed as initially proposed. Further, when conducting ANOVA, one must take into account the interactions that the independent variables may have on one another as well as the interaction on the dependent variable. In this case, sex and education status was interfering with the prediction on the dependent variable due to sex and education's strong relationship; as a result, the ANOVA modeling suppressed higher interactions and resulted in empty cells and singular matrix. Through examination of the data, and first running a correlation on the variables of interest, it was decided that regression analysis was a more appropriate and well suited statistical model to utilize. Regression modeling was chosen because it helped develop the understanding of how the typical value of the dependent variable changes when any one of the independent variables is varied, while fixing the other independent variables. This was particularly useful when attempting to understand how subjective mental health associates with leisure engagement frequency.

Rebasing of Data

The initial sample consisted of 11,000 randomly selected households within the area where the survey was conducted. One individual from each household age 18 and over was invited to complete the survey and of the 1,520 surveys submitted and completed by the municipal residents, 1,515 of them were deemed usable. This represents a 13.8% response rate for the survey.

Large sums of over a few hundred will generate significant test results by the very nature of inferential statistics and this may often cause problems for traditional inferential statistical testing methods (University of Regina, 2010). The rebasing of the data generates estimates on each characteristic based on the total number of residents in the region as reported in the 2011 Statistics Canada Census. One way to compensate for the scale of the weight variables used by Statistics Canada (2011) census is to rebase the weight variable to the sample size (University of Regina, 2010). The SPSS syntax equation that was used for rebasing the data was:

compute wt=wght*(1515/151170).

weight by wt.

The initial sample shows a total of 1,515 respondents and with the rebasing of the data response percentages will represent the actual demographical population; however demonstrate actual reweighted response rate frequencies.

Recoding of Variables

The following are rationales that outline why variables were recoded within the analysis. According to Field (2013) it is scientifically dangerous and unethical to remove cases all together simply based on their inability to fit the model of use. After consulting with a

statistician, the data was recoded to reflect participation rates that would not skew the data. There were a total of 8 variables recoded in total.

Physical activity variables. Physical activity in the previous month – individual sports has been recoded to represent what assumptions the author decided is a reasonable response. Some respondents indicated that they participated in team sports upward of 85 times in the previous month – others indicated 34 times. According to the author, participating in individual sports 85 times in a month is not feasible. As a result, all responses above 31 times in the previous month have been given a value of 31 to represent the number of days in a month.

Physical activity in the previous month – light exercise was recoded to represent what assumptions to the author is a reasonable response. Some respondents indicated that they participated in light exercise upward of 100 times in the previous month. Due to the fact that there are only 30 days in a month, for individuals who participate over twice a day would be considered to be individuals outside of the norm. According to the author, this level of participation is not a feasible amount and thus values over 60 times per month have been given a value of 60 to represent twice daily over the previous month. This would include individuals who walk to and from work, walk their dog, or walk their children to and from school.

Social activity variables. Social activity participation in the previous month – socializing with friends was recoded to represent what assumptions to the author is a reasonable response. Some respondents indicated that they had socialized with friends upward of 100 times in the previous month. According to the author this is not a feasible amount and thus values over 31 have been given a value of 31 to represent the number of days in a month. It is not reasonable

to believe that the respondents answered truthfully when their response was this high and as a result created a large skew in the analysis.

Social activity participation in the previous month – going out to a tavern, bar or club was recoded to represent what according to the author is a reasonable response. Some respondents indicated that they had visited one of these venues upward of 72 times in the previous month. These responses have caused a skew in the response rate and thus will be given a value of 31 to represent the number of days in a month. In the opinion of the author, 31 times is quite often to visit one of these locations.

Social activity participation in the previous month – attending a special event such as a sporting event or concert has been collapsed to represent what according to the author is a reasonable response. Some respondents indicated that they had visited one of these venues upward of 40 times in the previous month. These responses have caused a skew in the data and according to the author, are not feasible. In order to avoid eliminating these cases, all cases above 31 have been given a value of 31 to represent the number of days in a month.

Home-based activity variables. Home-based activity participation – reading a book in the past week was recoded to represent what according to the author is a reasonable response. Some respondents indicated that they had read a book 1000 times in the previous week. These responses caused a skew in the data and according to the author, are not feasible. In order to avoid eliminating these cases all together, all values over 50 have been given a value of 50. This value has been chosen as the closest response rate with at least five respondents in each cell.

Home-based activity participation – playing cards and a game in the past week was recoded to represent what according to the author is a reasonable response. Some respondents

indicated they had played cards or board games 30 times in the previous week. These respondents caused a skew in the data and according to the author, are not feasible. In order to avoid eliminating these cases all together, all values over 20 have been given a value of 20. This number according to the author allows all responses to be included in analysis and provides individuals who did respond above 20.

Home-based activity participation – completing a puzzle (Sudoku) in the past week was recoded to represent what according to the author is a reasonable response. Some respondents indicated that they completed a puzzle 100 times in the previous week. These responses have caused a skew in the data and according to the author, are not feasible. In order to avoid eliminating these cases all together, all values over 30 have been given a value of 30. This value was chosen as the closest response rate with at least five respondents in each cell.

Home-based activity participation – competing in a hobby, craft, knitting or wood working in the past week was recoded to represent what according to the author is a reasonable response. Some respondents indicated that they completed a craft, hobby, knitting or woodworking upward of a 100 times. In order to avoid eliminating cases all together, all values over 60 have been given a value of 60.

Cultural activity variables. Cultural activity participation in previous year – attending musical, visiting art galleries and museums, attending ballet and dance performances and attending live theatre performances were recoded to represent what according to the author is a reasonable response. Some respondents indicated that they attended these events more than 100 times in the previous year. In order to avoid eliminating these cases, the author has collapsed the values over 52 and given a value of 52. There are 52 weeks in a year and thus this value represents one concert attendance per week for the previous year.

Sum screen time variables. Total minutes of daily online activities for leisure was recoded to represent what the author finds a reasonable response. One respondent indicated that they spent 1980 minutes in one day online for leisure. Due to the fact that there are only 1440 minutes in a 24-hour day, all values over 1440 have been given a value of 1440.

Study Limitations

The limitations of the research study are focused on two concepts. There are the limitations of using a secondary data survey and reliance upon respondent statements. A further discussion around secondary data use can be found in the literature review section.

The first limitation was that the secondary data analysis within the study used a survey questionnaire. Survey questionnaires present a challenge when attempting to prove cause and affect relationships. Rather, surveys provide a more clear association between variables. The study was limited to the data collected during the original survey procedure as these dictate what can be asked of secondary data research. As well as the smaller response rate for the survey.

The second limitation of using secondary data in this study was the reliance on the respondents' behaviour response (and the bias that comes with it), rather than observation. At times, there may be a discrepancy between what they report doing, and what actually happens. Further, the measure of mental health typically only gets measured subjectively and it is hard to measure one's level of mental health using standardized tools and observations may provide further insight into the respondents' response. Further, with the use of regression analysis, because the results of the statistical analysis simply shows directionality, causality cannot be inferred and was not possible to address in the current study. This is an inherent limitation that was not addressable for this particular study.

Ethical Considerations

Ethical approval was granted through the Dalhousie Social Sciences and Humanities Research Ethics Board. Approval was granted in accordance with the Tri-council Policy Statement on Ethical Conduct for Research Involving Humans. Approval was also granted in accordance with this policy for the original study. Please refer to Appendix C for more information about ethical clearance along with clearance certificate.

Chapter 4

Data Analysis (Results)

The following research question was used to guide this chapter.

How does perceived, self-rated (subjective) mental health, presence or absence of a partner; socioeconomic status [income, highest level of education achieved, main activity (employment status)], age and sex associate with the how frequently respondents engage in leisure opportunities?

Chapter four was divided into two sections: a) the demographics of respondents by their sex, age, presence or absence of a partner, household income, educational status, work force status (employment status), and overall subjective mental health, and b) regression analysis which shows the directional relationship of each variable according to the predictor variables of interest that included (sex, age, income, education level, employment status, subjective mental health rating and presence or absence of a partner). The variables of interest included physical activity participation, social activity participation, home based leisure activity participation, cultural activity participation and screen time use for leisure.

Recoding of Variables

Further information and rationales for each variable recoded can be found within Chapter Three (Methodology). According to Field (2013) it is scientifically dangerous and unethical to simply remove respondent cases because they do not fit the statistical model of choice. It is recommended that results be recoded to represent a consistent response to the research question.

Demographics

Table 1 presents the sex of the respondents.

Table 1. Sex of Sample Population

Value	Label	Frequency	Percent
2	Female	789	47.9
1	Male	726	52.1
Total		1515	100

Males composed 47.9% of the sample size while females accounted for 52.1%. There were no respondents under the age of 20 that responded to the survey.

Table 2 presents the age groups of the respondents.

Table 2. Age Groups of Sample Population

Value	Label	Frequency	Percent	Cumulative Percent
2	20 to 24 years	156	10.3	10.3
3	25 to 34 years	227	15.0	25.3
4	35 to 44 years	234	15.5	40.7
5	45 to 54 years	303	20.0	60.7
6	55 to 64 years	269	17.7	78.5
7	65 to 79 years	238	15.7	94.2
8	80 to 99 years	88	5.8	100.0
	Total	1515	100.0	

The 20-24 age category is the smallest cohort within this study at 10.3%. The age group between the ages of 25-34 were 15% and for the age group of 35-44 years of age comprised 15.5%. The 45-54 age category represents the largest cohort at 20%, which could be

representative of the growing aging population within this municipality. The 55-64 age cohort group followed this with 17.7% of respondents from this age category. Finally, the two remaining age groups, 65-79 and 80-99, accounted for 21.5% of the respondents.

Table 3 presents the presence or absence of a partner of respondents of the study. The values assigned to the individual's presence or absence of a partner has been recoded to allow for a more accurate regression analysis. As the values stood in the original data set, it would have been difficult to determine how respondents' presence or absence of a partner predicted their leisure engagement frequency. In the original data set, individuals who were single, never married were given a value of one. However, in table 3, it was determined that other individuals who were single were given values of four, five and six. In order to accurately assess the directionality of the relationship within regression results it was necessary to give single, never married a value that would allow this response within the variable to be grouped with other related responses.

Table 3. Presence or Absence of a Partner of Respondents

Value	Label	Frequency	Percent	Cumulative Percent
7	Single, never married	205	13.5	13.6
2	Married	871	57.5	71.2
3	Living common-law	150	9.9	81.2
4	Separated	77	5.1	86.2
5	Divorced	94	6.2	92.5
6	Widowed	114	7.5	100
	Total	1510	99.7	
Missing	System	5	0.3	
Total		1515	100	

The majority of respondents identified as being married or living common-law to their partner (67.6%) and the remaining groups (32.4%) consisted of single, never married, separated, divorced and widowed.

Table 4 presents the Education Level of the respondents in the study.

Table 4. Education Level of Sample Population

Value	Label	Frequency	Valid Percent
1	Elementary School	36	2.4
2	High School	337	22.3
3	Post-secondary certificate	131	8.6
4	College Diploma	450	29.8
5	University Degree (BA, BSc)	324	21.5
6	Graduate Degree (MA, MSc, PhD)	233	15.4
Total		1510	99.7

2.4% of respondents only went to elementary school, 22.3% of respondents went to high school, where 8.6% of respondents had a post-secondary certificate or 29.8% had a college diploma. Thirty-six point nine percent of respondents had either an undergraduate degree or a graduate degree.

Table 5 represents the income levels of the respondents' household as well as the grouping used within the KFLA research.

Table 5. Household Income

Value	Label	Frequency	Percent	Cumulative Percent
1	Under $10,000	18	1.2	1.3
2	$10,000 to $19,999	70	4.6	6.5
3	$20,000 to $29,999	145	9.6	17.2
4	$30,000 to $39,999	110	7.2	25.3
5	$40,000 to $59,999	198	13	39.9
6	$60,000 to $79,999	225	14.9	56.5
7	$80,000 to $99,999	207	13.6	71.7
8	$100,000 to $119,999	144	9.5	82.3
9	$120,000 to $149,999	111	7.4	90.6
10	$150,000 and over	128	8.4	100
	Total	1356	89.5	
Missing	System	159	10.5	
Total		1515	100	

Some respondents (10.5%) did not state their household income; 17.1% of respondents within the region were found to have a salary under $30,000. The data indicates 22.7% of respondents received a salary of $30,000 to $60,000. The remainder of respondents was found to have a household income of over $60,000 per year (60.2%).

Table 6 indicates the labor force status of household frequencies. For the purpose of the research; the term used was main activity.

Table 6. Main Activity of Household

Value	Label	Frequency	Percent	Cumulative Percent
1	Working full-time	622	41	41.3
2	Working part-time	97	6.4	47.8
3	Non-standard employment (self-employed, contract, seasonal, temporary, multiple)	129	8.5	56.4
4	Unemployed, looking for work	34	2.2	58.6
5	Retired	410	27.1	85.9
6	Going to school	120	7.9	93.8
7	Household work/caring for children	61	4	97.8
8	On leave from work (e.g. illness, parental leave)	33	2.2	100
	Total	1504	99.3	
Missing	System	11	0.7	
Total		1515	100	

Of the 1504 households that identified the main activity of their household, the most common category was ‘working full-time’ with 41.3% (coded 1) of respondents identifying under this category; 31.6% (coded 2,3,4,6,7,8) of individuals were unemployed, looking for work, going to school, household work or on leave; and 27.1% (coded 5) of respondents identified as being retired.

Table 7 reports the subjective over all mental health of the respondents.

Table 7. Subjective Overall Mental Health of Respondents

Value	Label	Frequency	Percent	Cumulative Percent
1	Poor	26	1.7	1.7
2	Fair	121	8	9.7
3	Good	547	36.1	45.9
4	Very good	544	35.9	81.8
5	Excellent	275	18.1	100
	Total	1513	99.9	
Missing	System	2	0.1	
Total		1515	100	

As reflected in Table 7, of the 1513 respondents who identified their mental health status, the majority of them ranked themselves as 'good' accounting for 36.1% of responses. Following with 'very good' with a percent of 35.9; 9.7% of respondents identified as having a fair or poor rating of their mental health where 18.2% of respondents felt excellent about their mental health status.

Regression Analysis

The first research objective was to examine how frequently respondents engaged in leisure. The dependent variables of interest were recoded based on what the author felt were appropriate responses to the survey questions and it was determined that in order to get accurate results, it was necessary to recode certain variables to eliminate outliers (see chapter 3). Due to the nature of secondary data analysis original data collectors are not always available to sort out data collection error. The situation of outliers may lead to regression results that are heavily impacted by outliers. This demonstrates the importance of the variables being recoded in order to eliminate outliers from the response rates, which would have resulted in skewed regression results (Field, 2013). Another purpose of recoding variables would be to avoid small cells, however, this has not been utilized for the current study.

The independent variables of interest in the regression modeling were income, highest level of education received, main activity (occupation), presence or absence of a partner (marital status), subjective mental health range (1-5), age and sex. Each one of these independent variables was utilized in each regression analysis.

Each leisure opportunity was analyzed separately and presented in the tables below to reflect an individuals' leisure repertoire. The diversity of leisure opportunities analyzed depicts the broad array of potential opportunities individuals could engage in.

The following regression analysis is based on the following research question:

How does perceived, self-rated (subjective) mental health, presence or absence of a partner, socioeconomic status [income, highest level of education achieved, main activity (employment status)], age and sex associate with how frequently individuals engage in leisure?

The overall objective of this chapter was to assess how frequently individuals engage in leisure dependent upon specific predictor variables.

Table 8 presents the regression results summary for the physical activity in the previous month variable.

Table 8. Regression: Physical Activity Participation in Previous Month – Summary

	Physical Activity Participation in Previous Month – Team Sports ($R^2 = .067$)	Physical Activity Participation in Previous Month – Individual Sports ($R^2 = .079$)	Physical Activity Participation in Previous Month – Vigorous Exercise ($R^2 = .063$)	Physical Activity Participation in Previous Month – Light Exercise ($R^2 = .022$)
(Constant)	Sig .001	Sig .679	Sig .000	Sig .000
Income in previous year	**Beta .123**	NS	NS	NS
Highest level of education completed	**Beta -.162**	NS	NS	**Beta .097**
Main activity	NS	NS	NS	NS
Marital status	NS	NS	NS	NS
Mental health (range 1-5)	NS	NS	**Beta .230**	**Beta .103**
Sex	**Beta -.112**	NS	NS	NS
Age	NS	NS	NS	NS

Table note: Sig (bolded items) = p < .05

Physical activity participation in the previous month – team sports column depicts 6.7% of the variance in the dependent variable was explained ($R^2 = .067$) (See Appendix D for full tables). The independent variables of income, highest level of education completed, main activity, marital status, mental health range, Sex and age were used as predictors in the analysis. Education was found to be significant with physical activity in the previous month – team sports and light exercise. The beta of -.162 for team sports suggests that as a person's education decreases, involvement increases. It was found that light exercise (beta .097) and the beta suggests that people with higher education level so does that of their light exercise engagement.

Physical activity participation in the previous month – individual sports was analyzed using the same independent variables. The regression model explained 7.9% of the variance in the dependent variable (see Appendix D for full tables). In the analysis, the strongest predictor of individual sport participation was age. The beta result in the age calculation of .246 suggests that as the age of respondents increased, the frequency of their participation in individual sports increased.

The regression results of physical activity participation in the previous month – vigorous exercise utilized the same independent variables as in previous calculations with 6.3% of the variance being explained in the dependent variable (see Appendix D for full tables). The analysis resulted in a beta value of .230, suggests that as respondents' mental health rating increased so did the frequency in which they participated in vigorous exercise.

Education and mental health were found to be significant among the predictor variables. Education level resulted in a beta of .097, which suggests that as individuals' education level increased so did the frequency of participation in light exercise. In the mental health rating calculation, the beta value of .103 suggests that as the individuals' mental health rating increased, their frequency of participation in light exercise increased.

Table 9 presents a summary of results for the social activity participation in the previous month.

Table 9. Regression: Social Activity Participation in Previous Month – Summary

	Social Activity Participation in Previous Month – Socializing with Friends (R^2 = .046)	. Social Activity Participation in Previous Month – Going out to bars or clubs (R^2 = .154)	Social Activity Participation in Previous Month – Going out to sporting events as a spectator (R^2 = .250)	Social Activity Participation in Previous Month – Going to the movies (R^2 = .110)
(Constant)	Sig .000	Sig .00	Sig .100	Sig .000
Income in previous year	**Beta -.126**	NS	**Beta .123**	NS
Highest level of education completed	NS	**Beta -.195**	NS	**Beta -.137**
Main activity	NS	NS	NS	**Beta -.098**
Marital status	**Beta .135**	**Beta .134**	NS	**Beta .180**
Mental health (range 1-5)	NS	NS	NS	NS
Sex	NS	**Beta -.209**	**Beta .168**	**Beta -.181**
Age	**Beta -.100**	**Beta -.216**	**Beta .163**	**Beta -.119**

Table note: Sig (bolded items) = p < .05

The regression results from social activity participation in the previous month – socializing with friends utilized the same independent variables. With 4.6% of the variance in the dependent variable explained (R^2 = .046) (see Appendix E for full tables), income was found to be a significant predictor of socializing with time spent participating with friends in a previous year (beta -.126). This suggests that as individuals' income level decreased, their frequency of participation in socializing with friends increased. Among the examined predictor variables, whether the respondents had a partner resulted in a beta of .135 that demonstrates that people who identified as being single more frequently visited with friends. Individuals' subjective mental health rating resulted in a beta of .002 and although this is a relatively weak

relationship, the beta value still demonstrates that as individuals' mental health rating increased so did the frequency of socializing with friends.

The regression results for the dependent variable of social activity participation in the previous month – going out the bars or clubs utilized the same independent variables as previous calculations. Within the regression model, 15.4% of the variance in the dependent variable was explained ($R^2 = .154$). The highest level of education achieved by respondents resulted in a negative beta of -.195 that suggests that as individuals' education level decreased their frequency of participation in attending bars increased. Presence or absence of a partner resulted a beta of .134, which indicates that more single people attend bars and cubs. Between the examined predictor variables, sex of the respondents resulted in a beta .209 suggests that men participated more frequently in attending bars. Respondents' age was found to have a beta of .216 that indicates that older respondents attend bars and club more frequently than younger respondents.

Social activity participation in the previous month – going out the sporting events as a spectator regression results are presented in Table 9. With 25% of the variance in the dependent variable explained (see Appendix E for full tables), the two variables that were found to be significant predictors of attending sporting events a spectator were sex and age. The respondents' sex resulted in a $p = .001$ with a beta of .168 that suggests that women respondents more frequently attend sporting events. Individuals' age resulted in a $p = .005$ and a beta of .163 that suggests that as individuals aged they attended sporting events more frequently. This presents a strong relationship between the independent and dependent variables.

The regression results for the dependent variable of social activity participation in the previous month – going out the movies as a spectator are presented in Table 9. Eleven percent of the variance in the dependent variable was explained (see Appendix E for full tables). A beta of -.137 that suggests that respondents' education level was lower among more frequent moviegoers. Respondents' main activity resulted in a beta of -.098, which also suggests that less employed individuals attended the movies more frequently. Among the examined variables whether respondents had a partner resulted in a beta of .180, which depicts individuals who do not have a partner attend movies more frequently. Respondents' sex was found to have a beta of -.181 that suggests men visited the movies more frequently than women. This was a result of men being given a value of 1 and women 2 within the data set. Finally, age was found to have a beta of -.119 that suggests younger individuals attended the movies more frequently.

Table 10 presents the regression summary from the dependent variable of home based activity participation in the previous week.

Table 10. Regression: Home-Based Activity Participation in Previous Week

	Home activity participation in previous week – reading (R^2 = .049)	Home activity participation in previous week – Playing cards and/or games (R^2 = .077)	Home activity participation in previous week – Completing a puzzle (Suduko) (R^2 = .094)	Home activity participation in previous week – Completing a hobby (R^2 = .063)
(Constant)	Sig .590	Sig .005	Sig .498	Sig .000
Income in previous year	NS	**Beta -.146**	NS	**Beta -.262**
Highest level of education completed	**Beta .142**	NS	NS	NS
Main activity	NS	NS	**Beta .108**	NS
Marital status	NS	NS	NS	**Beta -.093**
Mental health (range 1-5)	**Beta .088**	NS	NS	**Beta .112**
Sex	NS	NS	NS	NS
Age	**Beta .141**	**Beta .228**	**Beta .258**	NS

Table note: Sig = p (bolded items) < .05

The regression results for the dependent variable of home activity participation in the previous week – reading a book or magazine for leisure are presented in Table 10. The independent variables of income, highest level of education completed, main activity, presence or absence of a partner, mental health range, Sex and age were used as predictors. Within the calculation, 4.9% (R^2 = .049) (see Appendix F for full tables) percent of the variance in the dependent variable was explained. Education (beta.142), subjective mental health (beta.088), and age (beta .141) were found to be significant for reading for leisure. The regression results for the dependent variable of home activity participation in the previous week – playing cards or a board game are presented in Table 10; 7.7% of the variance in the dependent variable was

explained (R^2 =.077) (see Appendix F for full tables). Income and age were found to be significantly related to home activity participation. Income had a beta value of -.146 that results in a strong negative relationship between the dependent and independent variables. As income increased, the negative beta suggests individuals played cards and games less frequently. The age of respondents had a beta of .228 which suggests that as age increased so did the frequency of playing cards.

The regression results for the dependent variable of home activity participation in the previous week – completing a puzzle are presented in Table 10; 9.4% of the variance in the dependent variable was explained (R^2 = .094) (see Appendix F for full tables). Among the examined predictor variables, the strongest predictor of how often respondents completed a puzzle in the previous week was age with a beta value of .258. The positive beta value (.258) suggests that as individuals' age increased so did their frequency of completing a doing a puzzle.

The regression results for the dependent variable of home activity participation in the previous week – completing a hobby indicated that 6.3% of the variance in the dependent variable was explained (R^2 = .063) (see Appendix F for full tables); subjective mental health status was a significant predictor of how often respondents completed a hobby at home in the previous week. The predictor variables of income resulted in a negative beta (-.262), which presents a strong relationship between the two variables and indicates that income level increased, home based hobby participation decreased. Finally, mental health resulted in a beta of .112, which indicated that those with a higher subjective mental health engaged more frequently in completing a hobby at home for leisure.

Table 11 presents the regression results for the dependent variable cultural-based activity participation in the previous year – attending musical concerts.

Table 11. Regression: Cultural Activity Participation in Previous Year - Summary

	Cultural activity participation in previous year – Attending musical concerts (R^2 = .063)	Cultural activity participation in previous year – Visiting art galleries and museums (R^2 = .031)	Cultural activity participation in previous year – Attending ballet or dance performances (R^2 = .031)	Cultural activity participation in previous year – Attending live theatre (R^2 = .068)	Cultural activity participation in previous year – Attending festivals (R^2 = .031)
(Constant)	Sig .326	Sig .546	Sig .394	Sig .426	Sig .008
Income in previous year	NS	NS	NS	NS	NS
Highest level of education completed	**Beta .150**	**Beta .117**	NS	NS	NS
Main activity	NS	**Beta .121**	NS	NS	**Beta .089**
Marital status	NS	NS	NS	NS	NS
Mental health (range 1-5)	NS	NS	NS	**Beta .107**	**Beta .113**
Sex	NS	NS	NS	**Beta -.093**	NS
Age	**Beta .195**	NS	NS	**Beta .210**	**Beta -.086**

Table note: Sig (bolded items) = p < .05

The independent variables of income, highest level of education completed, main activity, presence or absence of a partner, mental health range, Sex and age were used as predictors. Within the analysis, 6.3% of the variance in the dependent variable was explained (R^2 = .063) (see Appendix G for full tables); education level was found to be significant in predicting of how often respondents attended concerts in the past year with a beta of .185. This result suggests as education level of respondents went up so did the frequency of attending musical concerts. Age resulted in a beta of .195 suggests that respondents who were older more frequently attended musical concerts.

The regression results for the dependent variable cultural based activity participation in the previous year – visiting art galleries and museums are presented in Table 11. With 3.1 percent of the variance in the dependent variable was explained (R^2 = .031) (see Appendix G

for full tables); education and occupation (main activity) were found to be significant. Education level resulted in a positive beta of .117 that suggests that more educated respondents attended galleries and museums more frequently. Among the examined predictor variables, individuals who indicated they were not employed attended museums and galleries more frequently with a beta of .121.

The regression results for the dependent variable of cultural based activity participation in the previous year – attending ballet or dance performances for leisure are presented in Table 11. Within the regression analysis, 3.1% of the variance in the dependent variable was explained ($R^2 = .031$) (see Appendix G for full tables); however, none of the examined predictor variables were found to be significant.

Table 11 presents the regression results for the dependent variable cultural based activity participation in the previous year – attending live theatre. The regression results indicated 6.8% of the variance in the dependent variable was explained ($R^2 = .068$) (see Appendix G for full tables). Among the examined variables, mental health was found to be significant in how often respondents attended live theatre performances in the past year ($p = .006$) with a beta of .107. This result suggests that individuals with higher subjective mental health spend more time engaged in attending live theatre. Older individuals (beta .210) participated more frequently in attending live theatre. Further, individuals' sex acted as a significant finding of how often respondents attended live theatre with a beta of -.093. This result indicates that males (coded a value of 1) attended live theatre less frequently than females (coded a value of 2).

The regression results for the dependent variable cultural based activity participation in the previous year – attending festivals are indicated in Table 11. Within the regression

analysis, 3.1% of the variance in the dependent variable was explained (R^2 = .031) (see Appendix G for full tables). The significant findings of how often respondents attended festivals in the past year were their occupation (main activity) with a beta of .089. This suggests that individuals who were not working participated more in attending festivals. Subjective mental health rating had a beta of .113 that indicates individuals with higher level of subjective mental health participated more frequently in festivals. Finally, age had a beta value of -.086 that suggests that as individuals' age they attended less frequently.

Table 12 presents the regression results for the dependent variable total minutes of daily online activity for leisure.

Table 12. Regression: Total Minutes of Screen Time - Summary

	Total minutes of daily online activities for leisure (R^2 = .031)	Total minutes of TV viewing (R^2 = .163)
(Constant)	Sig .000	Sig .000
Income in previous year	NS	**Beta -.124**
Highest level of education completed	**Beta 1.112**	**Beta -.154**
Main activity	**Beta .095**	**Beta .094**
Marital status	**Beta .103**	NS
Mental health (range 1-5)	**Beta -.124**	Beta -.035
Sex	**Beta -.126**	Beta -.037
Age	**Beta -.200**	**Beta .213**

Table note: Sig (bolded items) = p < .05

The examined predictor variables of income, highest level of education completed, main activity, presence or absence of a partner, mental health range, sex and age were used as predictors. Within the regression modelling, 3.1% of the variance in the dependent variables was explained (R^2 = .031) (see Appendix H for full tables). Highest level of education was found to be significant (beta 1.112) related to minutes of online activity for leisure, which

suggests that as individuals increase in age, they spend more time on the computer for leisure. Further, the individuals' main activity resulted in a beta of .095 that suggests that individuals who do not work spend more time online for leisure, as well younger (-.200) respondents spent more time online for leisure. The results suggest that male respondents (-.200) spent more online for leisure as did those with a lower level of subjective mental health (-.124)

The regression results for the dependent variable total minutes of TV viewing previous week are presented in Table 12. It was determined that 16.3% of the variance in the dependent variable was explained (R^2 = .163) (see Appendix H for full tables). Income level (beta -.124) and education level (beta -.154) have values that indicate that as income and education level increase the frequency of television viewing decreases. Main activity (.094) and age (.213) both resulted in positive beta values, which suggests that people who were not working and are older spend more time watching television.

Chapter 5

Discussion

The research question for this study was:

How does perceived, self-rated (subjective) mental health, presence or absence of a partner; socioeconomic status [income, highest level of education achieved, main activity (employment status)], age and sex associate with how frequently respondents engage in leisure opportunities?

Chapter five summarizes the findings of the study and relates them to the literature related to the research question, discusses a potential frame work of leisure engagement, presents Avedon's postulates using the findings of the current study, reframing analysis using Avedon's (1974) postulates for future research, linking Avedon's (1974) postulates within a conceptual framework, of shifting gears for leisure engagement, potential implications for Therapeutic Recreation service and potential recommendation for future research.

Findings of the Study

Table 13 presents a synthesis of the beta results of the study. Due to the statistical analysis chosen, the beta results only indicate the direction of the responses.

Table 13 – Results by Beta Direction

Predictor Variables	Positive Significant Beta	Negative Significant Beta
Income		Completing a hobby (-.262) Online activity for leisure (-.066) Television viewing (-.124) Light exercise (-.070) Musical concerts (-.074) Socializing with friends (-.126) Playing cards and/or games (-.146)
Highest Education Level Achieved	Reading for leisure (.142) Light exercise (.097) Art galleries and museums (.117) Musical concerts (.150)	Online for leisure (-1.112) Television viewing (-.154) Going to the movies (-.137) Going out to bars or clubs (-.195) Team sports (-.162)
Main Activity (Higher values assigned to non-working individuals)	Completing a puzzle (.108) Online activity for leisure (.095) Television viewing (.094) Art galleries and museums (.121) Attending festivals (.089)	Going to the movies (-.098)
Marital Status (Higher values assigned to single individuals)	Online for leisure (.103) Going to the movies (.180) Socializing with friends (.135) Going out to bars or clubs (.134)	
Subjective Mental Health	Completing a hobby (.112) Reading for leisure (.088) Vigorous exercise (.230) Light exercise (.103) Live theatre (.180)	Online for leisure (-.124)
Age	Individual sports (.246) Television viewing (.213) Live theatre (.210) Musical concerts (.195) Attending sporting events (.163) Going out to bars or clubs (.168)	Online for leisure (-.200) Attending festivals (-.086) Going to the movies (-.119)
Sex (Males = 1 Females =2)	Completing a puzzle (.141) Attending sporting events (.168) Socializing with friends (.100) Going out to bars or clubs (.216) Playing cards or games (.228)	Online for leisure (-.126) Live theatre (-.093)

Income

The following summarizes the findings related to the income. Income was found to be significant in determining the following activities within the data set; completing a hobby (-.262), online activity for leisure (-.066), television viewing (-.124), light exercise (-.070),

musical concerts (-.074), socializing with friends (-.126), and playing cards or games (-.146). Researchers have indicated the importance of socioeconomic status in the patterning of leisure engagement opportunities (Crichter, 2006; Harvey & Singleton, 1995; Robinson & Godbey 1997). Further, individuals' income level depicts how often and in what type of leisure activities they engage (Robinson & Godbey, 1997). This may be a result of the resources required to participate, which may require financial stability. Further, individuals' income level influences how often and what type of leisure activities in which they engage. This may be a result of the resources required to participate, which may require financial stability. For example, to be engaged in team sports, a registration fee is often required.

Highest Level of Education

Level of education received was found to be significant in predicting how frequently individuals engaged in reading at home for leisure (.142), how much time they spent online for leisure (-1.112), how much time they spent watching television (-.154), how frequently they engaged in light exercise (.097), how frequently they visited art galleries and museums (.117), how frequently they attended musical concerts (.150), how frequently they went to the movies (-.137), how frequently they went to bars or clubs (-.195), and how frequently they played team sports (-.162). The betas suggest that people who had received a higher level of education engaged more frequently in reading at home, light exercise, visiting art galleries and museums, and went to musical concerts. These activities require financial resources that may come with a higher level of education received. Past research determined that individuals' education level more commonly predicted leisure engagement patterns than job status and income (Robinson & Godbey, 1997). Robinson and Godbey (1997) determined that individuals with a higher

education level have less time to engage in leisure activities than individuals with a lesser amount of education.

Main Activity

Past research has indicated that individuals' job status predicts their leisure engagement patterns (Robinson & Godbey, 1997). According to Crichter (2006) individuals' employment status plays a role in determining their overall socioeconomic status and class within society. Crichter (2006) explains further that individuals of higher socioeconomic status have greater opportunity for leisure because of their ability to gain and access resources required to be engaged. Main activity was found to be significant in determining how frequently individuals engaged in completing a puzzle at home (.108), how much time they spent online for leisure (.095), how much time they spent watching television (.094), how frequently they visited art galleries and museum (.121), how frequently they attended festivals (.089), and how often they went to the movies (-.098).

Marital Status

Marital status (presence or absence of a partner) was significant in determining the engagement patterns of how much time individuals spent online for leisure (.103), how frequently individuals went to the movies (.180), how often individuals socialized with friends (.135), and how frequently individuals went to bars or clubs (.134). Kelly (1990) indicated that family members were the most common form of leisure companionship. Thus, a small amount of support from social supports (friends/family) may affect how frequently individuals engage in leisure (Kelly, 1990; Shinew, 1996).

Subjective Mental Health

Individuals' subjective mental health was found to be significant with how frequently they participated in completing a hobby (.112), reading for leisure (.088), how much time they spent online for leisure (-.124), how frequently they participated in vigorous exercise (.230) and light exercise (.103), and how frequently they attended live theatre (.107). According to past research, leisure activities involve a certain level of both cognitive and social requirements (Avedon, 1974; Hopper & Singleton, 2015) and a certain level of expressive involvement and cognitive abilities (Gaitz & Gordon, 1972; Harvey et al., 2010; Hodgson, McCulloch, & Fox, 2011; Hopper & Singleton, 2015). These requirements stem from individuals subjective mental health and have been shown to influence their leisure engagement patterns (Hopper & Ferries, 2014).

Age

The age of respondents was found to be significant in determining how frequently they engaged in individual sports (.246), how much time they spent online for leisure (-.200), how much television they watched (.213), how frequently they attended festivals (-.086), how frequently they attended live theatre (.210), musical concerts (.195), attended sporting events (.163), went to the movies (-.119), and went to bars and clubs (.168). According to Nimrod and Janke (2012), age acts as a strong determinant in how individuals spend their leisure, especially for older individuals. Age determined what type of activities individuals engage in as a result of functional abilities – as an overall decline in functional ability is common among older adults (Nimrod & Janke, 2012; McCarville & MacKay, 2012; Gibson & Singleton, 2013).

Sex

The sex of respondents was found to be significant in how frequently they participated in completing a puzzle (.141), how much time they spent online for leisure (-.126), attended live theatre (-.093), attended sporting events (.168), socialized with friends (.100), how frequently they went out to bars or clubs (.216), and played board games or cards (.228). Shaw (1985) and Taniguchi and Shupe (2014) attributed to Sex differences in leisure engagement frequency to the general status differences between males and females in society, which leads to inequalities in access to leisure time.

Framework of Understanding Leisure Engagement

Leisure research has often not classified leisure engagement within a framework that provides an understanding of the complexities at which leisure engagement occurs. Leisure activities have been aggregated into an umbrella classification such as sports, culture, and tourism (Harvey et al., 2010; Hodgson et al., 2011; Hopper & Ferries, 2014; McCormick et al., 2012; Nimrod et al., 2012; Sagatun et al., 2007; Stumbo & Peterson, 2009). These classifications of leisure engagement often involve a larger, over-arching classification of leisure engagement such as physical activity. As an example, physical activity has traditionally been understood as simply physical activity, without the disaggregating of physical activity into all of the opportunities such as walking, running, and weight lifting.

As an example Stumbo and Peterson (2008) identified traditional and nontraditional leisure engagement that act as a way of classifying broadly defined leisure opportunities into an array of opportunities from traditional and nontraditional activities. An example of a traditional leisure engagement may include sports, where an untraditional activity may include eating. These categories serve as umbrella terms and are used to classify activities. Under the

term sports, opportunities within this term could be activities ranging from team sport to running and may require differing prerequisites financially, physically and cognitively. Stumbo and Peterson (2008) discussed this classification of activities as way of building choice and alternatives for individuals when selecting their leisure activities. Mobily, Lemke, Gisin (1991) developed the concept of a leisure repertoire and indicated that every individual has a set of activities that they have the required social, physical and cognitive skills to engage in the opportunity. Avedon (1974) postulated that the physical, psychological and cognitive requirements that an activity requires for engagement are important to consider. Rather than studying how many activities a person participated in, the researcher, as the results of the experience in this study postulates that research should begin to explore the complexities involved to participate in an activity and assisting the individual to build skills in a number of activities that potentially will be a source of enjoyment and satisfaction for the individual across their life (Avedon, 1974; Mobily, et al., 1991; Stumbo & Peterson, 2009). These concepts provide individuals possible explanations for individuals about why and how they engage in leisure. Further, outlining the required skills will assist the individuals in selecting leisure activities that are better suited to their level of abilities.

Reframing Analyses

Avedon (1974) developed a series of postulates related to social and cognitive interaction patterns that provides insights into the prerequisites of cognitive, social and physical skills needed to engage in an opportunity. Avedon's model allowed the researcher to place the findings within this model acknowledging the complexities of engagement among the activities within this study. Table 14 presents the definitions of all of Avedon's (1974) postulates, however, as depicted by the classified activities column, we were only able to place activities

from the CIW data set into four of the postulates. Some variables posed a substantial challenge when attempting to place them into specific categories. It is important to note that on-line activities for leisure could easily be social in nature and on-line activities are very difficult to classify as they are used in many ways.

Table 14 – Synopsis of Avedon Postulates and Categorized CIW Activities

Avedon's (1974) Postulates	Activities Classified from CIW Data Set
Intraindividual: Action takes place within the mind or involving the mind and a body part, but no contact with another person or object occurs. Meditating or daydreaming are examples of an intraindividual activity.	
Extraindividual: Action directed by a person toward an object in the environment, with no contact with other people. An example of an extraindividual activity may include reading at home for leisure.	Individual Sports Completing a Hobby Reading for Leisure Completing a Puzzle Online Activity for Leisure Television Viewing
Aggregate: Action directed by a person toward an object while with other people who are directing their attention towards objects. No interaction is required, but spontaneous interaction may result. Aggregate activities may include attending musical concerts where interaction is optional.	Vigorous Exercise Light Exercise Art Galleries and Museums Attending Festivals Live Theatre Musical Concerts Attending Sporting Events Going to the Movies
Interindividual: Action of a competitive nature directed by one person towards another. Requires continuous interaction with opponent. Assists people to deal with stress, pressure, winning and losing. An example of this type of activity may include a game of chess.	
Unilateral: Action of a competitive nature among three or more people, one of whom is the antagonist. This provides opportunities for role differentiation and may include a game of tag or hide-and-go-seek.	
Multilateral: Action of a competitive nature between three or more individuals with no one as an antagonist. Every player is against one another and the responsibility of control is placed on each individual. Multilateral activities may include a board game of Monopoly.	Socializing with Friends Going out to Bars or Clubs Playing Cards and/or Games
Intragroup: Action of a co-operative nature by two or more persons with the intent of reaching a common goal and helps to establish social skills. An intragroup activity may include completing a puzzle together with the end goal of completion.	
Intergroup: Action of a competitive nature between two or more intragroups. Difficult because they involve competition and co-operation, but helps participants learn to be team members. Intergroup activities would be an activity such as soccer where everyone is cooperating as a team, yet competing against another group.	Team Sports

Hopper and Ferries (2014) assessed the efficacy of physical activity among individuals experiencing a serious mental health challenge. What the authors failed to do was understand the complexities of the experiences under physical activity related to the meaning of the experience to the participant and the social, cognitive and physical requirements to engage in the experience. If the authors could have disaggregated the activity of running into the social, cognitive and physical requirements and asked the participant what the experience meant to the person it could have provided a broader insight to the experience. The authors used running within the study, however this opportunity may have not been appropriate for the person's interest or the person's physical, social, cognitive and economic resources. Understanding these complexities through this disaggregation may have allowed for more enjoyment and meaningful outcomes for the participants in the study.

Avedon's (1974) postulates enabled the researcher to speculate the complexities of the engagement and potentially a way of examining leisure engagement. The data used in the current study enabled the researcher to reframe the experiences and speculate how the meaning may have changed based upon the pre prerequisite social, cognitive and physical requirement of the experience.

During the current study, the researcher was able to summarize findings within the Avedon's conceptual model for discussion purposes. To assist the reader in understanding the complexities of the findings of the current study, Avedon's (1974) model was used to understand how the findings relate to previous research, current therapeutic recreation (TR) practice and future recommendations for research. The placement of the activities into their respective categories was subjective and related to the researcher's interpretation of the prerequisite skills and abilities needed to participate. The secondary data set provided a set list

of activities that the researcher, with consultation with his supervisor, was able to classify the activities into four of Avedon's postulates. These classifications are open to interpretation and need to be further examined in future research.

Table 15 presents the data from the current study within Avedon's postulates for discussion.

Table 15. Summary of Significant Findings as Classified Within Avedon (1974)

Avedon's Patterns of Social Interaction	Summary of Significant Findings by Beta Results						
	Income	**Highest Education Achieved**	**Main Activity**	**Marital Status**	**Subjective Mental Health Status**	**Age**	**Sex**
Extraindividual							
Individual Sports						.246	
Completing a Hobby	-.262				.112		
Reading for Leisure		.142			.088		
Completing a Puzzle			.108				.141
Online Activity for Leisure	-.066	-1.112	.095	.103	-.124	-.200	-.126
Television Viewing	-.124	-.154	.094			.213	
Aggregate							
Vigorous Exercise					.230		
Light Exercise	-.070	.097			.103		
Art Galleries and Museums		.117	.121				
Attending Festivals			.089		.113	-.086	
Live Theatre					.107	.210	-.093
Musical Concerts	-.074	.150				.195	
Attending Sporting Events						.163	.168
Going to the Movies		-.137	-.098	.180		-.119	
Multilateral							
Socializing with Friends	-.126			.135			.100
Going out to Bars or Clubs		-.195		.134		.168	.216
Playing Cards and/or Games	-.146						.228
Intergroup							
Team Sports		-.162					

Table 15 does not imply interaction but rather enabled the researcher to summarize the findings within Avedon's (1974) postulates. The author acknowledges that each of these variables was treated separately within the statistical analysis used – no cause or effect could be implied. However, this could be provide an opportunity for future research where researchers could provide study participants with activities to choose from based upon potential prerequisites for engagement.

Income

Extraindividual. In the extraindividual activity category, individuals' income was found to be significant in discovering how frequently they participated in completing a hobby (-.262), how much time they spent online for leisure (-.066), and how much time they spent watching television (-.124). The negative beta results suggests that individuals of lower income level participated more frequently in home-based leisure activities. Studies indicated that individuals with lower socioeconomic status have a smaller leisure repertoire (Kelly, 1990). Activities that were engaged in most frequently within the extraindividual category were activities that require few financial resources. Individuals' income level provided a direction in what type of activities they engaged in and within the extraindivdiual category individuals of a lower income level participated more frequently. This could be a result of a lack of resources required to engage in activities that involve a high level of cognitive and social prerequisites, such as team sports. Income may be related to an increased sense of self-esteem and as a result may increase one's subjective mental health.

Aggregate. Within the aggregate category, income was found to be significant in determining how frequently individuals engage in light exercise (-.070) and attending musical concerts (-.074). These findings indicated that respondents with a lower income level

participated in both of these activities. Light exercise and attending musical concerts are activities that may not include direct social interaction, however interaction could occur with other participants during the experience. And although musical concerts involve money, there are often free concerts offered as a part of a community festival or celebration. Further, at the aggregate level, light exercise could include activities that may not require many resources in the form of equipment or registration fees.

Multilateral. The multilateral activities included socializing with friends (-.126) and playing cards or games (-.146). Both socializing with friends and playing cards or games are activities that although involve a high level of social interaction, require very few financial resources to participate in. This finding contradicts the findings above under the extraindividual category where income limited social prerequisites. These activities also build upon a person's past experience in activities related to social cues, rules of games and interaction patterns that enable the person to potentially feel they can contribute to the opportunity. Professionals need to understand the social construction of the activity, which may include who participates? How do they participate? What are their motivations? What are their constraints and limitations? Armed with the answer to these questions, professionals have the ability to design and implement activities that make it possible for individuals to flourish (Carruthers & Hood, 2004). Professionals need to understand how the social, physical and cognitive requirements of the experience that could potentially include or exclude participants. Individuals' income level may play a role in predicting what types of leisure individuals engage in.

Education

Extraindividual. Highest education was found to be significant for how frequently individuals participated in reading at home for leisure (.142), how much time they spent online for leisure (-1.112), and how much time they spent watching television (-.154). In this study, individuals who had a higher education level more frequently engaged in reading at home for leisure, however individuals of a lower education level spent more time online for leisure and watching television.

Aggregate. Activities that were found to be significant according to education level under the aggregate category included how frequently individuals engaged in light exercise (.097), how frequently respondents visited art galleries and museums (.117), how frequently they attended musical concerts (.150), and how frequently they went to the movies (-.137). The activities that individuals of higher education level engaged in more frequently were light exercise (.097), visiting art galleries and museums (.117), and how frequently they attended musical concerts (.150). Respondents' education level also was found to be significant in relation to how frequently individuals went to the movies (-.137). The beta suggests that individuals with a lower level of education tended to visit the movies more frequently.

Multilateral. The education level of respondents was found to be significant in predicting how frequently they went to bars or clubs (-.195) and as a result individuals with a lower education level visited bars and clubs more frequently. According to Avedon's (1974) postulates, multilateral activities involve interaction with others and do require a level of cognitive and social functioning.

Intergroup. Individuals' education level was found to be significant in predicting how frequently they participated in team sports (-.162). Team sports are difficult because they

involve competition and co-operation, but helps participants learn to be team members. Intergroup activities would be an activity such as soccer where everyone is cooperating as a team, yet competing against another group. This level of interaction is the most complex in relation to the cognitive and social requirements for engagement (Avedon, 1974).

Level of education acted as a predictor in determining the engagement frequency and patterns in an array of activities. Overall, education level demonstrated the complexity that individuals go through in determining and choosing an activity to engage in. Education level of individuals is a factor in the determination of activities chosen to participate in according to Avedon's (1974) postulate.

Main Activity

Extraindividual. Within the extraindividual category, the main activity of respondents of the study was found to be significant in how frequently they participated in completing a puzzle at home (.108), how much time they spent online for leisure (.095), and how much time they spent watching television (.094). Respondents of the current study who were not working engaged more frequently in extraindividual activities.

Aggregate. Under the aggregate category of Avedon's (1974) model, individuals' job status was found to be significant for how frequently they engaged in attending art galleries and museums (.121), how frequently they went to festivals (.089), and how often they went to the movies (-.098). Individuals who were not working engaged more frequently in attending art galleries and museums and festivals.

Marital Status

Extraindividual. The presence or absence of a partner significantly predicted how much time individuals spent online for leisure (.108). Respondents who did not have a partner spent

more time online for leisure in comparison to respondents who did have a partner. If we look at the activities within the extraindividual category, the activities that are categorized as extraindividual require no social support or interaction with others.

Aggregate. Presence or absence of a partner was significant with how frequently individuals went to the movies under the aggregate classification. The aggregate postulate indicates that although individuals are directing their attention to an object independently, spontaneous interaction with others may occur.

Multilateral. Presence or absence of a partner was found to be significant with how frequently respondents socialized with friends (.135) and going out to bars or clubs (.134) within the multilateral category. Individuals who were not married, or did not have a partner because of a variety of reasons (widowed, never married, etc.) engaged more frequently in socializing with friends and going out to bars or clubs.

Subjective Mental Health

Extraindividual. The findings indicated that individuals of higher subjective mental health participated more frequently in reading at home for leisure (beta .088) and completing a hobby (beta .112). Reading at home and completing a hobby for leisure potentially involves a level of cognitive functioning in order to fully participate (Avedon, 1974). Although reading at home and completing a hobby were classified in the extraindividual category of Avedon's postulate, which speculates no interaction with others, the participant potentially could have been participating with others during this experience such as reading to children or participating with another individual during the activity. However, this information was not available to the researcher in the data set. Typically, activities that require a high level of subjective mental health would be classified in categories that involve interaction and

cooperation with other participants (Avedon, 1974; Gaitz & Gordon, 1972). Gaitz and Gordon (1972) discussed how leisure opportunities involve a certain level of expressive involvement. To engage in home based leisure opportunities such as reading for leisure; a certain level of expressive involvement is required to participate.

The negative beta result found when predicting how much time individuals spent online for leisure (-.124) indicated that individuals of lower subjective mental health status spent more time online for leisure. This finding may be important for future studies when assessing how individuals who are faced with a mental health challenge may spend more time online based upon the millennial cohorts use of technology. This may be attributed to an activity that requires a lower level of expressive involvement and a lower level of subjective mental health. Although, when Avedon (1974) developed this conceptual model, computers were not as accessible to the general population and only used within research environments. The millennial generation has grown up with access to computers and the social and psychological requirements for online use would fall into this category.

Aggregate. Within the physical activity variable (team sport, individual sport, vigorous activity, light activity), individuals' subjective mental health status was found to be significant in predicting how often they participated in both vigorous exercise (beta .230) and light exercise (beta .103). The leisure physical activity literature has indicated that the participation in physical activity is good for one's mental health status (McCormick et al., 2012). Further, the relationship could go both ways – engagement in physical activity could increase mental health and higher levels of subjective mental health could contribute to willingness to engage in physical activity.

Reflections on Avedon's (1974) Postulates

Participation in physical activity may be a result of individuals' motivation levels as well as that of their comfort level in the activity (Avedon, 1974; Gaitz & Gordon, 1972). Light and vigorous physical activity is an aggregate activity that does not necessarily involve direct social interaction with others, however interaction is possible. Each participating individual is directing their attention to an object (the activity) and requires a certain level of subjective mental health in order to fully participate. According to Gaitz and Gordon (1972) leisure activities require a varying level of expressive involvement, which may stem from individuals' subjective rating of their mental health. In the case of the physical activity involvement, a higher level of subjective mental health and expressive involvement in physical activity was required to fully engage in certain physical activity opportunities such as team sport. Typically, team sports involve socialization and cooperation with teammates in order to participate successfully. This level of involvement according to Avedon (1974) interaction patterns is the most complex and most demanding upon participants' social skills. This type of activity may involve a high level of subjective mental health to both participate in and find meaningful. Individuals' of a lower level of subjective mental health may find activities such as team sports stressful and may not have the ability to interact with teammates in order to be successful.

Subjective mental health was found to be significant in determining how often individuals attended live theatre (.107) and festivals (.113). The positive beta results suggest that individuals of higher subjective mental health engaged more frequently in cultural activities. Avedon (1974) provided insight into leisure activity interaction patterns from activities that take place within the individual and activities that involve a high level of

interaction such as team sports. Cultural activity participation may require social interaction with peers and other attendees. Using Avedon (1974) as a framework, it could be determined that these cultural activity participants have a higher level of subjective mental health because of their ability to interact and engage in the activity.

Sex

Extraindividual. Sex, within the extraindividual category was significant in determining the amount of time spent online for leisure (-.126). Male respondents spent more time online for leisure than women and this is consistent with past literature that indicated women often are confronted with family-work related obligations, and thus men may have more time for leisure opportunities. If we use Avedon's (1974) extraindividual category to understand why men spent more time online for leisure, it could be deduced that men find more meaning and connection with leisure activities that do not involve interaction with others. Further, women engaged more frequently in completing a puzzle at home (.141). This finding could be a result of women's higher obligation to home and family work obligations than men. Due to their increased home and family obligations, the female respondents spent more time at home, and found interest in completing puzzles.

Aggregate. Within the aggregate category of activity, respondents' specified Sex was found to predict how frequently individuals attended live theatre (-.093) and musical concerts (.168). Male respondents participated more frequently in attending live theatre. This could be a result of their interests in live theatre in comparison to female respondents. Further, female respondents attended musical concerts more frequently than males. These findings are atypical of societal norms where typically, females would be more interested in attending live theatre than musical concerts.

Multilateral. The specified Sex of respondents was found to be significant for how frequently they participated in socializing with friends (.100), going out to bars or clubs (.216) and playing cards or games (.228). Within the multilateral category, female respondents engaged more frequently in all activities. According to Avedon (1974), multilateral activities involve direct social interaction with others. It could be deducted from these results that female find more connection with leisure activities that involve direct social interaction with others.

Age

Extraindividual. Younger respondents spent more time online for leisure with a beta of -.200, where older individuals spent more time watching TV as indicated by a beta of .213. Individual sport was found to be significant only with age (.246). Previous literature found that an individuals' age has influenced their participation in the opportunity (Nimrod & Janke, 2012). However, this previous literature has not understood chosen activities within a framework such as Avedon's (1974) model. Within Avedon's model, we can see that in order to participate in individual sports the person's age is an influence. The use of a computer among younger aged cohorts could be a result of an increase in technological advancements during the respondent's life. Younger individuals are more inclined to use a computer because of their familiarity. Further, older individuals increased amount of time watching television could be a result of a variety of factors. One of these factors could be that as age increases, a loss of a partner becomes more prevalent, and thus leisure engagement has been altered to activities that do not include social engagement.

Aggregate. Under the aggregate category of social interaction, age was found to be significant in how frequently individuals engaged in attending festivals (-.086), attended live theatre (.210), musical concerts (.195), attending sporting events (.163), and going to the

movies (-.119). Older adults were found to participate more frequently in attending live theatre, musical concerts and sporting events. These engagement patterns could be a result of the respondents' stage of the life course, and because of their age, may have more time to attend these types of events. Further, because of their age, may have a decline in functional abilities and these types of activities suit their current strengths and abilities for leisure engagement. However, younger respondents were found to engage more frequently in attending festivals and going to the movies. It could be assumed that attending festivals and going to the movies are activities that are typical of younger adults.

Multilateral. Among older adults, going out to bars and clubs was more common (.168). Within the original survey, respondents only over the age of 18 were invited to participate. This finding could be a result of the legal age required to consume alcohol in the region where the original study was completed. Alternatively, the finding may suggest that older adults have the unobligated free time needed to attend bars and clubs more frequently.

Overall, the results of this study, when placed within Avedon's (1974) model, allowed the researcher to see the complexity involved in leisure participation. This model provided insights into a way to understand what is involved in perhaps finding meaning and measureable outcomes. A challenge of using Avedon's model in classifying what is involved in participating is that not each person fits within the model exactly. Respondents of the survey presented unique and complex lived experiences and not each person fit within a specific category. Each respondent of the original study represents a unique and complex individual and to demonstrate the complexity, a case study of an individual is presented below.

Case Study Example

To provide a theoretical example using the predictor variables chosen (age, sex, income, etc.) in the current study a case study of a respondent within Avedon's postulates will be described using online activity for leisure. When looking at how much time respondents spent online for leisure, each one of the predictor variables (income, education level, main activity, marital status, subjective mental health status, age, and sex) was found to be significant in determining leisure engagement. When examining the summary table, the author acknowledges each variable was a separate analysis and this a speculative model. The results depicted an individual with the following characteristics; the individual is a young male with a low subjective mental health rating, he is not married, does not have a job, low level of education and very little income. This individual was potentially involved frequently in online activity for leisure and his engagement in this activity could be a result of their current situation. Alternatively, it could be the cause of their current situation. Avedon's (1974) postulates provides a framework for which the study results could be further researched. In the case of online activity for leisure, it was placed within the extraindividual category and according to Avedon (1974), this category involves an activity where no social interaction is involved and individuals direct their attention to an object independently. Categorizing activities according to social and cognitive requirements allowed the researcher to reflect on the potential interactions of the analyses. The benefits of this type of classification are that it allows researchers and practitioners to break down the social and cognitive requirements of an activity as well as the personal characteristics of an individual into component parts. Avedon's postulates provided a visual by which activities and individuals can be placed in order to find the right fit. This research opportunity led to the author to recommend that the data be

reanalyzed using Multiple Classification Analysis which could enable the future research to examine the interaction that are only speculated within the summary table using Avedon's (1974) model.

The case study presented above on online activity within the extraindividual category (Avedon, 1974) potentially provides insights into who participated in this activity using the predetermined activities of the original data set. How the findings of this study within the Avedon's (1974) model may assist therapeutic recreation practitioners is presented in the next section.

The following figure (Figure 4) further illustrates the complexities found within the concepts presented in Figure 3, which were placed in a circular pattern to depict the individuals lived experience. The results of the study within Avedon's (1974) model and the previous research presented in Figure 3 are imbedded in the turning wheels.

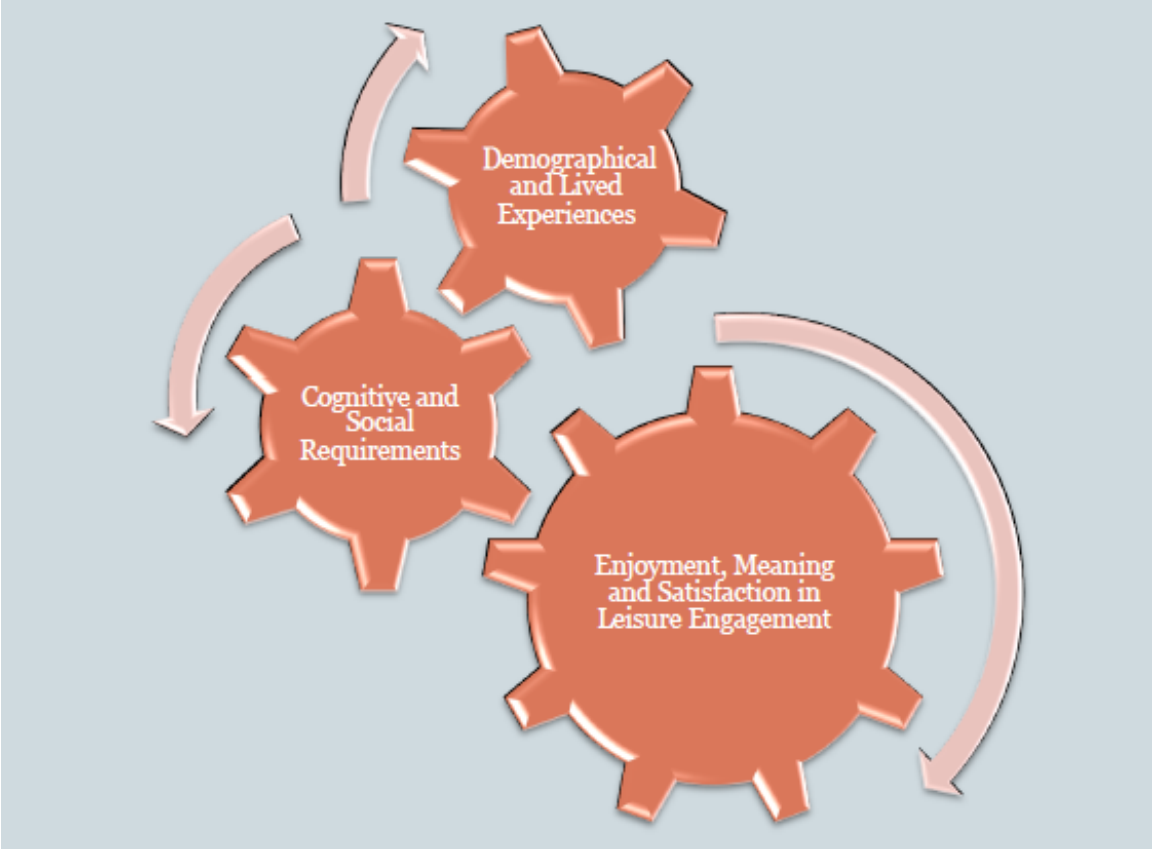

Figure 4. The complexity at which engagement occurs – the moving gears.

Using the gears as a visual representation, there are many moving parts. In order for the larger gear component to work that contains some of the potential benefits of leisure, there is a requirement that the two smaller ones work together in order to assist the larger one in moving. The two smaller gears contain the person's demographical characteristics (sex, age, SES, presence or absence of a partner) (Caldwell, 2005; Iwasaki, Coyle, & Shank, 2012; Keyes & Westerhof, 2012) and the other small gear contains the cognitive and social requirements to engage (Avedon, 1974; Gaitz & Gordon, 1972; Mobily et al., 1991). These smaller gears allowed the researcher to visually represent the variation in types of individuals that responded to the initial survey. Not one individuals was exactly the same and each of them have varying levels of subjective mental health and varying lived experiences. This visual helps depict the

findings and implications of the current research.

Significance for Therapeutic Recreation Practice

Therapeutic recreation (TR) practitioners will need to develop and implement their programs with an understanding of how their participants' rate their own subjective mental health and how they define their leisure engagement. Therapists may need to understand the complexity of individuals' subjective mental health status and to better support individuals who may be faced with a mental health challenge. This will allow for outcomes that are both measureable and meaningful for the person. The outcomes of the individuals' self-identification and ownership of their experience will develop a link to the therapist and the person. This self-identification and ownership of their experience was depicted through the complexity presented in the large variation in what predicted their engagement patterns. Whether it was the individuals' income level or their subjective mental health rating, individuals that therapeutic recreation practitioners may work with present unique cases and challenges through their experiences. Potentially using Avedon's model to understand the complexity of the experience would assist the practitioner to work more effectively with the people they work with by having a better understanding of what is involved in the activity to find both meaning and enjoyment, and to reduce challenges associated with engaging in an activity outside of the functional ability of the individual. As the profession of therapeutic recreation continues to grow, conducting evidence-based practice and theory-based programming is becoming increasingly important.

As the rate of individuals being faced with lower levels of subjective mental health continues to increase (Statistics Canada, 2013), the importance of understanding subjective mental health across the life course will require examination. Past research has addressed the

individuals' specific mental illness diagnosis and in some cases, the individuals' subjective mental health rating, regardless of their challenges this is an important factor in leisure activity selection and engagement. In the case of subjective mental health, there is very little literature to address how individuals use their leisure time (Paillard-Borg et al., 2009).

Therapeutic recreation practitioners may wish to stay away from the diagnostic label given through traditional diagnosis and measures; subjectivity allows the individuals that practitioners are working with to be the expert. This type of approach to therapeutic recreation practice is at the forefront of the profession, an approach that addressed individuals strengths and abilities and focuses on their needs (Carruthers & Hood, 2004). Practitioners need to understand the complexity of the activity and the demands upon the individual at a social interaction pattern level (Avedon, 1974). Further, practitioners could benefit from understanding and knowing the meaning of the experience to the person and what is required of them from to both succeed and find meaning in the activity (Gaitz & Gordon, 1972; Hopper & Ferries, 2014; McCormick et al., 2012).

The summary table using Avedon's model was an opportunity to frame the findings of this study and is not to be interpreted as interactive. The author suggests using Multiple Classification Analysis for future research using Avedon's framework with the independent variables (age, sex, income, education level, main activity, presence or absence of a partner and mental health) used in this study.

Recommendations for Future Research

Although there were significant findings within the patterns of engagement that contributed to leisure engagement within this study, they did not account for all of the variance within the leisure engagement. The following recommendations for future research should be

considered.

Future research should continue to focus on the demographics of age, sex, presence or absence of a partner, income, education level, main activity, and subjective mental health status. Although each demographic did not contribute significantly to each leisure opportunity, further testing should be conducted using these demographics and leisure opportunities with a larger response rate. The use of three socioeconomic status (SES) variables (income, highest level of education achieved and main activity) made it difficult to determine what predictor of SES was the greatest predictor. Future research should choose one predictor variable for SES, or first determine the interaction between chosen SES variables. In some instances a category could have been collapsed to provide a more significant trend.

Leisure activity opportunities should continue to be disaggregated to provide a broader scope of exactly what type of 'physical activity' the person is participating in as this allows for a more accurate depiction of leisure engagement trends. The terms used by researchers to identify leisure opportunities have varying meanings to individuals and aggregating activities together does not allow the individual to respond accurately. In the current study, the original researchers provided respondents the opportunity to indicate what part of physical activity, social activity, home-based activity and cultural activity they engaged in.

The study of subjective mental health and leisure engagement should continue to be studied within the leisure literature. Subjective mental health in the current study used a five point Likert scale, which may not reflect the person's self-defined experience. Even though subjective mental health status was only found to be significant for the following activities: completing a hobby, reading for leisure, online activity for leisure, vigorous and light exercise, and attending live theatre, according to the researcher, the subjectivity of one's mental health is

an important facet of peoples' lives. These results may be due to the statistics used for analysis of the study and the term was defined Within the current study, as the level of subjective mental health challenges continue to rise among the Canadian population, understanding how individuals' subjective mental health status contributes to their leisure engagement will need to be continually examined. In future research, more in-depth questions around the individuals' subjective mental health rating would be asked and how this contributes to the types of activities they engage in. As well as how individuals' subjective mental health contributes to the meaning they find in selecting and within the activity. Identifying this meaning of the activity according to their subjective mental health may allow for more frequent engagement in the activity. Further, the researcher proposes the use of qualitative research methods be used in employing further subjective mental health research. In this study, only 10% of respondents indicated lower subjective mental health. When employing qualitative methods, it would be important to recruit a sample that has a greater variability in subjective mental health levels. By using qualitative methods, such as narrative analysis for example, would allow the researcher to ask further questions about the individual and to gather a stronger sense of how their lived experience and subjective mental associates with their leisure engagement.

Table 16 demonstrates how future research questions can be developed in order to perhaps answer more detailed questions about the social, physical and cognitive requirements needed to participate in a given leisure activity.

Table 16 – Possible Future Research Questions and Directions

	Social	Cognitive	Physical
Mental Health	What is the person's ability to interact with others? What does the experience mean to the person?	What does the person think of the experience?	What are the physical perceptions of experience to the person?
Leisure Activity	What does the leisure experience mean to the person?	How does the person define the experience? What are the cognitive prerequisites to the experience	What are the physical components or prerequisites to engage in the activity?

Finally, it is suggested that there is continued use of secondary data analysis within the leisure literature. The use of secondary data may allow emerging scholars the opportunity to reflect on their interpretation of the data. Through the use of secondary data sets, leisure researchers can continue to grow the body of knowledge by saving on time and resources (Hyman, 1972). Secondary data allows researchers the ability to utilize already existing data sets to analyze concepts and questions not previously examined (Singleton, 1988). The process of utilizing secondary data provided the opportunity for the researcher to work closely with a data set for a long period of time and immerse themselves in the conceptualization of their data analyses. Secondary data use could be attractive to graduate students that are looking for not only a unique research experience, but one that is just as or more beneficial than collecting their own data. Students who choose to utilize secondary data will have more time to immerse themselves in the data and get experience in statistical processes not always available in primary data collection. These experiences may include, recoding of variables, data cleaning and choosing variables to analyze of true interest to the researcher. Further, it is important that researchers utilizing secondary data sets pay close attention to the data set of choice through

careful data ‘cleaning’ and fully understanding how the original data collectors collected their data. This will allow for a more accurate and seamless secondary data study by ensuring all chosen variables answer the current study's question to the best of their ability, as well as understanding the limitations the chosen variables may pose.

The use of Avedon’s (1974) postulates posed some challenges when classifying the results of the study. First, attempting to classify leisure activities into specific categories can be difficult as the term leisure is left up to one’s interpretation. After consultation with the writer’s supervisor, activities were classified according to the best of their ability. The classifications of activities may be placed in different categories by different researchers.

Secondly, because there are quite a few different postulates within Avedon’s model, trying to place activities into a wide selection of categories was challenging. The researcher would propose eliminating some of the categories or combining them to more accurately reflect current research. Considering the model was developed in 1974, some activities, such as online activity for leisure was not reflected by any of the categories. By updating the model to reflect current research and to combine the categories may provide a more accurate classification process in the future.

Concluding Thoughts

Overall, this research experience has been one of personal growth in terms of my abilities as a researcher. I experienced challenges and setbacks, as well as victories along the way. My past research (Hopper & Ferries, 2014) allowed me to analyze the use of a specific activity (physical activity) and its use with individuals faced with a mental illness. What I failed to do in that research was understand the complexity and life circumstances that may have driven the individuals to participate in the activity. The current study allowed understanding that there are

many facets and complexities to one's leisure engagement behaviours. Circumstances and factors such as income, education, and marital status are all factors I failed to incorporate in my previous research. Further, the complexity required to participate, such as the level of subjective mental health required, was not addressed in my previous research. The findings of this current research allowed me to see that there is much more to engaging in an activity than simply asking participants if they wish to participate. Rather, practitioners need to first understand the person and the complexities involved in the activity. Not only do these factors (income, age, sex, presence or absence of a partner, etc.) influence the individuals' engagement, but also it makes them who they are. Personally, this finding has been the most rewarding in concluding this research. Finally, this study allowed me the opportunity to reflect about what subjective mental health means and what types of things may contribute to one's subjective mental health.

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Appendix A

Please refer to Method section for particular questions used from the below survey.

CANADIAN Index OF WELLBEING

KFL&A PublicHealth

Community Foundation for Kingston & Area

Community Wellbeing Survey

Section A: Community Vitality

	No	Yes
A1. In the past 12 months, did you do any *unpaid* volunteer work for any organization?	○	○

A2. In the past 12 months, were you a member of or a participant in…	No	Yes
a union or professional association?	○	○
a political party or group?	○	○
a sports or recreational organization (e.g., hockey league, health club, golf club)?	○	○
a cultural, educational or hobby organization (e.g., theatre group, book club, bridge club)?	○	○
a religious-affiliated group (e.g., church youth group, choir)?	○	○
a school group, neighbourhood, civic or community association (e.g., PTA, alumni, block parents, neighbourhood watch)?	○	○
a service club or fraternal organization (e.g., Kiwanis, Knights of Columbus, the Legion)?	○	○
a public interest group (e.g., focused on the environment, animal welfare, food security, homelessness)?	○	○
some other organised group or activity not mentioned above?	○	○

A3. In the past 12 months, did you provide any *unpaid* help to anyone …	No	Yes
with work at their home such as cooking, cleaning, gardening, maintenance, painting, shovelling snow, or car repairs?	○	○
by doing any shopping, driving someone to the store, or to any other appointments?	○	○
with paperwork tasks such as writing letters, doing taxes, filling out forms, banking, paying bills, or finding information?	○	○
with health-related or personal care, such as emotional support, counselling, providing advice, visiting the elderly, unpaid babysitting?	○	○
with unpaid teaching, coaching, tutoring, or assisting with reading?	○	○

A4. How many *relatives* (including uncles, aunts, cousins) do you have who you feel close to, that is, who you feel at ease with, can talk to about what is on your mind, or call on for help?

Number of relatives:	_____

A5. How many *close friends* do you have, that is, people who are not your relatives, but who you feel at ease with, can talk to about what is on your mind, or call on for help?

Number of close friends:	_____

A6. About how many people in your neighbourhood do you know well enough to ask for a favour?

Number of neighbours:	_____

A7. How safe do you feel walking alone in your ***neighbourhood*** after dark? Do you feel:

Very unsafe						Very safe
○	○	○	○	○	○	○

A8 .How often do you feel uncomfortable or out of place in your neighbourhood because of your *ethnicity, culture, race, or skin colour*?

Never						All of the time
○	○	○	○	○	○	○

A9. How would you describe your sense of belonging to your local community? Would you say it is:

Very weak						Very strong
○	○	○	○	○	○	○

A10. For each of the following statements, please indicate the extent to which you agree by checking the circle that best describes *how you feel about your community as a place to live*.

"Thinking about your community as a place to live…"	Very strongly disagree ↓	Strongly disagree ↓	Disagree ↓	Neutral ↓	Agree ↓	Strongly agree ↓	Very strongly agree ↓
Many people in this community are available to give help if somebody needs it	○	○	○	○	○	○	○
I have good friends in this community	○	○	○	○	○	○	○
This community provides opportunities for me to do a lot of different things	○	○	○	○	○	○	○
If I had a problem, few people in this community would try to help me	○	○	○	○	○	○	○
I feel at ease with the people in this community	○	○	○	○	○	○	○
If I need help, this community has many excellent services to meet my needs	○	○	○	○	○	○	○
In this community, people are not willing to help those in need	○	○	○	○	○	○	○
People are sociable here	○	○	○	○	○	○	○
In this community, there is never much to do	○	○	○	○	○	○	○
If I had an emergency, even people I do not know would be willing to help me	○	○	○	○	○	○	○
It is difficult for me to connect with the people in this community	○	○	○	○	○	○	○
In this community, I have few opportunities to satisfy my needs	○	○	○	○	○	○	○

To what extent are you prepared to respond to a crisis or emergency in your community? In the questions that follow, please indicate how you have prepared for an emergency.

A11. If there was an emergency or disaster, *where would you get information* about the event and what you need to do? Please check as many as apply:

○	Radio	○	A friend, family member, or colleague
○	Television	○	By calling 911 (emergency services)
○	City hall, municipal or government office	○	By calling 211 (community or social services)
○	An agency or public service	○	Print material (e.g., newspaper, sign, poster)
○	A professional (e.g., nurse, doctor, teacher)	○	Internet (e.g., website)
○	Workplace	○	Social media (e.g., Facebook, Twitter)

○	Other source. Please specify: _____

A12. If there was an emergency or disaster …	No	Yes
I have set aside *non-perishable food* at home, enough to last at least three days	○	○
I have set aside a *supply of bottled water* at home, enough to last at least three days	○	○
I have set aside some money, in small bills, loonies, and toonies	○	○
I would check up on my neighbours	○	○

Section B: Healthy Populations

B1. In general, would you say your *physical* health is:

Poor	Fair	Good	Very good	Excellent
○	○	○	○	○

B2. In general, would you say your *mental* health is:

Poor	Fair	Good	Very good	Excellent
○	○	○	○	○

B3. In general, how would you rate the ***overall quality*** of the health care services in your community?

Poor	Fair	Good	Very good	Excellent
○	○	○	○	○

B4. In general, how would you rate the ***overall accessibility*** of the health care services in your community?

Poor	Fair	Good	Very good	Excellent
○	○	○	○	○

B5. For each of the statements below that describe how you might have felt during the past week, please indicate the extent to which *you agree you felt this way during the past week.*

"During the past week…"	Very strongly disagree ↓	Strongly disagree ↓	Disagree ↓	Neutral ↓	Agree ↓	Strongly agree ↓	Very strongly agree ↓
I had a lot of energy	○	○	○	○	○	○	○
I was able to perform all my daily living activities (e.g., household chores)	○	○	○	○	○	○	○
I could not get going	○	○	○	○	○	○	○
Physical pain prevented me from doing what I needed to do	○	○	○	○	○	○	○
I got good quality exercise	○	○	○	○	○	○	○
I regularly ate healthy meals	○	○	○	○	○	○	○

B6. How often do you usually visit the dentist?

○	more than once a year for check-ups
○	about once a year for check-ups
○	less than once a year for check-ups
○	only for emergency care

B7. When was the last time you visited the dentist?

○	Less than 1 year ago
○	1 year to less than 2 years ago
○	2 years to less than 3 years ago
○	3 years to less than 4 years ago
○	4 years to less than 5 years ago
○	5 or more years ago
○	I have never gone to the dentist

B8. If you have *not* been to a dentist in the past three years, what are the reasons why? Please check as many reasons as apply:

○	I have not gotten around to it	○	Waiting time was too long
○	I did not think it was necessary	○	I had transportation problems getting to the dentist
○	My dentist did not think it was necessary	○	I have language problems that make it hard to get dental care
○	Personal or family responsibilities prevented me from going	○	I did not know where to go, I did not know where there is a dentist
○	It costs too much to go	○	I was afraid to go to the dentist
○	A dentist was not available at a time convenient to me	○	I wear dentures and don't need to see a dentist
○	A dentist was not available in the area where I live	○	I can't leave the house because of a health problem

○	Other reason. Please specify: _____

B9. Do you have insurance that covers all or part of your dental expenses? ○ No ○ Yes

B10. How often do you brush your teeth?

○	More than twice a day
○	Twice a day
○	Once a day
○	Less than once a day, but more than once a week
○	Once a week
○	Less than once a week

Section C: Democratic Engagement

C1. In which of the following activities have you participated in the past 12 months?

I attended a municipal council meeting	○ No	○ Yes	○ Not sure
I attended a Ward/neighbourhood meeting	○ No	○ Yes	○ Not sure
I attended a local planning meeting or open house	○ No	○ Yes	○ Not sure
I participated in a public demonstration or protest	○ No	○ Yes	○ Not sure
I wrote a letter or e-mail to or spoke with a municipal official about a local issue	○ No	○ Yes	○ Not sure
I wrote a letter to the editor of the newspaper about a local issue	○ No	○ Yes	○ Not sure
I joined a Facebook page on a local issue	○ No	○ Yes	○ Not sure
I participated in a local event in support of a charitable organisation (e.g., 5km run for breast cancer	○ No	○ Yes	○ Not sure
I participated in a local event in support of my community (e.g., "pick up litter days", earth day)	○ No	○ Yes	○ Not sure

C2. How interested are you in politics? Using a scale from one to ten, where zero means "no interest at all" and ten means "a great deal of interest", rate your level of interest in politics for each of the following levels of government:

Your level of interest in…	No interest at all ↓	2	3	4	5	6	7	8	9	A great deal of interest ↓
Federal politics	○	○	○	○	○	○	○	○	○	○
Provincial politics	○	○	○	○	○	○	○	○	○	○
Municipal politics	○	○	○	○	○	○	○	○	○	○

C3. Have the programmes and services of the *local* government made you better off?

Much worse off			Have not made any difference			Much better off	Don't know/not sure
○	○	○	○	○	○	○	○

Section D: Environment

D1. Please indicate the extent to which *you personally agree* with each of the following by checking the circle that best describes how you feel.

"Thinking about the environment in my community…"	Very strongly disagree ↓	Strongly disagree ↓	Disagree ↓	Neutral ↓	Agree ↓	Strongly agree ↓	Very strongly agree ↓
The *quality* of the natural environment in *my neighbourhood* is very high	○	○	○	○	○	○	○
The *quality* of the natural environment in *my town/city* is very high	○	○	○	○	○	○	○
There are plenty of opportunities to enjoy nature in *my neighbourhood*	○	○	○	○	○	○	○
There are plenty of opportunities to enjoy nature in *my town/city*	○	○	○	○	○	○	○
Traffic congestion in my community is a problem	○	○	○	○	○	○	○
The *air quality* in my community is very good	○	○	○	○	○	○	○
The *water quality* in my community is very good	○	○	○	○	○	○	○
I feel I have a personal responsibility to help protect the natural environment	○	○	○	○	○	○	○
I regularly participate in events organized by local groups to protect the natural environment (e.g., protests, fund raising)	○	○	○	○	○	○	○

D2. In the past 12 months, how often did you engage in the following activities?

"In the last 12 months, how often did you …?"	Never ↓	Some-times ↓	Regular-ly ↓	Quite often ↓	All of the time ↓
Reuse materials (e.g., plastic bottles, plastic bags, tins cans, etc.)	○	○	○	○	○
Recycle materials (e.g., plastics, tin cans, cardboard, etc.)	○	○	○	○	○
Try to reduce household waste	○	○	○	○	○
Separate waste (e.g., sort biodegradable and non- biodegradable waste and dispose it in special containers)	○	○	○	○	○
Conserve *energy* (e.g., buy energy efficient bulbs and appliances, turn off lights, etc.)	○	○	○	○	○
Conserve *water* (e.g., not leaving the water tap running, take shorter showers, etc.)	○	○	○	○	○
Walk, bike, or take public transit more often (rather than drive your car)	○	○	○	○	○
Purchase foods produced locally	○	○	○	○	○

Section E: Leisure and Culture

E1. For each of the categories of physical activities listed below, please indicate the ***total number of times*** you participated in each activity ***in a typical month***. If you do *not* participate in the activity, please report "0" (zero) or leave the space blank.

	Total number of times in a typical month
Team sports (e.g., baseball, hockey, volleyball, basketball)	_____ times
Individual sports (e.g., tennis, badminton, skiing)	_____ times
Vigorous exercise (e.g., aerobics, jogging, weight training)	_____ times
Light exercise (e.g., going for a walk, bicycling)	_____ times

E2. For each of the activities listed below, please indicate the ***total number of times*** you participated in each activity ***in a typical month***. If you do *not* participate in the activity, please report "0" (zero) or leave the space blank.

	Total number of times in a typical month
Socializing with friends (e.g., getting together at someone's home, dining out)	_____ times
Going out to movies	_____ times
Going out to clubs, bars, taverns	_____ times
Going to sports events as a spectator	_____ times

E3. For each of the activities listed below that are ***typically done at home***, please indicate the ***total number of times*** you participated in each activity ***in a typical week*** (be sure to count *each separate time* you participated).

	Total number of times in a typical week
Reading books, newspapers, and/or magazines for pleasure	_____ times
Playing board or card games	_____ times
Doing puzzles such as crosswords, Sudoku, jigsaw	_____ times
Hobbies such as knitting, crafts, woodworking	_____ times

E4. For each of the cultural activities listed below, please indicate the ***total number of times*** you participated in each activity ***in the past year***.

	Total number of times in past year
Attending music concerts,	_____ times
Visiting art galleries/museums	_____ times
Attending festivals	_____ times
Attending ballet, dance performances	_____ times
Attend live theatre	_____ times

E5. For each of the ***online activities*** listed below, please indicate the ***total number of times*** you participated in each activity for leisure ***on a typical day*** (be sure to count *each separate time* you participated).

	Total number of times on a typical day
Searching the internet for interest	_____ times
Playing computer games online	_____ times
Socializing with others online (e.g., Facebook, Skype, texting)	_____ times

How much ***time in total*** on a ***typical day*** do you spend engaged in these online activities for leisure? ☐ hours and ☐ minutes per day

E6. Thinking about your typical television viewing…

How much ***time in total*** on a ***typical day*** do you spend watching television, DVDs, or shows/movies online? ☐ hours and ☐ minutes per day

E7. Thinking about all of the holidays you have taken in the past year…

How many ***days in total*** were you away on holiday in the past year? ☐ days on trips

E8. ***During the past year***, how often did you use the following recreation and cultural facilities in your community?

	Never ↓	Some-times ↓	Regularly ↓	Quite often ↓	All of the time ↓
Multi-purpose recreation centre	○	○	○	○	○
Arena	○	○	○	○	○
Outdoor skating rink	○	○	○	○	○
Local park	○	○	○	○	○
Sports fields (e.g., soccer, baseball)	○	○	○	○	○
Other outdoor sports facilities (e.g., golf, tennis)	○	○	○	○	○
Swimming pool	○	○	○	○	○
Splash pads or wading pools	○	○	○	○	○
Public library	○	○	○	○	○
An historic site (e.g., Old Fort Henry, Bellevue House)	○	○	○	○	○
Performing arts facility (e.g., KROC Centre, Grand Theatre)	○	○	○	○	○
Visual arts facility (e.g., Agnes Etherington Art Centre, Art in the Park)	○	○	○	○	○

E9. Thinking about your *accessibility* to recreation and cultural facilities in your community, please indicate the extent to which you agree with each of the following statements. ***Please leave the line blank if it does not apply to you.***

	Very strongly disagree ↓	Strongly disagree ↓	Disagree ↓	Neutral ↓	Agree ↓	Strongly agree ↓	Very strongly agree ↓
The recreation and culture facilities are easy for me to get to from my home	○	○	○	○	○	○	○
There are places nearby where I can take classes for my own interest	○	○	○	○	○	○	○
Recreation and culture programs are offered at times that are convenient to me	○	○	○	○	○	○	○
There is a local park nearby that is easy for me to get to from my home	○	○	○	○	○	○	○
Childcare is available at the recreation facilities if I need to use it	○	○	○	○	○	○	○
The cost of public recreation and culture programs prevents me from participating	○	○	○	○	○	○	○
The recreation and cultural facilities are very welcoming to me	○	○	○	○	○	○	○

E10. For each statement below, please indicate the extent to which you agree that it is something you get out of your leisure time.

	Very strongly disagree ↓	Strongly disagree ↓	Disagree ↓	Neutral ↓	Agree ↓	Strongly agree ↓	Very strongly agree ↓
My leisure provides opportunities to try new things	○	○	○	○	○	○	○
My leisure provides me with opportunities for social interaction with others	○	○	○	○	○	○	○
My leisure helps me to relax	○	○	○	○	○	○	○
I participate in leisure that develops my physical fitness	○	○	○	○	○	○	○
My leisure helps me to learn about myself	○	○	○	○	○	○	○
My leisure has helped me to develop close relationships with others	○	○	○	○	○	○	○
My leisure helps relieve stress	○	○	○	○	○	○	○
I participate in leisure that restores me physically	○	○	○	○	○	○	○
My leisure helps me to learn about other people	○	○	○	○	○	○	○
My leisure is most enjoyable when I can connect with others	○	○	○	○	○	○	○
My leisure contributes to my emotional wellbeing	○	○	○	○	○	○	○
My leisure helps me to stay healthy	○	○	○	○	○	○	○

Section F: Education

F1. Have you taken any ***formal education courses*** to improve your skills or to prepare you for a job in the past year (e.g., course for credit towards a certificate, diploma, or degree)?

Formal education course(s) taken in the past year…

to help you get started in your current or a new job?	○ No	○ Yes
to improve your skills in your current job?	○ No	○ Yes
to prepare you for a job you might do in the future?	○ No	○ Yes
to lead directly to a qualification related to your current job?	○ No	○ Yes

F2. Have you taken any ***courses for interest*** in your community during the past year?

Courses for interest taken in the past year (e.g., computer skills, woodworking, sewing, creative writing)?	○ No	○ Yes

If *yes*, how many courses did you take *for interest* in the past year?

Number of courses taken for interest:	_____

F3. Please indicate the extent to which you agree with the following statements about the educational opportunities in your community by checking the circle that best describes how you feel.

"Thinking about opportunities for formal education and courses of interest in my community,…"	Very strongly disagree ↓	Strongly disagree ↓	Disagree ↓	Neutral ↓	Agree ↓	Strongly agree ↓	Very strongly agree ↓
There are plenty of opportunities to take formal education courses	○	○	○	○	○	○	○
There are plenty of opportunities to take courses of interest	○	○	○	○	○	○	○
I would take courses, but they are too expensive	○	○	○	○	○	○	○
There are places nearby where I can take courses out of interest	○	○	○	○	○	○	○
There are schools nearby where I can upgrade my educational qualifications	○	○	○	○	○	○	○
I would take courses, but they are offered at inconvenient times	○	○	○	○	○	○	○
There are many opportunities for me to get to know people from different cultures	○	○	○	○	○	○	○

Section G: Living Standards

G1. Do you work for pay?

- ○ Yes (go to question **G2**)
- ○ No (go to question **G8** on page 13)

G2. How many *different* jobs for pay do you have (both full and part-time)? ☐ job(s)

G3. How many hours per week do you usually spend working at your ***main job***? ☐ hours per week

G4. If you have other jobs beyond your main job, how many hours per week do you usually spend working at your ***other job(s)***? ☐ hours per week

G5. Approximately how long does it take (in minutes) to get from your residence to your place of work for your ***main job***? ☐ minutes

G6. For each of the following statements, please indicate the extent to which you agree by checking the circle that best describes how you feel about your main job.

	Very strongly disagree ↓	Strongly disagree ↓	Disagree ↓	Neutral ↓	Agree ↓	Strongly agree ↓	Very strongly agree ↓
I have little hope for promotion at my job	○	○	○	○	○	○	○
My current occupational position adequately reflects my education and training	○	○	○	○	○	○	○
Considering all my efforts and achievements, my opportunities at work are adequate	○	○	○	○	○	○	○
I have experienced or I expect to experience an undesirable change in my work situation	○	○	○	○	○	○	○
Considering all my efforts and achievements, my salary/income is adequate	○	○	○	○	○	○	○
My job security is poor	○	○	○	○	○	○	○

G7. The following statements describe several different **reactions to work**. Please indicate the extent to which you agree with each statement by checking the circle that best describes how feel.

	Very strongly disagree ↓	Strongly disagree ↓	Disagree ↓	Neutral ↓	Agree ↓	Strongly agree ↓	Very strongly agree ↓
My personal life suffers because of work	○	○	○	○	○	○	○
My job makes a personal life difficult	○	○	○	○	○	○	○
I neglect personal needs because of work	○	○	○	○	○	○	○
I put my personal life on hold for work	○	○	○	○	○	○	○
I struggle to juggle work and non-work activities	○	○	○	○	○	○	○
I am happy with the amount of time for non-work activities	○	○	○	○	○	○	○
My personal life drains me of energy for work	○	○	○	○	○	○	○
I am too tired to be effective at work	○	○	○	○	○	○	○
My work suffers because of my personal life	○	○	○	○	○	○	○
It is hard to work because of personal matters	○	○	○	○	○	○	○
My personal life gives me energy for my job	○	○	○	○	○	○	○
I am in a better mood at work because of my personal life	○	○	○	○	○	○	○
I am in a better mood generally because of my job	○	○	○	○	○	○	○

G8. How often did you have the following experiences in the past year? Please indicate by marking the circle how often each experience occurred for you in the past year.

"During the past year…"	Never ↓	Once in the past year ↓	At least once every 6 months ↓	At least once every 3 months ↓	At least once a month ↓
I could not pay my bills on time (e.g., water, hydro, phone, credit card)	○	○	○	○	○
I could not pay my mortgage or rent on time	○	○	○	○	○
I ate less because there was not enough food or money for food	○	○	○	○	○
I did not have enough money to buy the things I *wanted*	○	○	○	○	○
I did not have enough money to buy the things I *needed*	○	○	○	○	○

Section H: Time Use

H1. Do you provide unpaid care *to any children*?

- ○ Yes
- ○ No

If *yes*, how many hours *in a typical week* of unpaid care do you usually provide:

…to children *in your family*? ☐ hours per week

…to children who are *not* members of your family? ☐ hours per week

H2. Do you provide unpaid care to *an older or dependent adult*?

- ○ Yes
- ○ No

If *yes*, how many hours *in a typical week* of unpaid care do you usually provide:

…to an older or dependent adult *in your family*? ☐ hours per week

…to an older or dependent adult who is a *neighbour or friend*? ☐ hours per week

H3. Do you feel you have adequate time for yourself? Please indicate whether or not there is adequate time for you by checking the circle that best describes how you feel. ***Leave the line blank if it does not apply to you.***

"To what extent is there enough time for you…"	Not at all enough ↓	2	3	4	5	6	7	8	9	Almost always enough ↓
to get enough sleep/rest?	○	○	○	○	○	○	○	○	○	○
to be yourself?	○	○	○	○	○	○	○	○	○	○
to socialize?	○	○	○	○	○	○	○	○	○	○
to keep in shape?	○	○	○	○	○	○	○	○	○	○
to prepare or eat healthy meals?	○	○	○	○	○	○	○	○	○	○
to participate in or be active in the community?	○	○	○	○	○	○	○	○	○	○
to nurture your spiritual and/or creative side?	○	○	○	○	○	○	○	○	○	○
to complete housework or chores?	○	○	○	○	○	○	○	○	○	○
to be with the children you live with?	○	○	○	○	○	○	○	○	○	○
to be with your partner or spouse?	○	○	○	○	○	○	○	○	○	○
and your family to be together?	○	○	○	○	○	○	○	○	○	○
to form and sustain serious relationships?	○	○	○	○	○	○	○	○	○	○

H4. Thinking about night time sleep and naps, how many hours of sleep do you usually get per day? ☐ hours per day

H5. How many times *in the past week* has your family (i.e., your children and/or partner) had a meal together?

○	None
○	1 to 2 times
○	3 to 4 times
○	5 to 6 times
○	7 times or more

Section I: Overall Health and Wellbeing

I1. We would like you to indicate your overall level of satisfaction with a variety of areas that affect wellbeing. For each of the following statements, please indicate *how satisfied you are* by checking the circle that best describes how you feel.

	Extremely dissatisfied ↓	↓	↓	↓	↓	↓	Extremely satisfied ↓
My *mental* wellbeing	○	○	○	○	○	○	○
My *physical* wellbeing	○	○	○	○	○	○	○
My leisure time	○	○	○	○	○	○	○
My sense of belonging to this community	○	○	○	○	○	○	○
My personal relationships	○	○	○	○	○	○	○
My access to educational opportunities in the community	○	○	○	○	○	○	○
The balance of activities in my daily life	○	○	○	○	○	○	○
The way I spend my time	○	○	○	○	○	○	○
My access to *arts and cultural* opportunities in the community	○	○	○	○	○	○	○
My access to *parks and recreational* opportunities in the community	○	○	○	○	○	○	○
My neighbourhood as a place to live	○	○	○	○	○	○	○
The environmental quality of my neighbourhood	○	○	○	○	○	○	○
My way my local government responds to community needs	○	○	○	○	○	○	○
How well democracy is working in my community	○	○	○	○	○	○	○
My financial situation	○	○	○	○	○	○	○
My work situation	○	○	○	○	○	○	○

I2. Finally, how satisfied are you with your life in general?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
○	○	○	○	○

Section J: Personal Characteristics

In this final section, we would like to know more about the residents of your community so we can create groupings and see if some people have higher or lower experiences of wellbeing than others.

J1. What is your sex? ○ Male ○ Female ○ Transgendered

J2. What is your current age? _____ years of age

J3. What is your marital status?

○	Single, never married
○	Married
○	Living common-law
○	Separated
○	Divorced
○	Widowed

J4. What is the highest level of education you have *completed*?

○	Elementary school
○	High school
○	Post-secondary certificate
○	College diploma
○	University degree (e.g., BA, BSc)
○	Graduate degree (e.g., MA, MSc, PhD)

J5. Which *one* of the following categories would you say best describes your *main activity*?

○	Employed full-time
○	Employed part-time
○	Non-standard employment (e.g., self-employed, contract, seasonal, temporary, multiple jobs)
○	Unemployed, looking for work
○	Retired
○	Going to school
○	Household work/caring for children
○	On leave from work (e.g., illness, parental leave)

J6. What was your total *household* income from all sources last year?

○	Under $10,000
○	$10,000 to $19,999
○	$20,000 to $29,999
○	$30,000 to $39,999
○	$40,000 to $59,999
○	$60,000 to $79,999
○	$80,000 to $99,999
○	$100,000 to $119,999
○	$120,000 to $149,999
○	$150,000 and over

J7. Were you born in Canada? ○ Yes ○ No

If *no*, in which country were you born? _____

J8. How long have you lived in Canada? _____ years

J9. How would you describe your cultural, ethnic, or national background (e.g., Chinese, Polish, Métis, Greek Canadian, etc.)? _____

J10. What is your first language? ○ English ○ French

○ Other. Please specify: _____

J11. Do you have First Nations status in Canada? ○ Yes ○ No

J12. Are you living with a disability that limits your activity? ○ Yes ○ No

J13. How long have you been a resident of this community? _____ years and _____ months

J14. How long have you lived *in your current residence*? _____ years and _____ months

Appendix B

Research Question	Statistical Analysis
1. How does a person's perceived, self-rated (subjective) mental health associate with the amount of time spent engaged in leisure opportunities?	-Regression
1.1 How does a person's sex associate with perceived mental health and time spent engaged in leisure opportunities?	-Regression
1.2 How does socioeconomic status associate with perceived mental health and time spent engaged in leisure opportunities?	- Regression
1.3 How does presence or absence of a partner associate with perceived mental health and time spent engaged in leisure opportunities?	- Regression
1.4 How does a person's age associate with perceived mental health and time spent engaged in leisure opportunities?	- Regression
2. How does a person's sex, socioeconomic status, presence or absence of a partner and age associate with subjective mental health?	- Regression

Appendix C

July 16, 2014

Mr Tristan Hopper
Health Professions\Health & Human Performance

Dear Tristan,

REB #: 2014-3352
Project Title: Leisure...How Much Time Do We Really Spend Engaged? A Secondary Data Analysis of Subjective Mental Health and Leisure Time Engagement

Effective Date: July 16, 2014
Expiry Date: July 16, 2015

The Social Sciences & Humanities Research Ethics Board has reviewed your application for research involving humans and found the proposed research to be in accordance with the Tri-Council Policy Statement on *Ethical Conduct for Research Involving Humans.* This approval will be in effect for 12 months as indicated above. This approval is subject to the conditions listed below which constitute your on-going responsibilities with respect to the ethical conduct of this research.

Sincerely,

Dr. Valerie Trifts, Chair

Appendix D

Table 8.1 Physical Activity Participation in Previous Month – Team Sports

Table 6.1 Physical Activity Participation - Team Sports (R = .259 / R^2 = .067 / F = 2.345 / ANOVA sig. = .025)	Beta	t	Sig.
(Constant)		3.372	.001
Income in previous year	.123	1.172	.078
Highest level of education completed	-.162	-2.337	.020
Main activity	.034	.470	.639
Marital status	.054	.787	.432
Mental health (range 1-5)	-.036	-.556	.579
Sex	-.112	-1.694	.092
Age	.099	1.331	.185

Table 8.2 Physical Activity Participation in Previous Month – Individual Sports (Recoded)

Table 6.2 Physical Activity Participation – Individual Sports (R = .281 / R^2 = .079 / F = 4.123 / ANOVA sig. = .000)	Beta	t	Sig.
(Constant)		.414	.679
Income in previous year	.052	.845	.399
Highest level of education completed	-.008	-.135	.893
Main activity	.065	1.070	.285
Marital status	.037	.662	.508
Mental health (range 1-5)	-.067	-1.231	.219
Sex	.011	.194	.846
Age	.246	3.987	.000

Table 8.3 Physical Activity Participation in Previous Month – Vigorous Exercise

Table 6.3 Physical Activity Participation – Vigorous Exercise ($R = .251$ / $R^2 = .063$ / $F = 5.476$ / ANOVA sig. = .000)	Beta	t	Sig.
(Constant)		3.644	.000
Income in previous year	-.003	-.077	.939
Highest level of education completed	-.073	-1.685	.093
Main activity	-.033	-.711	.478
Marital status	-.017	-.392	.695
Mental health (range 1-5)	.230	5.597	.000
Sex	-.046	-1.108	.268
Age	-.069	-1.508	.132

Table 8.4 Physical Activity Participation in Previous Month – Light Exercise

Table 6.4 Physical Activity Participation – Light Exercise (R = .148 / R^2 = .022 / F = 3.862 / ANOVA sig. = .000)	Beta	t	Sig.
(Constant)		4,751	.000
Income in previous year	-.070	-2.145	.032
Highest level of education completed	.097	3.100	.002
Main activity	-.028	-.832	.406
Marital status	-.036	-1.187	.235
Mental health (range 1-5)	.103	3.509	.000
Sex	-.033	-1.133	.257
Age	.014	.409	.682

Appendix E

Table 9.1 Social Activity Participation in Previous Month – Socializing with Friends

Table 7.1 Social Activity Participation in Previous Month – Socializing with Friends ($R = .214$ / $R^2 = .046$ / $F = 8.441$ / ANOVA sig. = .000)	Beta	t	Sig.
(Constant)		7.016	.000
Income in previous year	-.126	-3.856	.000
Highest level of education completed	-.012	-.387	.699
Main activity	-.038	-1.169	.243
Marital status	.135	4.463	.000
Mental health (range 1-5)	.089	3.108	.002
Sex	-.028	-.981	.327
Age	-.100	-3.009	.003

Table 9.2 Social Activity Participation in Previous Month – Going out to bar or club (Recoded)

Table 7.2 Social Activity Participation in Previous Month – Going out to bars or clubs (R = .392 / R^2 = .154 / F = 10.317 / ANOVA sig. = .000)	Beta	t	Sig.
(Constant)		7.440	.000
Income in previous year	-.093	-1.813	.071
Highest level of education completed	-.195	-3.922	.000
Main activity	-.043	-.781	.435
Marital status	.134	2.849	.005
Mental health (range 1-5)	.029	.612	.541
Sex	-.209	-4.476	.000
Age	-.216	-3.996	.000

Table 9.3 Regression: Social Activity Participation in Previous Month – Going out to sporting events as spectator (Recoded)

Table 7.3 Social Activity Participation in Previous Month – Going out to sporting events as a spectator ($R = .248$ / $R^2 = .061$ / $F = 3.779$ / ANOVA sig. = .001)	Beta	T	Sig.
(Constant)		-1.650	.100
Income in previous year	.123	1.172	.078
Highest level of education completed	-.003	-.066	.947
Main activity	-.017	-.304	.761
Marital status	.001	.029	.977
Mental health (range 1-5)	.050	1.014	.311
Sex	.168	3.460	.001
Age	.163	2.855	.005

Table 9.4 Regression: Social Activity Participation in Previous Month – Going to the movies

Table 7.4 Social Activity Participation in Previous Month – Going to the movies (R = .333 / R^2 = .111 / F = 10.750 / ANOVA sig. = .000)	Beta	t	Sig.
(Constant)		9.063	.000
Income in previous year	-.082	-1.859	.064
Highest level of education completed	-.137	-3.258	.001
Main activity	-.098	-2.132	.033
Marital status	.180	4.480	.000
Mental health (range 1-5)	.057	1.448	.148
Sex	-.181	-4.632	.000
Age	-.119	-2.587	.010

Appendix F

Table 10.1 Regression: Home-Based Activity Participation in Previous Week – reading

Table 8.1 Home activity participation in previous week – reading (R = .222 / R^2 = .049 / F = 9.358 / ANOVA sig. = .000)	Beta	t	Sig.
(Constant)		.539	.590
Income in previous year	-.063	-2.009	.045
Highest level of education completed	.142	4.728	.000
Main activity	.057	1.728	.074
Marital status	-.023	-.772	.440
Mental health (range 1-5)	.088	3.094	.002
Sex	-.009	-.335	.738
Age	.141	4.274	.000

Table 10.2 Regression: Home-Based Activity Participation in Previous Week – Playing cards and/or games (Recoded)

Table 8.2 Home activity participation in previous week – Playing cards and/or games (R = .278 / R^2 = .077 / F = 7.060 / ANOVA sig. = .000)	Beta	t	Sig.
(Constant)		2.811	.005
Income in previous year	-.146	-3.217	.001
Highest level of education completed	-.011	-.264	.791
Main activity	.20	.408	.683
Marital status	-.055	-1.273	.204
Mental health (range 1-5)	-.010	-.233	.816
Sex	-.016	-.376	.707
Age	.228	4.689	.000

Table 10.3 Regression: Home-Based Activity Participation in Previous Week – Completing a puzzle (Sudoku) (Recoded)

Table 8.3 Home activity participation in previous week – Completing a puzzle (Suduko) (R = .307 / R^2 = .094 / F = 9.446 / ANOVA sig. = .000)	Beta	t	Sig.
(Constant)		-.678	.498
Income in previous year	-.007	-.156	.876
Highest level of education completed	.078	1.880	.061
Main activity	.108	2.373	.018
Marital status	-.060	-1.390	.165
Mental health (range 1-5)	.031	.803	.422
Sex	.004	.101	.920
Age	.258	5.499	.000

Table 10.4 Regression: Home-Based Activity Participation in Previous Week – Completing a hobby, craft, knitting or woodworking (Recoded)

Table 8.4 Home activity participation in previous week – Completing a hobby (R = .251 / R^2 = .063 / F = 5.770 / ANOVA sig. = .000)	Beta	t	Sig.
(Constant)		4.411	.000
Income in previous year	-.262	-5.486	.000
Highest level of education completed	.045	1.012	.312
Main activity	-.025	-.532	.595
Marital status	-.093	-2.150	.032
Mental health (range 1-5)	.112	2.719	.007
Sex	-.057	-1.416	.157
Age	.000	-.007	.995

Appendix G

Table 11.1 Regression: Cultural Activity Participation in Previous Year – Attending musical concerts

Table 9.1 Cultural activity participation in previous year – Attending musical concerts (R = .251 / R^2 = .063 / F = 8.189/ ANOVA sig. = .000)	Beta	t	Sig.
(Constant)		-.984	.326
Income in previous year	-.074	-1.991	.047
Highest level of education completed	.150	4.219	.000
Main activity	.022	.544	.587
Marital status	-.055	-1.523	.128
Mental health (range 1-5)	.065	1.927	.054
Sex	-.017	-.511	.610
Age	.195	4.821	.000

Table 11.2 Cultural Activity Participation in Previous Year – Visiting art galleries and museums

Table 9.2 Cultural activity participation in previous year – Visiting art galleries and museums (R = .176 / R^2 = .031 / F = 2.892 / ANOVA sig. = .006)	Beta	t	Sig.
(Constant)		-.605	.546
Income in previous year	.027	.617	.538
Highest level of education completed	.117	2.818	.005
Main activity	.121	2.615	.009
Marital status	.027	.645	.519
Mental health (range 1-5)	.041	1.017	.309
Sex	.007	.171	.864
Age	.010	.212	.832

Table 11.3 Cultural Activity Participation in Previous Year – Attending ballet or dance performances

Table 9.3 Cultural activity participation in previous year – Attending ballet or dance performances (R = .175 / R^2 = .031 / F = .906 / ANOVA sig. = .503)	Beta	t	Sig.
(Constant)		-.855	.394
Income in previous year	.084	1.072	.285
Highest level of education completed	.091	1.176	.241
Main activity	-.028	-.324	.747
Marital status	.002	.031	.975
Mental health (range 1-5)	.000	.003	.997
Sex	-.003	-.048	.962
Age	.145	1.652	.100

Table 11.4 Cultural Activity Participation in Previous Year – Attending live theatre

Table 9.4 Cultural activity participation in previous year – Attending live theatre (R = .261 / R^2 = .068 / F = 6.873 / ANOVA sig. = .000)	Beta	t	Sig.
(Constant)		-.796	.426
Income in previous year	-.005	-.118	.906
Highest level of education completed	.068	1.669	.096
Main activity	.014	.298	.766
Marital status	-.009	0.210	.834
Mental health (range 1-5)	.107	2.772	.006
Sex	-.093	-2.424	.016
Age	.210	4.259	.000

Table 11.5 Cultural Activity in Participation in Previous Year – Attending festivals

Table 9.5 Cultural activity participation in previous year – Attending festivals (R = .176 / R^2 = .031 / F = 3.280 / ANOVA sig. = .002)	Beta	t	Sig.
(Constant)		2.666	.008
Income in previous year	.028	.719	.472
Highest level of education completed	.057	1.476	.140
Main activity	.089	2.148	.032
Marital status	-.056	-.1460	.145
Mental health (range 1-5)	.113	2.995	.003
Sex	.003	.085	.932
Age	-.086	-2.050	.041

Appendix H

Table 12.1 Total daily online activities – Previous week (Recoded)

Table 10.1 Total minutes of daily online activities for leisure (R = .321 / R^2 = .103 / F = 19.384 / ANOVA sig. = .000)	Beta	T	Sig.
(Constant)		14.290	.000
Income in previous year	-.066	-2.105	.035
Highest level of education completed	1.112	-3.755	.000
Main activity	.095	3.001	.003
Marital status	.103	3.535	.000
Mental health (range 1-5)	-.124	-4.301	.000
Sex	-.126	14.519	.000
Age	-.200	-6.263	.000

Table 12.2 Total daily television viewing – Previous week

Table 10.2 Total minutes of TV viewing ($R = .403$/ $R^2 = .163$ / $F = 33.348$ / ANOVA sig. = .000)	Beta	t	Sig.
(Constant)		9.688	.000
Income in previous year	-.124	-4.052	.000
Highest level of education completed	-.154	-5.277	.000
Main activity	.094	3.065	.002
Marital status	.008	.275	.784
Mental health (range 1-5)	-.035	-1.304	.193
Sex	-.037	-1.377	.169
Age	.213	6.785	.000