# Social Capital and Cardiac Rehabilitation. Social Variation of Lifestyles of Men from Contrasting Socioeconomic Groups

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**Article**

# List of Abbreviations

AA – Alcohol Anonymous

CVD – Cardiovascular disease

CRP – Cardiac rehabilitation program

CSST – Centre de Sante et Services Sociaux de Gatineau

NA – Narcotics Anonymous

SED – Socioeconomically deprived

## Abstract

Social inequalities in health have been well documented in the literature. Despite the universal health care system and detailed measures of health surveillance, socioeconomic disparities related to cardiovascular diseases (CVD) remain present and are predicted to increase due to growing socioeconomic inequalities (Pampalon, 2008). Many health policy initiatives, such as the development of cardiac rehabilitation programs, were put in place in order to promote heart healthy lifestyles. These programs are provided as a medical and educational solution to prevent, manage, and lower risks of developing complications due to cardiovascular diseases, yet participation rates are as low as 37% for eligible individuals (Heart and Stroke Foundation of Canada, 2013).

By drawing chiefly on Pierre Bourdieu's sociocultural theory of practices, this qualitative study aims to understand the social variation of lifestyles in the context of cardiac rehabilitation of two groups of men from contrasting socioeconomic conditions. Sixty in-depth interviews were conducted with francophone men (mean age of 56.5) from the Outaouais region (Québec, Canada) who have suffered from a cardiac event requiring hospitalization. A number of studies on cardiovascular health have indicated health and lifestyle disparities among the male population. In order to provide a new perspective, this specific study drew principally on the notion of social capital in order to provide a more complete understanding of the social variation of lifestyles in the context of cardiac rehabilitation, particularly the impact these socioeconomic differences have on the quality of participants' social capital, and how it shapes lifestyles after a heart intervention

The results of this study are presented in an article which compares lifestyles and cardiac rehabilitation practices on the basis of three concepts of social capital, – social cohesion, trust,

and social support. Results suggests that socioeconomic conditions influence levels of social cohesion, trust, and the quality of social support provided by social networks in the context of cardiac rehabilitation. Despite the underprivileged participant's awareness of normative health lifestyles, they also were constrained by socio-cultural barriers, which limited a heart-healthy lifestyle.

**Key words:** Bourdieu, social capital, cardiac rehabilitation, heart diseases, social support, interviews, qualitative, social cohesion, trust, social variation, lifestyles

# Chapter 1 – Introduction

## Health inequalities and heart health

Population health statistics have repeatedly demonstrated the close association between socioeconomic factors and health inequalities. Since the Whitehall studies, the notion of social gradient in health has been extensively used in order to highlight these inequalities by focusing on the social variation in mortality and morbidity in all economically advanced societies (Marmot, 2004). By drawing on Canadian national statistics on life expectancy, Greenberg and Normandin (2011) described this trend in mortality rates by indicating the staggering health problem of men from lowest income quintile. Their average life expectancy of 75.6 years is much lower than women of the same quintile (81.7 years) and men (80.3 years) and women (84.0 years) from the highest income quintile.

One of the starkest examples of health inequalities has been highlighted by the mortality and morbidity rates associated with heart diseases. Pampalon and his colleagues (2008) indicated that in the Province of Québec (1999-2003), there were 3.4 times more premature deaths related to cardiovascular diseases in men from the lowest income quintile than men from the highest income quintile and 10.4 times more than women from the highest income quintile, showing significant social and gender inequalities of cardiovascular diseases. These authors indicated that 31% of Quebec's population potential years of life lost caused by income inequality are linked to premature death due to cardiovascular diseases, the main cause of death and disability in Canada for men aged of 55 years and over.

Generally speaking, universal health care and cardiac rehabilitation programs have been provided as solutions to educate and inform people at risk of cardiovascular diseases on various

ways they can incorporate physical activity and healthy eating in everyday life. Cardiac rehabilitation assists individuals in improving their lifestyle, reduce levels of stress, and lower their risk of subsequent cardiac events and death by 20-30% (Cardiac Care Network of Ontario, 2002). Although there are many benefits to these programs, participation rates of eligible individuals is 37% (Heart and Stroke Foundation of Canada, 2013). Level of education, social support, and socioeconomic status are some of the many factors that explain low participation rates in these programs (Ades, 2006; Bock et al., 1997; Farley, Wade & Birchmore, 2003; Harlan et al., 1995; Lane et al., 2001; Worcester et al., 2004).

This study draws principally on social capital as a key concept to social variation of lifestyle in the context of cardiac rehabilitation. Although there are many approaches to explain health inequalities, social capital allows a closer focus on the flow of information, resources, and support provided by social networks as determinants of health behaviours such as physical activity, diet, smoking, and alcohol consumption (Poortinga, 2006).

**Social capital, health and lifestyle**

There are many definitions of social capital. This study draws chiefly on Pierre Bourdieu's conceptualization as it can be included into a wider framework explaining social inequalities that have been applied to health disparities (William, 1995). Bourdieu has included social capital in his sociocultural theory of practice by conceptualizing it as resources available to individuals provided by their social networks, which differ in its availability between socioeconomic groups associated to a social position. It is thus another form of capital, e.g. economic, cultural, and symbolic capitals (Bourdieu, 1986). As defined by Bourdieu, social capital refers to the "actual or potential resources available linked to the possession of a durable

network*"* (social ties, group memberships, and networks of influence and support) (Bourdieu, 1986, p.248). In other words, this approach to social capital conceives networks as a key to various forms of resources that can positively affect people's health.

Although social capital has been applied to understand health inequalities, no studies to our knowledge have explicitly focused on the connection between social capital, socioeconomic status, and the social variation of men's participation in cardiac rehabilitation. In order to fill this gap, the aim of this study is to understand the social variation of cardiac rehabilitation of men from contrasting socioeconomic conditions by drawing on Pierre Bourdieu's sociocultural theory and his concept of social capital. Because of the importance Bourdieu places on the availability of resources provided by social networks, it is a useful concept to understand the lifestyles linked to cardiac rehabilitation. This study can also provide knowledge on the ways individuals can be further encouraged in participating in a cardiac rehabilitation program, change their lifestyle, and increase their quality of life following a heart intervention.

Many concepts of social capital will also be taken into consideration in order to include more recent work and further operationalize the concept. Although these concepts are not included in Pierre Bourdieu's theory, later studies have found that social support, social cohesion, and trust are valuable heuristic tools to understand health lifestyles (Carpiano, 2006; Giordano & Lindstrom, 2010). From a social capital perspective, this thesis also provides some understanding of the degrees of interest and involvement of men from contrasting living conditions in health practices and cardiac rehabilitation after heart surgery.

**Study Context**

This study is part of a larger project conducted in the region of Outaouais, in the province of Québec, Canada. This region (population of 260 800) holds one of the highest average incomes per capita and one of the lowest unemployment rates among all metropolitan census areas of the province of Quebec. The region of Outaouais is thus identified as one of Canada's highest living standards cities (Castaldo and Froats, 2011).

However, these high living standards mask the high poverty rates of its inner city area. Two studies conducted by Québec's Public Health Agency have reported poor health due to high social inequalities and higher average mortality rates in the region of Outaouais in comparison to regions of similar socioeconomic conditions (Courteau, Émond, and Garvie, 2002; Régie régionale de la santé et des services sociaux de l'Outaouais (RRSSSO), 1996). The regions' social transition from a working class to an underprivileged population can be explained by a form of ghettoization, a process in which the wealthy individuals move to the surrounding outskirts of the city and the arrival of poorer individuals in search for low rent and other subsidized services offered in the inner city. Due to this social transition, the inner city region of Outaouais is directly comparable with other regions of inner city poverty in Québec[i].

This introduction is followed by 1) a literature review on the link between social capital, health, health practices, and cardiac rehabilitation; 2) a section on Pierre Bourdieu's socio-cultural theory of social capital and habitus, which will allow researchers to understand its impact on health practices, including cardiac rehabilitation, through the social resources available from their social networks while considering their socioeconomic conditions; 3) a methods section composed of the proposed data collection and analysis procedures; 4) a research

article comparing social capital and its impact on the lifestyles of men from contrasting socioeconomic conditions in the context of cardiac rehabilitation, and 5) the final conclusion.

## Chapter II - Literature Review

Social inequalities in health have been well documented in the literature. Socioeconomic living conditions, social status, and psychosocial conditions (social support, social networks, and social activity) are some of the key determinants of health behaviours. This literature review aims to understand the relationship between social capital, health practices, and cardiac rehabilitation. It surveys studies that have applied Pierre Bourdieu's conceptualization of social capital as well as other studies which have applied social capital in the context of health and lifestyles. Because of its close association to socioeconomic status, it will also include a brief overview of health inequalities.

Lifestyle is defined as 'patterns of individual action determined by personal characteristics (primarily values and attitudes) as differentiated from patters of action determined by structural characteristics of the surrounding society and by positional characteristics of the individual (forms of life and ways of life)'(Rosengren, 1995 : 7) and has become an important explanation for health inequalities between socioeconomic groups. Drawing on Pierre Bourdieu's sociocultural theory of practice, the well established work of Luc Boltanski (1971) showed through national statistics that individuals of similar socioeconomic status have comparable lifestyles in respect to health. The difference in access to resources is part of the three fundamental explanations to the social variation in lifestyle.

The first explanation refers to the accessibility of health care and the barriers individuals must overcome to access these beneficial health-related resources. Although Canada has a universal health care system in place, individuals often rely on walk-in emergency services as

their main source of health care. Long wait times, and the enforcement of one reason per visit creates a barrier for those who do not have access to a family physician for regular medical follow-ups. Other barriers include physical (e.g. limited access to healthy foods), monetary (necessary equipment for exercise, afford healthy foods, lack of state benefits - paid time off work for participation in rehabilitation), time, and proximity to a hospital or clinic offering a rehabilitation program (Harlan et al., 1995).

The second explanation is cultural and results from socialization. According to the sociocultural theory of practice, the concept of habitus has been widely used to represent the shared norms, values and lifestyles of specific groups characterized by their economic and cultural capitals. This approach suggests that a shared view-of-the-world is embodied through experiences of people of a similar social position (Bourdieu, 1972).

The third explanation to social variation in lifestyle is social capital. While it focuses on social networks, it encompasses ideas of socialization and resources in its understanding of lifestyle. In other words, social capital includes sociocultural and material resources provided by social networks. Similar to economic capital, social capital is present unequally in society.

**Social capital, health, and health behaviours**

Although many studies have identified a link between social capital (social support, social cohesion, and trust) and health (Poortinga, 2006), few studies provided in-depth information on the link between social capital and cardiac rehabilitation. Consequently, this section will overview the literature on social capital, health, and health behaviours. Following is a sub-section on the concepts of social capital and their link with health behaviours and cardiac rehabilitation.

Studies have shown that there are several mechanisms that link social capital to health (Kim et al., 2006; Lindstrom, 2008, Mohseni & Lindstrom, 2007; Ueshima et al., 2010). One of the leading scholars in the field, Ichiro Kawachi (1999) identified three pathways to better understand this connection. The first pathway consists of the diffusion of health information: more social contacts increase the variety of health information available to individuals. The second pathway consists of the promotion of health behaviours through society's norms and attitudes. Individuals in communities with high levels of social capital may work together, through collective efficacy, creating social norms and attitudes toward health (Lindstrom et al., 2003; McNeil et al., 2006; Patterson et all., 2004; Wilkinson et al., 1998). The third pathway refers to collective efficacy which also increases control over deviant behaviours and crime. These three pathways allow for positive health outcomes and the assurance in the availability of health enhancing resources such as community sports facilities and walking paths.

To help operationalize the concept, authors such as Baum and his colleagues (2009) have identified social cohesion, trust, and social support as sub-concepts of social capital. These sub-concepts have also been of interest when studying lifestyle and cardiac rehabilitation (Wieslander et al., 2005). In fact, most studies that have explored the association between social capital and participation in a cardiac rehabilitation program are through one of these sub-concepts (see Clark et al., 2005 and Mohensi & Lindstrom, 2007).

**Social cohesion**. Social cohesion is defined as a sense of belonging to a group (Baum et al., 2009; Putnam, 2000; Wilkinson, 1996). This sense of belonging has a positive impact on health by lowering the risk of premature death as well as increasing the speed of recovery (Putnam, 1993). Neighbourhood cohesion is the 'residents sense of shared norms, values, and feelings of belonging within their local area' (Baum et al., 2009, p.15). These shared norms and

values help reduce rates of violence and crime, thus increasing neighbourhood safety and trust between individuals in the community. Social cohesion also allows the spread of information to residents about unhealthy behaviours and reinforces social norms, reducing risk oriented behaviours such as excessive alcohol consumption, smoking, and sedentary behaviours (Scheffler et al., 2008).

More precisely, social cohesion during a cardiac rehabilitation program can benefit an individuals' experiences and cooperation with cardiovascular diseases (Clark et al., 2005). In their study, Clark and his colleagues (2005) have identified a link between social cohesion and the long term efficiency of cardiac rehabilitation programs. In their study, they created focus groups with forty-seven participants to collect in-depth information on their perceptions of the program, factors that have impacted their participation, and the influence cardiac rehabilitation has on subsequent lifestyle changes. The authors found that social cohesion promotes lifestyle changes through motivation in a group-based cardiac rehabilitation program, showing the importance of social relationships in behavioural changes. The social cohesion and emotional support provided from these group discussions allows individuals to cope with the illness as well as make the necessary changes in their lifestyle to reduce further heart-related complications (Clark et al., 2005)

The Roseto study is another example that demonstrates the importance of social cohesion on cardiovascular health. While taking into consideration the lifestyle habits of individuals in terms of smoking, diet, and exercise, the members of this community had a 50% lower prevalence of cardiovascular diseases than its four surrounding communities (Bruhn, Philips & Wolf, 1972). The members of this Pennsylvanian community show the benefits of social capital on health:

social participation, social networks, and a tightly knit community increase the levels of trust, solidarity, and social cohesion within the society, which in turn enhances cardiovascular health.

Within ten years from the first Roseto study, Egolf and his colleagues (1992) found that the members of this community were now 'Americanized'. These authors have showed that the habitants were dissociated from each other, with less social participation and cultural involvements in the community, resulting in lower community social capital. This also lowered the heart health of individuals to similar as individuals from its surrounding communities (Egolf et al., 1992).

**Trust.** Social cohesion cannot exist without trust. Putnam (1993) considers trust as an important sub-concept of social capital as it 'lubricates social life' (p.20) and promotes the 'coordination and cooperation for mutual benefits' (p.16). He applies trust to understand the relationship between social capital, health, and health inequalities in society. In his theory, trust is available unequally in society, depending on the income inequality present in the community. The health of individuals from communities where income inequality is high results in low trust between individuals, as well as high levels of fear and stress, which have a direct impact on cardiovascular health. On a similar note, Coleman (1981) discussed of trust as an essential factor of social capital (Coleman, 1981). Trust minimizes 'transaction costs by easing the flow of information' (p.31, Lin, 1999). In other words, useful information on health is spread more efficiently between individuals who trust each other.

There are two forms of trust: vertical trust and horizontal trust (Mohseni & Lindstrom, 2007). Vertical trust refers to the trust between individuals and their institution, such as the trust found between a health care provider and a patient (Mohseni & Lindstrom, 2007). For example, in a situation of high levels of vertical trust, a patient is more likely to listen to his doctor's

lifestyle recommendations (Mohseni & Lindstrom, 2007). As patients may have little medical knowledge on their health condition, it is important for them to have trust in their health provider's decisions and recommendations to improve their quality of life (Mohseni & Lindstrom, 2007). Furthermore, individuals that have high levels of vertical trust will be least likely to initiate tobacco smoking and more likely to participate in a smoke cessation program because of the trust in their health care provider's recommendations (Lindstrom, 2008). In the context of cardiac rehabilitation, Mohsemi & Lindstrom (2007) have showed that the lack of vertical trust may also delay the participation of required treatments for certain conditions such as cardiovascular diseases.

Horizontal trust or generalized trust is interpersonal. A low level of generalized trust in the workplace is associated with 1.3 times higher risk of having at least two lifestyle risk factors to cardiovascular diseases (Vaananen et al., 2009). Vaananen and his colleagues (2009) found that individuals with low trust were least likely to quit smoking, be physically inactive, and abuse alcohol (Vaananer et al., 2009).

This type of trust is necessary for social cohesion in a community (Mohseni & Lindstom, 2007). In lower income areas, where levels of crime and violence are high, there is little presence of generalised trust between individuals in the community. Spiro and his colleagues (1995) have found that suspicion is an indicator to low levels of generalized trust, which has an impact cardiovascular health. They have found that suspicion increases an individual's levels of stress, which in turn increases their risk of cardiovascular diseases. For example, the impact of low horizontal trust in a community is well demonstrated in Klinenberg's study on the Heat Wave in Chicago, where individuals who live in lower income communities are apprehensive of the presence of crime and violence in their community. This fear would incline them to stay inside,

taking themselves away from possible sources of support (Klinenberg, 2001), and in extreme cases, isolation.

Isolation is defined as an individual with limited social ties and is associated with negative effects on health (Heinrich & Gullone, 2006; House et al., 1988). Although isolated individuals are three times more at risk of cardiovascular diseases, they are also the least likely to participate in cardiac rehabilitation programs following a cardiac event (Heritage, Wilkinson, Grimeaud & Pickett, 2008). Showing the impact of isolation (or living alone as shown to increase the risk of isolation), Lane and his colleagues found that only 9% of eligible individuals living alone participate in a cardiac rehabilitation program after heart surgery. Out of the 108 attendees who were interviewed six days post-surgery, only ten indicated that they lived alone during the time of interview. Additionally, they found that 85% of partnered individuals participated in at least one session of a cardiac rehabilitation program. Other studies have also indicated that isolated individuals are least likely to comply with medical treatments such as smoking cessation programs or cardiac rehabilitation (Arthur, 2006; Hawkley & Cacioppo, 2003)

According to Kawachi and his colleagues (1999), isolated individuals usually live in areas where rates of crime are high (and low horizontal trust) with few opportunities to form social ties with other individuals from the community. This lack of available ties reduces their access to resources, emotional support, access to health related information, and increases their risk of death by all causes of mortality by two to three fold (Whitehead & Diderichsen, 2001).

Physiological and behavioural responses related to isolation increase risks of cardiovascular diseases. According to Lisa Berkman (1988), isolation ages the organism by interacting with physiological processes. For example, stress increases the levels of cortisol in

the body, which affect both the cardiovascular and immune systems, increasing the risk of infection, heart attack, stroke, depression, and aggression (Berkman, 1988).

High levels of stress linked to isolation also contribute to a higher risk of unhealthy behaviours such as malnutrition, over consumption, physical inactivity, and abuse of drugs and alcohol (Treacy et al., 2004). These behaviours are used as a coping mechanism with 'protective mental effects' in response to stress (Jackson et al., 2010). In their study, Jackson and his colleagues (2010) mention the importance of the environment and how, in combination with these stress-driven unhealthy behaviours, increases morbidity and mortality.

**Social support.** Social support can also be provided through networks that optimize health. It is defined as the many forms of encouragement provided by friends, relatives, co-workers, neighbours, support groups, and health professionals that assist individuals in better coping with physical, mental, and emotional disabilities (e.g. sickness, stress, and loss) (Hawkley & Caciopo, 2003). Many studies have identified the positive link of social support with health, either through encouragement of healthy lifestyles, participation in rehabilitation programs, or simply as a buffer against the negative effect of stress on the body (Henningway et al., 2001; McNeil et al., 2006; Poortinga, 2006).

Many studies have also shown that married individuals with a positive support system are most likely to attend cardiac rehabilitation and adhere to their new lifestyle once the program has ended (Hanna & Wenger, 2005; Henningway et al., 2001; Kawachi & Kim., 2008; Steptoe et al., 1996; Worcester et al., 2004). Lochner and his colleagues (2005) explain the positive impact of social support and marriage on nutritional health, with marriage reducing the likelihood of meal skipping as well as the financial barriers related to nutrition such as limited income to purchase sufficient healthy foods (Lochner et al., 2005). The studies of Poortinga (2006) and McNeil and

his colleagues (2006) have also demonstrated this positive impact on lifestyle. According to their studies, individuals with social support were more likely to eat the recommended portions of fruits and vegetables per day, unlike isolated individuals who are least likely to eat the recommended five servings of fruits and vegetables per day.

Similarly, McNeil and his colleagues (2006) have shown that 'buddy systems' and physical activity based social organizations (e.g. walking groups) have a positive impact on leisure time physical activity levels by encouraging individuals to exercise outdoors. This social aspect of physical activity creates a social norm between individuals while promoting a positive lifestyle, through observations and positive feedback (aspect of learning) and access to physical activity related resources such as trainers and physical activity programs (McNeil et al., 2006)

Although there are many benefits to social capital, it also has a negative impact on health. Rostila (2011) has shown that the exchange of resources available in lower income areas, such as fire arms, drugs, and other black market items, between individuals creates a "network closure" where groups of similar low socioeconomic status limit access of social resources, increasing the likelihood of violence and crime. This network closure reduces levels of horizontal trust and social cohesion in the community which have a direct impact on outdoor physical activity levels and other health related behaviours (Lindstrom et al, 2003). Carpiano (2006) has also shown that in his study on health behaviours, both smoking and "binge drinking" were linked to neighbourhood social support.

As mentioned previously, few studies have focused on the relations between social capital and the variation of lifestyles in the context of cardiac rehabilitation. The application of Pierre Bourdieu's concept of social capital will allow the fill of this gap in the literature through

the comparison of two groups of men of contrasting living conditions who have previously suffered from a heart condition requiring hospitalization.

## Chapter III - Pierre Bourdieu's Socio-cultural Theory of Practice

Pierre Bourdieu's sociocultural theory has been widely used in the field of public health. Its value lays mainly in its ability to understand the social variation in lifestyles and the connections between social class, lifestyles, and health (Williams, 1995). This approach emphasizes the idea that lifestyles are fashioned by the living conditions of individuals and the amounts of capital they possess i.e., economic, cultural and social (Bourdieu, 1984). His theory showed that social class variations in lifestyle could be explained by tastes, preferences, and judgments.

### Pierre Bourdieu and Social Capital

Generally speaking, Pierre Bourdieu defines the concept of capital as a form of power related to the utilization of resources in society (Alheier et al., 1995). He identifies three fundamental types of capital: cultural, economic, and social, which can be summarized into education, money, and social networks (Bourdieu, 1986). Cultural capital refers to the 'education qualifications' (p.243, Bourdieu, 1986), the knowledge, and credentials one has accumulated in their life course which enables them to succeed. Economic capital 'can immediately and directly be convertible into money and may be institutionalized in the form of property rights' (p.243, Bourdieu, 1986). This type of capital is defined by its 'durability' and is based on money and assets (Bourdieu, 1986).

For Pierre Bourdieu, social capital is defined as the 'aggregate of the actual or potential resources that are linked to the possession of a durable network of more or less institutionalized

relationships of mutual acquaintances and recognition' (Bourdieu, 1986, p.248). However, Bourdieu argues that it 'depends on the nature of the social obligations, connections, and networks available to you' (Bourdieu, 1986, p. 51). In other words, investing in social networks has the potential to provide greater access to goods, which would not be accessible otherwise (Turner, 2003). As a type of currency, social capital can be transformed into other valued forms of capital, such as economic capital. In this sense, Pierre Bourdieu's notion of social capital includes material, social, and cultural resources (Moore, 2008).

Although few studies have applied Bourdieu's conceptualization of social capital to health, Carpiano (2007) as well as Moore and his colleagues (2005) mention the usefulness of this approach in Public Health research. It not only focuses on the social relationships between individuals in a community, but also brings attention to the social and material conditions on people's lifestyle. The social networks of individuals from contrasting living conditions fashion different attitudes toward health because of the impact of material and social resources on practices and tastes as well as the impact of social class on people's preferences of practice (Botanski, 1971).

**Social Position, Capital, and Habitus**

For Pierre Bourdieu, individuals who share a similar structure and volume of capitals are also likely to share a social position in society. This social position fashions significant characteristics of their social networks (size and type) that engender lifestyles. These two outcomes of one's social position (social networks and lifestyles), converge on the concept of habitus, that is an embodied system of schemes of dispositions, appreciation and perception that are adjusted to the opportunities and constraints of a particular social position (Bourdieu, 1984). In other words, it predisposes an individual to appreciate and prefer certain practices to others

and it constrains an individual's actions because it suggests the ways in which an individual should act and think.

Theoretically speaking, the habitus is a embodied culture, and refers to the 'internalisation of exteriority' (vision-of-the-world) and the 'externalisation of interiority' (lifestyles) (Bourdieu, 1984). It is 'an endless capacity to engender products – thoughts, perceptions, expressions, actions – whose limits are set by historically and socially situated conditions of its production' (Bourdieu, 1977, p. 95). Habitus is 'both the generative principle of objective classifiable judgments and the systems of classification of these practices. It is the relationship between the two capacities which define the habitus, the capacity to produce classifiable practices and works, and the capacity to differentiate and appreciate these practices and products (taste), the represented social world is constituted' (Bourdieu, 1984, p. 170).

The link between capital and habitus is 'established between the pertinent characteristics of economic and social conditions (capital volume and composition[…]) and the distinctive features associated with the corresponding lifestyle. This only becomes intelligible when the habitus is constructed as the generative formula accounting both for classifiable practices and products for the judgments, themselves classified, which make these practices and works into a system of distinctive signs' (Bourdieu ,1984, p. 170). In other words, the type and volume of capital available to an individual shapes their habitus which generates a particular lifestyle for a specific socioeconomic condition.

These theories can be useful in the analysis of social variation in health practices and cardiac rehabilitation. Both habitus and social capital take into consideration the impact of socioeconomic conditions of individuals, the resources available to them, and how they affect people's lifestyle. More specifically, habitus is used primarily to understand the lifestyle choices

of individuals after heart surgery and social capital is used to analyze the social networks that are available that affect the health of individuals.

**Operationalizing Social Capital**

Although this study emphasizes Pierre Bourdieu's conceptualization of social capital other key figures have provided different perspectives that can complement a study on the social variation of health and lifestyle. Hence, many sub-concepts of social capital, such as *trust*, *social cohesion*, and *social support*, derived from Robert Putnam (1993; 2000) and James Coleman's (1990) theories can help better operationalize the concept and facilitate its analysis.

It is also worth mentioning Marku Hyyppä's (2010) study on social capital. In his book entitled 'Health Ties', he identified several dimensions of social capital to better operationalize the concept and to optimize its use in empirical investigations. As shown in Table 1, he divides social capital into structural (networks) and cultural (trust and reciprocity) dimensions.

Table 1. *Dimensions of social capital* (Hyyppa, 2010).

| | | Structural dimension | Cultural (cognitive) dimension | |
|---|---|---|---|---|
| Characteristic | Data | Networks | Trust | Reciprocity |
| Individual-level social capital | Survey, statistical indicators, community studies, projects | Social contacts, membership in voluntary associations, volunteerism, civic involvement, social and cultural participation, voluntary associations | Generalized trust in others, social trust inside community, confidence in institutions | Norms of reciprocity, solidarity, togetherness, sense of belonging, sense of community, we-attitude, collective action and cooperation |
| Collective-level social capital | Survey, official register, official statistics, poll, community projects and studies | Networks, aggregate figures of memberships, volunteerism, social contacts, voting, use of mass media, use of internet, time budget survey, migration | Generalized trust, confidence in institutions | Aggregate figures of norms, democratic attitudes, social cohesion, neighbourhood quality |

The structural dimension relates to the networks and the structures that hold the social ties together. These consist of family, friends, neighbours, groups, and organizations in which the individual has a membership. The size and diversity of the relationships within these networks give access to better resources (Hyyppä, 2010).

The cultural dimension is more difficult to measure because of its subjective nature. For example, trust and reciprocity, as factors of the cultural dimension, are subjective in interpretation and can greatly differ in its significance. It consists of the norms, principles, judgments, and beliefs of individuals (Cullen & Whiteford, 2001). Cultural (or cognitive) dimension is also thought to have a behavioural impact on the health of individuals through social control of risky behaviours, reciprocity, and diffusion of information (Cullen & Whiteford, 2001).

As shown in Table 1 (Hyyppä, 2010, p. 24), the structural and cultural dimensions can also be divided into individual level social capital and collective-level social capital (Hyyppä, 2010). The collective level social capital evaluates the social capital at the group level and how individuals, as part of a social network, cooperate and trust each other. It also evaluates the cohesion within a community. On the other hand, the individual level social capital focuses on the resources available to individuals, and helps evaluate the sense of belonging as well as the social involvement of individuals in a community by considering feelings of security, trust, and reciprocity between individuals.

Similarly to Hyyppä, Islam and his colleagues (2006) created a table, as seen in Figure 1, to better understand the operationalization of social capital. Additionally to dividing social capital into cultural and structural dimension, Islam and his colleagues (2006) believe social capital also has a horizontal and vertical aspect to it.

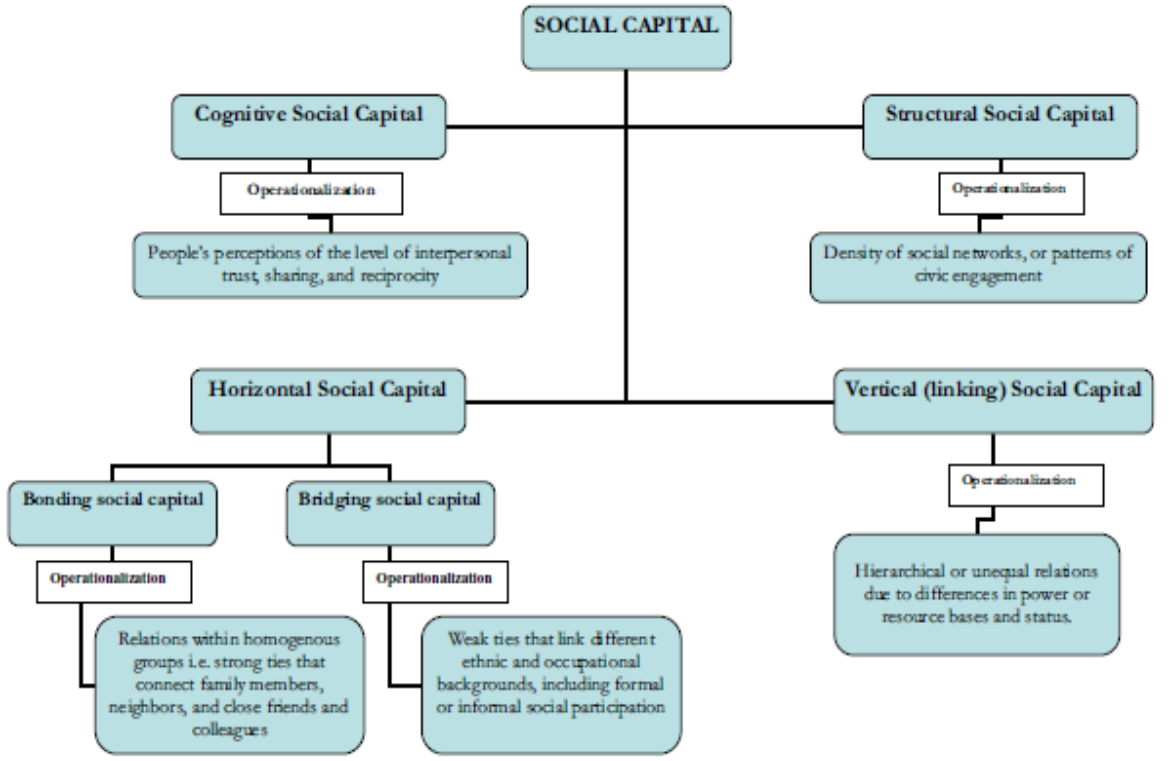


*Figure 1.* Forms and Dimensions of Social Capital. This figure illustrates the operationalization of social capital in current empirical studies (p.5, Islam et al., 2006)

Vertical social capital refers to the social ties between individuals of different hierarchical position, and horizontal capital refers to the ties that exist between individuals or groups of individuals of similar socioeconomic conditions. Within horizontal social capital lies Putnam's bonding and bridging social capitals. Bonding social capital is the strong ties that exist between family members, close friends, and neighbours. Putnam (1993) compares it to sociological superglue that bonds similar individuals together. According to Cullen and Whitefort (2001), bonding social capital is important for the establishment of healthy norms, the control over risky and unusual behaviours, reciprocity between individuals as well as protection of individuals at risk. In theory, bonding social capital can be positive or negative to health: it can encourage healthy behaviours such as physical activity and healthy eating, but can also encourage deviant behaviours such as high alcohol consumption, drug abuse, and cigarette smoking.

Bridging social capital consists of social ties between individuals from different social environments (different ethnicity, socioeconomic conditions). Putnam (1993) compares bridging social capital to sociological WD-40, which allows transfusion of resources and useful information between groups in the community. This type of social capital is important for the success of a community (or nation) allowing individuals to make social changes and have access to resources that wouldn't be available otherwise (Putnam, 2000). Few studies have measured the impact of bridging social capital on health. Theoretically, bridging social capital can be advantageous to the health of individuals and society through better access to resources and reduction in the number of conflicts between groups (Islam et al., 2001).

Pierre Bourdieu's theory is a useful framework for the analysis of lifestyle inequalities. This study is specifically concerned with lifestyle after heart surgery. Bourdieu's concept of habitus will allow a better understanding of the social variation in cardiac rehabilitation and other health practices occurring after a heart intervention. His conceptualization of social capital is also useful for this study as it considers the socioeconomic conditions as well as the resources available to individuals. Although he did not implicitly include the concepts of social support, social cohesion, and trust in his theory, other researchers have shown that these sub-concepts are part of both collective level (social cohesion) and individual-level social capital (social support and trust). Higher levels of trust, social cohesion, and support provide the necessary information as well the encouragement and resources necessary for better health.

## Chapter IV - Methods

This section describes the background of the project and the methodological component projected for this study on social capital. Four sections will be discussed: a) the population and sample characteristics, b) the strategies of participant recruitment, c) methods of data collection, and d) data analysis procedures.

This qualitative study is part of a larger research project on the social variation of cardiac rehabilitation in men after receiving heart surgery (Dumas, 2007). Figure 2 illustrates a methodological timeline of the larger research project as well as my involvement in the project.

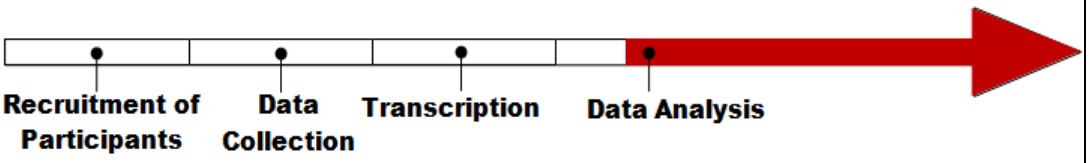


*Figure 2* Methods Timeline. This figure illustrates the evolution of the research project and my involvement in the methods.

As seen in Figure 2, the strategies of participant recruitment, the qualitative methods of data collection, the transcription of interviews, and part of the data management strategies were conducted by other members of the larger research team. In the next sections, we will briefly overview these methods before getting into the methods of data analysis, and my involvement in the research project.

**Population and Sample**

The study was conducted in the region of Outaouais in the province of Québec, Canada. This region is known for its high social and health inequalities, and has one of the highest mortality gaps between socioeconomic groups in the province of Quebec (Courteau et al., 2002). As seen in Figure 3, the areas intended for data collection (Hull, Pointe Gatineau and Notre-Dame) are characterized by large social and material deprivation.

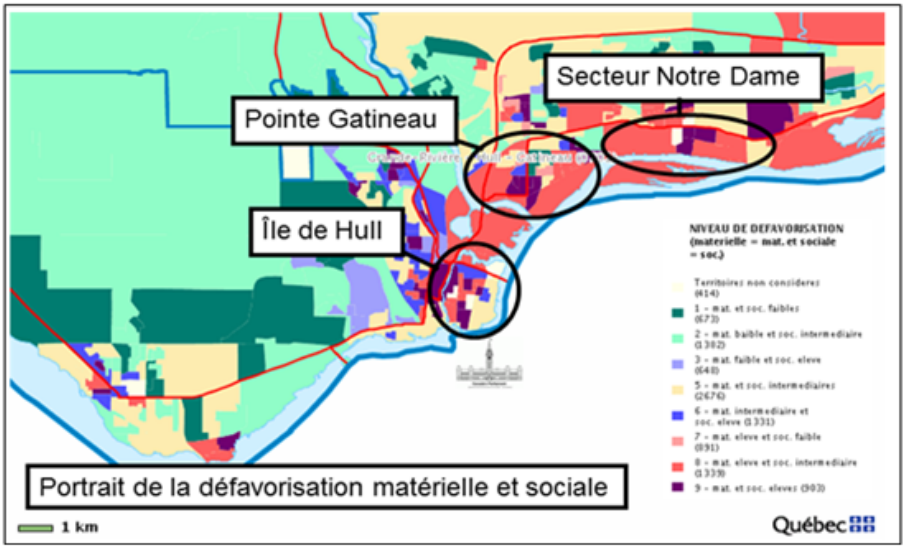


*Figure 3*. Regions of Data Collection. The areas of the Outaouais region intended for data collection. This figure illustrates the regions material and social deprivation ratio.

The postal codes of possible participants were provided in order to calculate the median income of the dissemination areas (see Figure 4), which are small groups of approximately 100 addresses. Within the region of recruitment, the median income varied from less than 1800$/year to more than 80000$/year.

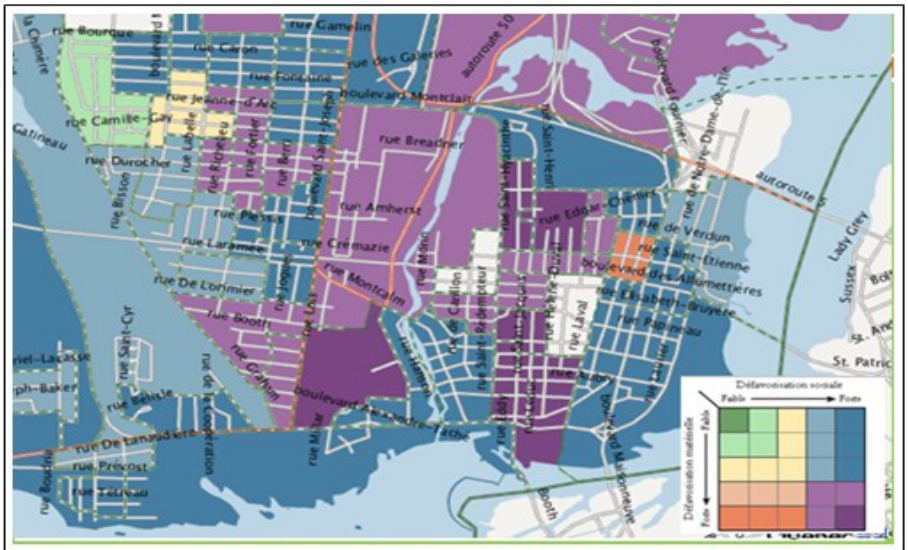

*Figure 4*. Dissemination areas of the Outaouais region. This figure illustrates the dissemination areas of the Outaouais. Each coloured region represents a specific material and deprivation ration.

The sample population for this study consists of sixty men from contrasting living conditions: the social and material deprivation group (unemployment or unspecialized work with no work-related benefits, attends food shelters, lives in public or roomed housing, limited and unreliable social ties) and the lower and upper middle classes (stable work with capital benefits, some education, independent of social services for living necessities, close and reliable social ties, and proximity to family). Participants are francophone men between the ages of 25 and 75 years (mean age of 53 years) of the Outaouais region who have suffered from a cardiovascular incident requiring a medical intervention and hospitalization in the last ten years. To insure their ability of participating in physical activities, participants must also be considered as independent according to the definition of independence from Health and Social Services Ministry of Quebec[ii].

Table 2 and 3 show participant characteristics obtained by a short questionnaire prior to the interview. Table 3 illustrates a social gradient in the participant characteristics: large differences between groups of participants, showing a social gradient of participant characteristics. Most participants from the social and material deprivation group do not have a high school diploma and are either on welfare or work in a non-specialized trade (construction, transportation, cleaning, manufacturing, or low-level administration). These individuals also suffered from abominable life experiences such as childhood abuse, imprisonment, little to no social contact with family members, and have lived alone for most of their lives. Although most individuals are knowledgeable of the impact of lifestyle on general health, most adhered to a non-compatible lifestyle recommended by cardiac health promotion experts: drug and alcohol abuse, tobacco consumption, little to no medical appointment attendance, unhealthy eating

habits, sedentary behaviours, and refusal of prescription and other medication intake for cardiac issues.

In contrast, men from the middle and upper middle classes generally work in the public civil services, have little to no tobacco or alcohol consumption, none were imprisoned, frequently visit health professionals, take prescription medication for their heart condition, are married, have children, and keep much closer family ties and are in frequent contact with them.

Table 2. *Participant Characteristics*

| Age | Level of education | Employment |
|---|---|---|
| <39 (n=5) | No high school diploma (n=29) | Trade (n=6) |
| 40-49 (n=11) | High school diploma or professional diploma (n=17) | Government (n=9) |
| 45-49 (n=8) | College or University (n=13) | Sales and Services (n=13) |
| 50-59 (n=18) | | Non Specialised Trade (n=18) |
| 60> (n=26) | | Welfare (n=13) |

Table 3.*Comparison of Participant Characteristics according to contrasting levels of social and material deprivation*

| Attributes | Social and Material Deprivation (n=31) | Lower and Upper Middle Classes (n=29) |
|---|---|---|
| History of drug and alcohol abuse | 15 | 0 |
| Cigarette smoking | 23 | 12 |
| Victim of Childhood Abuse | 11 | 2 |
| History of imprisonment | 13 | 1 |
| Proximity to family | 19 | 28 |
| Married/in a relationship | 16 | 27 |
| Children | 23 | 28 |
| Sedentary | 23 | 12 |
| Full participation in cardiac rehabilitation program | 5 | 27 |
| Medication intake | 20 | 26 |
| Follow-up with health professional | 17 | 26 |

With the information provided by the participants, a table was created in the qualitative analysis software QSR NVivo 8, allowing easy comparisons between participants across contrasting socioeconomic groups. Attributes found within the table include: age group, physical

activity (sedentary or active), alcohol consumption (before and after cardiac event), diet, smoker, job, history of illicit drug intake, childhood abuse, proximity of family, children, marital status, participation in cardiac rehabilitation, residence, education attainment, spirituality, socioeconomic group, and hospital treatments (see Figure 5).

| | Entrevue Albert | Entrevue Alfred | Entrevue Alfred 2 | Entrevue Benoit | Entrevue Bigras | Entrevue Bob | Entrevue Boxeur |
|---|---|---|---|---|---|---|---|
| 1 : Violence a l'enfance | Non | Non | Non | Non | Oui | Non | Oui |
| 2 : Traitements hospitalier | Angioplastie explor | Medicaments seule | Pontage triple | Angioplastie avec tu | Ablation | Angioplastie avec tu | Unassigned |
| 3 : Statut socioeconomique | 2a | 1a | 3 | 3 | 1a | 3 | 1a |
| 4 : Spiritualité | Religieux non prati | Not Applicable | Not Applicable | Religieux non pratiq | Not Applicable | Religieux non pratiq | Spirituel |
| 5 : Scolarité | Pas de DES | Pas de DES | DEC | DEC | DES ou DEP | Universitaire | Pas de DES |
| 6 : Résidence | Pointe Gatineau | Centre ville (Gatine | Hautes-Pleines | Plateau | Ile | Cote D'Azur | Ile |
| 7 : Réadaptation cardiaque | Pleine participation | Aucune participatio | Commencer mais pa | Pleine participation | Pas referer | Pleine participation | Commencer mais |
| 8 : Proximité de la famille élargie | Oui | Non | Oui | Oui | Oui | Oui | Non |
| 9 : Prison | Non | Oui | Non | Non | Oui | Non | Oui |
| 10 : Nombre d'hospitalisation | 5 | 1 | 1 | 1 | 1 | 2 | 1 |
| 11 : Métier | Ouvrier Non-Spéci | Vente et Service | Fonctionnaire | Vente et Service | Assistance Social | Fonctionnaire | Ouvrier Non-Spéci |
| 12 : Logement | Maison | Logement social | Maison | Maison | Unassigned | Maison | Unassigned |
| 13 : Historique de toxicomanie | Non | Oui | Non | Non | Oui | Non | Oui |
| 14 : Historique de malbouffe | Consomme parfois | Consomme parfois | Aime mais ne conso | Ne consomme pas | Consomme parfois | Consomme parfois | Consomme beauc |
| 15 : Historique d'alcool | Non | Non | Non | Non | Oui | Oui | Oui |
| 16 : Enfant | Oui | Oui | Oui | Oui | Oui | Non | Oui |
| 17 : En couple présentement | Oui | Non | Oui | Oui | Non | Oui | Oui |
| 18 : Consulte le medecin | Presque jamais | Presque jamais | Comme prescrit | Comme prescrit | Presque jamais | Comme prescrit | Jamais |
| 19 : Consommation de medicam... | Parfois | Parfois | Oui | Oui | Parfois | Parfois | Oui |
| 20 : Cigarette | Oui | Oui | Non | Non | Oui | Oui | Oui |
| 21 : Changement - toxicomanie | Not Applicable | Oui à non* | Non à non | Non à non | Oui à oui | Non à non | Unassigned |
| 22 : Changement - medicaments | Non à non* | Oui à non* | Oui à oui | Oui à oui | Non à oui | Non à oui | Oui à oui |
| 23 : Changement - médecin | Non à oui | Oui à non | Oui à oui | Oui à oui | Non à oui | Non à oui | Oui à oui |
| 24 : Changement - cigarette | Oui à non* | Oui à non* | Non à non | Non à non | Non à oui | Oui à non | Non à oui |
| 25 : Changement - alimentation | Oui à non* | Oui à non | Non à oui | Oui à oui | Oui à non* | Non à non | Oui à oui |
| 26 : Changement - alcool | Oui à oui | Oui à non | Non à non | Non à non | Oui à oui | Oui à oui | Oui à oui |
| 27 : Changement - activité physi... | Oui à non | Oui à oui | Oui à oui | Oui à oui | Non à non* | Oui à oui | Non à non* |
| 28 : Age | 70 - 74 | 39 et moins | 60 a 64 | 45 a 49 | 50 a 54 | 70 - 74 | 45 a 49 |
| 29 : Activite Physique | Sedentaire | Actif | Parfois (faible intensi | Actif | Actif | Actif | Actif |

*Figure 5.* Table of sample characteristics in NVivo. This figure illustrates a screen shot of the participant characteristics. The table allows comparisons of individuals or groups with filters.

**Methods of data collection**

**Two strategies of recruitment.** To allow comparison of results between socioeconomic groups, two strategies were applied during the recruitment process. The first strategy consisted of the presence of the research team in the field in the means of approaching possible participants by oral presentations in social organizations (soup kitchens, homeless shelters, food banks) and local businesses (pubs and restaurants), posted advertisements of the project, and a published explanatory article of the project in the local newspaper. This strategy also consisted of

recruitment by snowball effect where participants recommended other individuals who may be interested in participating. This recruitment strategy was intended to recruit individuals who have had a heart intervention, but did not participate in a cardiac rehabilitation program. In total, thirty-six of sixty participants were recruited with this strategy of recruitment.

The second recruitment strategy consisted of a joint effort from both the research team and the coordinator of the cardiac rehabilitation program from the CSSS of Gatineau[iii]. The coordinator of the cardiac rehabilitation program was informed of the nature of the project as well as the ideal sample population for data collection. With the information provided from the research team, the coordinator was able to generate a list of individuals who answered the participant criteria[iv]. For ethical reasons, this list was only accessible to the staff of the CSSS of Gatineau.

A letter of recruitment in the name of the research team was sent to the individuals from this list explaining the nature of the study as well as the coordinates of the project manager, Alex Dumas, to contact if interested in participating in the study. For ethical reasons, the members of the research team did not initially have access to the name of possible participants of the study.

The location and time of the interview was determined by the participant, as long as it coincided with the researcher's availability. Locations were either at the University of Ottawa, the home of the interviewee[v], or within a room that was offered from a non-profit organization. At the beginning of each interview, all of the information regarding the study was provided to the participants in simple language and were informed of their right to end their participation in the study at any point. Once they had agreed to participate, a form of consent (see Appendix A) was signed and 30$ was given for their willingness to participate.

**Data collection.** Once the participants were recruited, semi-structured interviews were conducted to obtain rich and in-depth information. The interviews averaged 90-120 minutes in length of were transcribed in their entirety (average of 18 720 words per interview). The interview guide consisted of four groups of questions consistent with Pierre Bourdieu's socio-cultural theory: 1) socioeconomic life trajectories and characteristics and quality of his social environment, 2) his opinions and experiences with cardiovascular diseases in his life trajectory, 3) the resources available that disposes the participant to a particular lifestyle, 4) the personal trajectory of the participation in matters of his perceptions, attitudes and appreciation in regards to the recommended lifestyle by health professionals post heart intervention (nutrition, medication intake, preventive medical follow-ups, physical activity, etc.) (see Annexe B).

A number of questions from the interview guide emphasize on social capital and its sub-concepts by exploring individuals' social support networks and social ties that could be linked with rehabilitation and lifestyle changes. These questions explore the social context of participants, the initiatives that would encourage him to do physical activity (such as an organized walking or running club in the community and the availability of sports facilities), the impact of their social surroundings on their experience with heart diseases, and their perceptions and feelings toward cardiac rehabilitation. These questions allow the exploration of participants' social environment during childhood, their relationship with friends, family, co-workers, and significant other, their social support systems as well as the impact it has on their lifestyle. These questions also explore participants` trust in health professionals, trust in others, and their feelings of security in the community that promote physical activity and other health promoting (or demoting in reasons of fear and lack of trust) aspects of lifestyle in the community.

**Data management.** All interviews were transcribed verbatim by members of the research team. The transcriptions and audio-recording were tagged with the participant's pseudonym[vi] and kept in a folder in an alphabetical order. The transcriptions were then imported in the QSR NVivo 8 qualitative data analysis software. This software is a useful tool because it keeps the data and other related documents together in an orderly fashion with the possibility for easy retrieval. A table (casebook) in the analysis program was created with the participant demographics, as seen in Figure 5, for easy referral and comparisons between groups of individuals[vii]. Several copies of the project were saved and password protected. All members of the research team have access to the data collected.

**Data analysis.** A thematic analysis will be first performed to the interviews in order to search for common themes. A preliminary step of questions is required prior to the thematic analysis. These questions include: 1) what to consider as a theme, 2) whether to use inductive or theoretical thematic analysis, 3) a rich description of the whole data set or a detailed description of one dimension, 4) use of semantic or latent themes, and 5) whether the epistemology used is essentialist or constructionist (Braun & Clark, 2005).

The first question consists of the consideration of a theme. Themes are repeated codes (either words or expressions) to the point of data saturation. Initial themes for data analysis were previously put into place by other members of the research team. A theoretical thematic analysis will be performed since the themes are based on Pierre Bourdieu's socio-cultural theory. Given the focus of this study, three dimensions will be privileged in the analysis: the connection between social capital and living conditions of individuals, the habitus, and their impact on their health practices (third decision). The fourth and fifth decisions are the use of latent themes and the epistemology of constructionism. Individuals decide whether the cardiac event is enough to

promote necessary lifestyle changes to improve quality of life and participate in a cardiac rehabilitation program. Cardiac rehabilitation, as an example of health practices, is socially constructed and its meaning comes from both the object (men interviewed) and the subject (cardiac rehabilitation) (Crotty, 1998). Each view is constructed by the individuals' expectations and previous life experiences, including that of the cardiac event.

These decisions illustrated by Braun and Clarke are followed by six phases to a thematic analysis, which consist of: 1) becoming familiar with the data, 2) generation of individual codes, 3) searching for themes, 4) evaluation of themes, 5) reorganization of themes, and 6) the final report. Since I was not present during the conduction of interviews or its transcriptions, the only way to get as close to the data as possible was by reading the transcripts a number of times and pay close attention to the verbal cues and pauses indicated in the transcripts. The generation of individual codes can derive from either a theoretical framework or emerge from the data. As mentioned in the previous paragraph a theoretical framework is used, therefore the themes within the data derive from Pierre Bourdieu's sociocultural theory. Since a primary thematic analysis was performed with twenty of the sixty-two interviews, the second and third steps of generating individual codes and searching for themes, as seen in Table 4, has already been generated from another member from the research team.

Table 4. *Initial themes from the Primary Thematic Analysis based on Bourdieu's Socio-cultural Theory* (Savage & Dumas, 2010)

| | |
|---|---|
| Initial themes | Physical activity, alcohol, diet, other health problems, cultural capital, economic capital, physical capital, social capital, cigarette, adulthood living conditions, childhood living conditions, couple, heart attack, drugs, emotions, children, hope, tastes, lifestyle, hierarchy of practices, family history, control, information, disease and family, masculinity, medical, perception of family, perception of death, perception of disease, perception of health, perception of life, perception of the body, prison, age, future, past, present, cardiac rehabilitation, reflexivity, resources in the community, biographical disruption, sex, sleep, spirituality, stress, work and violence |

The fourth phase, which consists of the evaluation of initial themes, was performed during the analysis of the thirty-eight unanalyzed interviews. To allow simplification and focus of themes pertaining social capital and lifestyle, the fifty initial themes were reassessed and reorganized, as seen in the fifth phase of the thematic analysis. Similar themes were grouped into one family theme with one or several sub-themes. For example, similar themes such as physical activity, alcohol, diet, medical, drugs, and cardiac rehabilitation were grouped into one family theme called "health practices". Themes that were large enough to hold on their own, such as social capital and masculinity were kept as a single theme. In total, fifty themes are now grouped into four family themes (with twelve sub-themes), and twelve single themes (see Table 5).

Table 5. *Themes and Family Themes of Secondary Thematic Analysis Based on Bourdieu's Socio-Cultural Theory*

| Themes | Family Themes | |
|---|---|---|
| | **Parent Themes** | **Sub-themes** |
| Physical capital and ageing | Life conditions | Economic capital |
| Social capital | | Violence |
| Life advice | Perceptions of health practices | Physical activity |
| Control | | Nutrition |
| Environment | | Drugs (includes alcohol) |
| Experience of cardiovascular disease | | Medication and doctors |
| Masculinity | | Cardiac rehabilitation |
| Perception of the body | | Sleep |
| Perception of age, health, life and death | Biographical disruption | Past |
| Spirituality and religion | Other codes | Citations |
| Stress | | Cultural Capital |
| Work | | Reflexivity |

Social capital was one of the most prominent themes in the sixty interviews. As seen in Table 6, three attributes (relationship status, children and proximity to family members) were taken into consideration during the secondary thematic analysis.

| **Social class** | **Social and material deprivation group (n=31)** | **Middle and Upper Middle Classes (n=29)** |
|---|---|---|
| In a relationship | 16 | 27 |
| Have children | 23 | 28 |
| Proximity to family members | 14 | 28 |

This table illustrates the descriptive data of the sample population, where individuals from higher middle and upper middle classes economic groups are more likely to be in a relationship (93% of participants vs. 51%), have children (96% vs. 74%), and be close to their family members (96% vs. 45%).

To further analyze the concept of social capital, a second thematic analysis will be conducted. This analysis will include the splitting of social capital into sub-concepts as proposed by Hyyppä (2010) social support, sense of belonging, family life, groups, networks, trust, social cohesion, and inclusion. This step will help operationalize the concept of social capital and will form the initial thematic map, which is also included in Braun and Clarke's phase 4 of the thematic analysis process (see Figure 6) (Braun & Clarke, 2006).

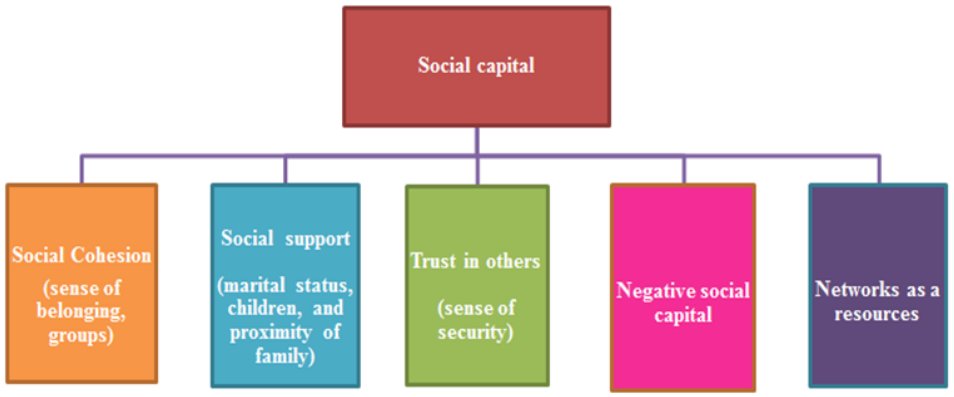


*Figure 6.* Thematic Map. This figure illustrates the operationalization of social capital that will be used for the data analysis.

These concepts of social capital were organized into themes and family themes, as seen in Table 7. The themes found in this table will be applied for the secondary thematic analysis.

Table 7. *Organization of themes related to social capital*

| Themes | Family Themes | |
|---|---|---|
| | Parent Themes | Sub-Themes |
| Adverse social environment | Family | Relationship |
| Community | | Children |
| Negative social capital | | Orphanage |
| Resources | Networks | Connectedness |
| Sense of security | Places | Positive influences |
| Social Cohesion | | Negative influences |
| Social support | Social support | Isolation |
| Trust in others | | |

Similar to previous studies on this project, a thematic analysis of each interview (vertical analysis) and a thematic analysis across interviews (transversal analysis) will be conducted following the thematic analysis of social capital, allowing for the comparison of social capital and health practices of individuals from four contrasting living conditions. This will allow comparison of themes from the interviews within the same social class as well as those from different social classes for trends, similarities and differences between participants.

These themes, as well as the thematic map found in Figure 6, will allow the comparison of social capital between two contrasting living conditions as well as the social capital between individuals from the same socioeconomic group and how it has an impact on health practices, including cardiac rehabilitation, after heart surgery.

## Chapter V- Research article

# Lifestyles and Social Capital: Cardiac Rehabilitation of men from Contrasting Socioeconomic Conditions.

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## Abstract

Social epidemiology has repeatedly exposed the increased risk of death and disabilities of men from lowest income quintile. Recent Canadian data show they have 3.4 times higher risk of dying from a cardiovascular disease than their counterparts from the highest income quintile, and least likely to adhere to a cardiac rehabilitation program. Drawing chiefly on Pierre Bourdieu's social capital theory, this qualitative research aimed to expose and understand the social variation of lifestyles practices of two groups of men from contrasting living conditions after their hospitalization for a heart problem. Sixty in-depth interviews were conducted with men (mean age of 56.3) from varying socioeconomic conditions of the region of Outaouais, Quebec, Canada. A thematic approach was used to vertically analyze, and then compare interviews for common themes and patterns within a group as well as differences between groups of interviews. Results of this study show that various characteristics related to social capital, – social cohesion, trust, and social support- orient lifestyles in the context of cardiac rehabilitation. Social circumstances within middle and upper class conditions provide more favourable social settings within the health care environment, and supportive and trustworthy social networks that tend to encourage the adoption of normative lifestyles, whereas materially and socially deprivation conditions foster little support, suspiciousness, and unhealthy environments with regards to cardiovascular health. This bourdieusian analysis of mens' biographies strongly supports the idea that health lifestyles are not only the outcome of one's rational choosing, but also the results of socially acquired dispositions and opportunities engendered by material, family, and social circumstances.


**Key words:** Bourdieu, social capital, cardiac rehabilitation, heart diseases, social support, interviews, qualitative, social cohesion, trust, social variation, lifestyles

## Introduction

This study draws on Pierre Bourdieu's concept of social capital in order to understand the lifestyles of men from two groups of contrasting levels of social and material deprivation who have suffered from a cardiac event requiring a medical intervention. The analysis of sixty in-depth interviews shows that characteristics of social networks of socially and materially underprivileged men provide little support and few incentives to adapt and sustain heart healthy lifestyles in the context of cardiac rehabilitation. In comparison, social networks from the middle and upper middle classes provide stronger social cohesion, trust, and social support, which improve adherence to normative lifestyles promoted by health institutions.

### Health inequalities and cardiac rehabilitation

Population health statistics have demonstrated the close association between socioeconomic factors and health inequalities. Since the Whitehall studies, the notion of social gradient in health has been extensively used in order to highlight the social variation in mortality and morbidity in economically advanced societies (Marmot, 2004). In Canada, Greenberg and Normandin (2011) described this trend in mortality rates by indicating the problematic health of men from the lowest income quintile. Their average life expectancy at birth of the (75.6 years) is 6.1 years lower than women of the same quintile, 4.7 years lower than men (80.3 years) and 8.4 years lower than women (84.0 years) from the highest income quintile.

Heart diseases constitute some of the most revealing examples of health inequalities. In the Province of Québec, Pampalon and his colleagues (2008) indicate that there is 3.4 times more premature deaths (deaths occurring before the age of 75 years) related to cardiovascular diseases of men from the lowest income quintile than those from the highest income quintile and 10.4 times more than women from the highest income quintile. Such trends show significant

socioeconomic and gender inequalities. Underprivileged men are also least likely to make changes to their lifestyles after a heart intervention, lowering their chances of survival one year post-surgery (Alter et al., 1999).

The explanation for such a social gradient in cardiovascular health is complex and involves many contributing factors, such as long term stress and lifestyles (e.g. Ades, 2006; Farley et al., 2003; Heart and Stroke Foundation of Canada, 2006; Worcester et al., 2004). Although lifestyles are not the only factor involved in the complex relationship between social status and cardiovascular diseases (CVD) (Marmot, 2004), many health institutions have put in place cardiac rehabilitation programs (CRP) which focus on lifestyles in secondary prevention. These programs improve the quality and longevity of life of patients suffering from CVD by providing the necessary information on the risk factors and the impact of lifestyles (diet, physical activity, medication, and cigarettes) on heart-health (Grace et al., 2002; Keaton & Piece, 2000).

Although health institutions have promoted and educated people on heart-healthy lifestyles, CVD remain as a leading cause of death and disability in Canada (Heart and Stroke Foundation of Canada, 2010). Generally speaking, CRP have been provided as medical and educational solutions to prevent and manage the risks of developing further complications due to CVD amongst vulnerable populations (Heart and Stroke Foundation of Canada, 2006). Generally speaking, basic CRP consist of group discussions and one-one consultations with specialists in health care for an interdisciplinary approach to CVD. The team of specialists consists of nurses, a physician, pharmacist, an exercise physiologist, a psychiatrist, psychologist, sociologist, and a dietician (Cooper, Jackson, Weinmann & Home, 2004).

Cardiac rehabilitation programs assist individuals in improving their lifestyle, reduce

levels of stress, and lower their risk of subsequent cardiac events and death by 20-30% (Cardiac Care Network of Ontario, 2002). Participants in CRP are taught how to incorporate physical activity in everyday life, eat healthy, correctly take medication, and stop or reduce the consumption of tobacco, drugs, and alcohol. Although there are many benefits to such programs, only 37% of eligible individuals participate in the program (Heart and Stroke Foundation of Canada, 2013). If they have proved their benefits on cardiovascular health (Grace et al., 2002), studies have also indicated a high rate of abandonment of these practices – 25% within the first three months following a heart attack, 50% after the first six months (Oldridge, 1991; Bock et al., 1997) and 75% after one year (Willich et al., 2001).

Many authors in the field of cardiac rehabilitation have argued that social support and social cohesion have a positive impact on the adoption of healthy eating and physical activity. Married individuals of high socioeconomic status (income and education) were most likely to attend these programs and understand the implications of lifestyles on cardiovascular health (Ades, 2006; Bock et al., 1997; Farley, Wade & Birchmore, 2003; Harlan et al., 1995; Lane et al., 2001; Worcester et al., 2004). Characteristics linked to weak social capital (e.g. single, living alone with low support from social surroundings) were also key factors that help explain their low participation rate (Worcester et al., 2004).

Few studies have presented an in-depth analysis of resources linked to social capital as key determinants of the social variation in cardiac rehabilitation. In order to fill this gap, the aim of this study is to expose and understand the social variation of lifestyles in the context of cardiac rehabilitation practices of two groups of men from contrasting living conditions. The study draws chiefly (but not exclusively) on Pierre Bourdieu's concept of social capital. Because of the importance his framework places on available resources provided by social networks, his theory

allows for a closer focus on the impact of socioeconomic position and related notions of trust, social cohesion, and social support as determinants of health practices. As argued by Carpiano (2006: 170) "social support is quite consistent with Bourdieu's theory, particularly in thinking about his aim to understand how social capital operates in reproducing inequality". In this respect, this theory of practice also contributes to a deeper comprehension of the role of class and class culture on health practices.

**Bourdieu, Lifestyles, and Capital**

Pierre Bourdieu's sociocultural theory has been widely used in the field of public health. Its value lays mainly in its ability to understand the social variation of lifestyles and the connections between socioeconomic class, lifestyles, and health (Cockerham, 2013; Williams, 1995). This approach emphasizes the idea that lifestyles are fashioned by the living conditions of individuals and the amounts of capital they possess i.e., economic, cultural and social (Bourdieu, 1984). Capital is a form of power related to the utilization of resources in society (Bourdieu, 1986). Bourdieu describes three fundamental types of capital, i.e., cultural, economic, and social capitals (Bourdieu, 1986), which, respectively are linked to educational credentials, money, and social networks.

More specifically for this study, social capital is defined as the 'possession of a durable network of more or less institutionalized relationships of mutual acquaintances and recognition' (Bourdieu, 1986, p.248). Although eclectic in its definitions and applications in health research (see Bourdieu, 1984; Coleman, 1990; Putnam, 1993), Bourdieu's notion of social capital focuses on the value and quality of resources linked to social networks, and by including it in his wider theory of practices, it also brings attention to social and material conditions linked to social

position (Carpiano, 2007; Moore et al., 2005). It thus encompasses ideas of socialization (habitus) and access to resources (capital) in its understanding of lifestyle. Pierre Bourdieu did not implicitly operationalize his theory of social capital, but many researchers (e.g; Carpiano, 2006; Pixten & Lievens, 2014; Song, 2011; Ziersch, 2005) described the importance of social support, social cohesion, and trust to his conceptualization.

First, social cohesion is defined as the sense of belonging to a group (Baum et al., 2009). It includes factors of connectedness and solidarity amongst members (Patterson et al., 2004), shared values, common norms, and bonds allowing people to act together (Osberg, 2003), and provides a certain homogeneity of personal characteristics, which reinforces social network ties (Galabouzi, 2010). Carpiano (2007) suggests that "social cohesion as a necessary antecedent of social capital - without a least some degree of social cohesion between residents, social capital cannot be fostered, maintained,,and used" (p. 651). In another publication she argues that it "is rather easy to think in terms of Bourdieu's theory how a neighborhood community or some of its residents may use such resources to pursue a variety of goals or outcomes…it is the potential of forms such as these that make social networks useful for action" (Carpiano, 2006, p. 170).

Studies have shown its positive impact on health (Bruhn, Philips & Wolf, 1972; Scheffler et al., 2008), group therapy outcomes (Clark et al., 2005), and speed of recovery (Putnam, 1993). This sense of belonging allows for quicker spread of information about unhealthy behaviours and reinforces social norms, reducing risk oriented behaviours such as excessive alcohol consumption, smoking, and sedentary behaviours (Scheffler et al., 2008).

Second, trust is also an essential feature of social capital. It includes mutual dependence and reciprocal communication between individuals, and is strengthened by social and cultural homogeneity (Hyyppä, 2010). It is defined as a relational concept enhancing cooperation and

coordination for mutual benefit (Mohseni & Lindstrom, 2007). As Pierce (2003) described: "the concept of social capital seems to have a lot in its favor...combines the economic concept of 'capital' with the social concepts of trust and fairness… takes its place as something fundamental to the smooth functioning of society and economic growth" (p.126). Putnam (1993) applies trust to understand the relationship between social capital, health, and health inequalities in society. In his theory, trust is unevenly distributed in society and varies according to income inequality within a given community; high-income inequality results in low trust between individuals.

Thirdly, in the context of health, social support is defined as the many forms of encouragement provided by friends, relatives, co-workers, neighbours, support groups, and health professionals that assist individuals in managing illness and better coping with physical, mental, and emotional disabilities (e.g. sickness, stress, and loss) (Hawkley & Caciopo, 2003). Carpiano (2006) suggests that although "Bourdieu did not explicitly discuss forms of social capital, certainly, social support is quite consistent with Bourdieu's theory, particularly in thinking about his aim to understand how social capital operates in reproducing inequality" (p. 170, 2006). Many studies have identified the positive link between social support and health, either through encouragement to adopt healthy lifestyles, participation in rehabilitation programs, or simply as a buffer against the negative effect of stress on the body (Henningway et al., 2001; McNeil et al., 2006; Poortinga, 2006).

Several authors have also included these concepts in their Bourdieu-inspired theory of social capital and its application to health inequalities (Carpiano, 2006; Pierce, 2003; Pinxten & Lievens, 2014). Pinxten and Lievens (2014), for example, have used neighbourhood social cohesion and social support as essential components of social capital in their study on health inequalities. To our knowledge, no studies have included these concepts in order to understand

the social variation in lifestyles of men in the context of cardiac rehabilitation. How does social capital or its concepts of social cohesion, trusts, and social support help understand health inequalities, participation in cardiac rehabilitation programs, and the adoption of risky oriented practices after heart surgery?

## Methods and Context

This qualitative study is part of a larger research project entitled Men, Socioeconomic Class and Cardiac Rehabilitation and funded by the Social Sciences and Humanities Research Council of Canada. It aims to better understand the variation of lifestyles in men from varying socioeconomic conditions.

### Study context

This study was conducted in the region of Outaouais, in the province of Quebec, Canada because of its large health disparities. Although this region (population of 260 800) holds one of the highest average incomes per capita (69 226$ in comparison to 59 560$ for the province in 2010) and one of the lowest unemployment rates among all metropolitan census areas of the province of Quebec (5.7% in comparison to 7.2% for the province), it is also characterized by large health inequalities. Two studies conducted by Québec's Public Health Agency have reported poor health due to high social inequalities and higher average mortality rates in the region of Outaouais, in comparison to regions of similar socioeconomic conditions (Courteau, Émond, and Garvie, 2002; Régie régionale de la santé et des services sociaux de l'Outaouais (RRSSSO), 1996). More recently, the same surveillance agency indicated a rise in mortality disparities between extreme income quintiles over the last 20 years (1984-1988 to 2004-2008) (Courteau, Marleau & Garvie, 2014). The regions' social transition from a working class to an

underprivileged population had lead to the ghettoization process, in which the wealthy groups moved to the surrounding outskirts of the city and the arrival of poorer individuals within the inner city in search for low rent and other subsidized services (Dumas, 2011). Due to this social transition, the inner city of Outaouais has strong concentrations of poverty areas, which are comparable with other underprivileged regions in Québec. For these reasons, most of the data collection was conducted on urban areas of Gatineau (Statistics Canada, 2013).

Thus far, a number of studies within the larger project have been published[viii], showing clear lifestyle disparities between socioeconomic groups of men. Factors such as socioeconomic conditions and masculinity were found to have an impact on the lifestyles of participants after heart surgery. Although the characteristics of social networks were identified as having a bearing on lifestyle (Dumas et al., 2013), they have not been analyzed systematically. In order to include a new perspective, this specific study will draw on social capital in order to provide a more complete understanding of the social variation of lifestyles in the context of cardiac rehabilitation, particularly the impact these socioeconomic differences have on the quality of participants' social capital, and how it shapes lifestyles after a heart intervention.

**Participant recruitment**

This study included sixty participants from socially and materially deprived groups (31 participants) and middle and upper middle classes (29 participants). The sample population for this study consists of sixty men from contrasting living conditions: the social and material deprivation group (unemployment or unspecialized work with no work related benefits, attends food shelters, lives in public or roomed housing, limited and unreliable social ties) and the lower and upper middle classes (stable work with capital benefits, some education, independent of

social services for living necessities, close and reliable social ties, and proximity to family). Participants are francophone men between the ages of 25 and 75 years (mean age of 53 years, lived in the region of Outaouais, have had a cardiac event requiring hospitalisation, and were considered as « independent » according to the norms of the Ministry of Health and Social Services of Quebec[ix]. All men from the former group had experienced unstable employment, with periods of unemployment and precarious work conditions (undeclared, low income security and benefits, part-time and unreliable), lived in underprivileged areas, depended on shelters for food and lived in public housing. They have infrequent contact with family members and lived alone, in isolation, for a significant portion of their life. Conversely, men from the middle and upper middle classes had stable work conditions with employee benefits (paid sick leave, social benefits, full-time and reliable work), are married and have children, and co-habited most of their lives.

Two strategies were used in order to the recruit participants from these two contrasting socioeconomic groups. The first strategy was in field and intended to recruit those who have had a heart intervention, but did not participate in a cardiac rehabilitation program. Members of the research team posted advertisements of the project, published an explanatory article in the local newspaper, and presented the project in social organizations (soup kitchens, homeless shelters, food banks) and local businesses (pubs and restaurants). This strategy also consisted of recruitment by snowball effect where participants recommended other individuals who may be interested in participation. The second strategy of recruitment consisted of a joint effort from both the research team and the coordinator of the cardiac rehabilitation program from the CSSS of Gatineau. The coordinator of the cardiac rehabilitation program was informed of the nature of the project as well as the ideal sample population for data collection. With the information

provided from the research team, the coordinator was able to generate a list of individuals who answered the participant criteria. For ethical reasons, this list was only accessible to the staff of the CSSS of Gatineau. A letter of recruitment in the name of the research team was sent to the individuals from this list explaining the nature of the study as well as the coordinates of the team leader, Alex Dumas, to contact if interested in participating in the study.

**Data collection and analysis**

Semi-structured interviews were conducted once participants were recruited. The location and time of the interview was determined by the participant, as long as it coincided with the researcher's availability. Interview guide was constructed of four sections consistent with Bourdieu's sociocultural theory. The first series of questions address participants' socioeconomic life circumstances social environment and cardiovascular disease. The second series of questions were directed at lifestyles, perceptions, and appreciations of health and health practices. The third series of questions addressed resources available to the men, including barriers and constraints. The fourth series of questions explored trajectories of perceptions, attitudes, and appreciations towards health professionals and recommended practices during the heart intervention process. All interviews were transcribed verbatim by members of the research team and by a professional transcriber. Each participant was given a pseudonym in order to respect anonymity. The transcriptions were then imported in the QSR NVivo 8 qualitative data analysis software where each interview was read and thematically analyzed in its entirety. A table composed of 29 attributes was created for each participant. This provided valuable data on the sample and enabled a more thorough analysis of the links between socio-demographic characteristics and lifestyles. Then, a vertical analysis allowed the identification of important themes from each interview that were consistent with Pierre Bourdieu's socio-cultural theory.

Social capital was one of the most prominent themes in the sixty interviews. The secondary thematic analysis consisted of dividing the social capital themes into other concepts (social cohesion, trust and social support) as proposed by Hyyppä (2010). For instance, the concepts of social cohesion included three principal themes : sense of belonging, homogeneity, collective efficacy; social support included five themes : family life, reliability, socialization, moral support and isolation; and trust included five principal themes sense of security, community, confidence in others' willingness to help, suspicion, vertical trust, and inclination to follow medical advice. Sections of the transcription specific to a theme were coded, included in the node of the specific concept (e.g. a section of sense of belonging coded in the node social cohesion) and translated in order to preserve meaning intended by participants. Once the vertical analysis was completed, a horizontal analysis was performed in order to compare and contrast the two socioeconomic groups.

## Results

### Participant characteristics

Table 1 exposes the large discrepancies in lifestyles between groups of participants. Most participants from the underprivileged group had lifestyles which did not correspond to normative behaviours in public health. In fact, 48% (15/31) of participants have a history of drug abuse, 77% (24/31) have smoked tobacco on a regular basis, and 58% (18/31) have a sedentary behaviour. Most did not have a high school diploma (25% of participants), and are either dependent on social services or work in a non-specialized trade (construction, transportation, cleaning, manufacturing, or low level administration). Participants from this group have also suffered much more from unfavourable life experiences such as childhood abuse (35%), have

suffered from physical abuse in their present environment (71%) and have a history of imprisonment (42%). They have little to no social contact with family members (45%), are single (48%) or divorced (29%). In contrast, men from the upper and middle classes use little to no tobacco (41%), alcohol addiction (3%) or have a history of drug abuse. Few have described unfavourable life experiences such as childhood abuse (6%), violence in their environment (38%), or a history of imprisonment (3%). They frequently visit health professionals (79%), take prescribed medication for their heart condition (90%), are married (80%), have children (97%), and have stronger family ties and are in frequent contact with them (97%).

**[Insert Table 1 here]**

**Social variation in cardiac rehabilitation**

Results are divided in three sections linked to social capital (social cohesion, trust, and social support), which show the lifestyle differences between two socioeconomics groups in the context of heart disease and cardiac rehabilitation. A summary of major themes is presented in Table 2.

**[Insert Table 2]**

**Social cohesion: similarity and familiarity of environment**

Social cohesion is defined as the degree in which participants feel a sense of belonging and similarity with others (Baum et al., 2009; Putnam, 2000; Wilkinson, 1996). As stated by Kawachi (2013), 'social cohesion tends to emphasize social capital as a group attribute and to analyze it as a contextual influence on individual health'(p.207). It refers to a sense of belonging that provides emotional social support and abilities to cope with illness (Scheffler et al., 2008). In this respect, the analysis showed clear differences in the level and type of cohesion experienced

in cardiac rehabilitation programs between both socioeconomic groups (see Table 2). The interviews show that middle and middle class conditions are more favourable to experiences of solidarity and social belonging within the health care setting and cardiac rehabilitation programs in comparison to underprivileged circumstances: 'They [specialists from cardiac rehabilitation program]were sympathetic. We had lots of fun... and made jokes' (Albert, 70, retired insurance broker). Participants from the middle classes were more likely to participate and to share values and strategies to sustain a health regimen promoted by health care institutions (balanced diet and active lifestyle, regular medical follow-ups), be interested in educational component of the CRP , and actively participate in changing lifestyles: 'The program was very interesting. They explained good and bad cholesterol. You know, last week, I was just reading an article on eggs and HDL' (Benoit, 49, firefighter]. Cardiac rehabilitation is encouraged through mutual learning, connectedness and group homogeneity (Clark et al. 2005). This bounded solidarity (Coleman, 1988) observed in the middle classes testified to their sense of mutual recognition derived from shared personal experiences with cardiovascular disease: 'The program was interesting. We meet lots of people. We described our first heart attack and how it all happened. Everyone explained how it started. It was good ... You realize that you're not alone" (Donald, 68, retired mechanic); 'They [other members of the CRP] experienced the same thing. They had the same problems as I had' (Connor, 53, retired civil servant). Expressions of self-identification were linked to receptiveness on various health strategies. Shane was a participant with a long history of a genetic heart problem who found enjoyment in sharing his strategies for improving his lifestyle: 'Only men were in the program ... I loved it! I would say "look at me!" I think I was a motivator for others of the group (Shane, 57, civil servant).

The experiences of social cohesion were very different for the underprivileged group as they experienced what Boltanski (1971) described as a 'cultural distance' from the medical institution. This detachment was most evident in the discussions on group deliberations and therapy linked to health and cardiac rehabilitation. They indicated a 'paradox of social cohesion' that often dissuaded underprivileged men from participating or being actively involved in these services. First, they either felt 'out of place' because of the socioeconomic discrepancies with other more mainstream attendees of the CRP. A number of them expressed a weak sense of belonging in cardiac rehabilitation programs, which was not optimal to prompt an active participation. Non-participation or withdrawal from the program was stimulated by feelings of incompatibility with health care environments and prescriptions in a cardiac rehabilitation setting. Some expressed feelings of shame, status anxiety, and fear of negative judgments during these public group sessions. 'I felt different from the others...I was with five or six people... This person tells me that they've had three heart attacks, the other one says the same thing...I didn't get any of that stuff...For me, I'm not even sure why I'm here' (Claude, 52, part-time taxi driver). Second, they also felt that they were at the 'wrong place' with respect to alternative public health information groups, prescribed for marginalized populations, because they apprehended falling back into their old habits. 'I don't go in AA or NA meetings because I see people who consume drugs. If I see someone who consumes, it really bothers me' (Danny, 37, unemployed). A number of participants expressed their apprehension and uneasiness of rubbing shoulders with old acquaintances and towards the homely atmosphere of such local support groups (addiction centers), proposed by health care professionals in order to complement traditional cardiac rehabilitation programs. Since these programs have been adapted for marginalized populations, many fear a regression in their health and lifestyles from revisiting familiar social circles. In a

discussion about these groups, Jay, a 34 years old dependant on social services and former narcotic addict, explains this need to take distance from his social environment: 'I don't go out with a gang of people for coffee somewhere. I can't because I can fall right back to where I was'.

**Trust: confidence, suspicion, and scepticism of advice**

The notions of horizontal trust (trust in others) and vertical trust (trust in institutions) also provide a better understanding of the impact of social networks on lifestyles. In this respect, reciprocity, mutual respect, and safety were key factors to the disclosure of personal experiences within one's social environment and the confidence one has in the advice provided by health care professionals. As presented in Table 2, there are fundamental differences between groups for both types of trust.

**Horizontal trust.** Horizontal trust was a key indicator of the socioeconomic trajectories of the participants. The analysis of personal biographies supports the trend that levels of trust are lower in low-income communities (Putnam 1993). It revealed an acquired sense of distrust engendered by difficult childhood circumstances (parental unreliability and neglect, childhood abuse) and disloyal, unsupportive and tense social environments (repeated betrayals, difficult family relations, and antagonistic and unpleasant residential arrangements): 'I was rejected, and still feel that way as an adult. It left a mark… felt rejected by my mother… no affection' (Sincere, 59, unspecialized worker); 'I was raised in an environment that was completely closed [...]. I always had difficulties interacting with others' (Claude, 52, part-time taxi driver). These types of comments were often provided to explain their unwillingness to trust others (especially strangers) and their lower susceptibility to share personal feelings related to difficult personal experiences. " Personally, fewer the people…the better" (Eddy, 47 year old dependent on social

services). Conversely, a broad sense of trustworthiness was cultivated in the more affluent conditions of the middle and upper middle classes. The interview transcripts did not show conspicuous feelings of distrust. In fact, participants expressed the helpfulness of people they encounter in their community and health care settings: 'There is a sense of mutual respect [in the CRP] (Pete, 75, salesman). For them, the CRP enabled an environment of personal disclosure concerning experiences of illness and heart disease: 'I really liked it because we talked about our experiences. The others were listening to what I had to say... they even took notes' (Michel, 72 year old retired butcher)

When questioned about the characteristics of their immediate social environment, participants from the middle and upper middle classes described their community as safe and their neighbours as trustworthy and helpful: 'We are a good group of people, no gangs here... we are well. We all think alike' (Rheal, 58, technical support worker). No interviewees from this group mentioned the risk of being threatened while performing outdoor physical activities in their neighbourhood: 'I was never scared of walking' (Michel, 72, retired butcher). Similarly to what Klinenberg (2001) found with his study on the social production of isolation, outdoor activities are less frequent in underserved and underprivileged neighbourhoods (violence and stress related to suspiciousness). These environments offer poor space for safe activities such as evening walks. The following quotes express the suspiciousness of underprivileged participants and their angst of unpredictable behaviours of residents in their neighbourhood: 'There are a few gangs in my neighbourhood... I don't like it [walking at night] because they get violent' (Bigras, 53 year old dependant on social services); 'There are a lot of drugs and alcohol [in roomed housing]. They scream at each other. …it's stressful... I watch myself….you never know when

one of them will get you with a knife, or a gang behind you, or hidden in the bushes [when they are high]' (Jay, 34, unemployed)**.** '

**Vertical trust.** Vertical trust described the quality of interactions with health professionals and represented the likelihood of embodying normative health lifestyles. Generally speaking, the middle and upper middle class participants had confidence in lifestyle prescriptions and recommendations provided by health professionals, were optimistic of their positive health outcomes, and valued the compliance to prescribed lifestyle recommendations: 'My doctor said that I have to do cardio, and that is what is going to save me. So, I asked my wife to bring me to Canadian Tire or Wal-Mart and we bought a treadmill which I use every day for 30-45 minutes' (Donald, 68, retired mechanic); 'If there is anything, a cold or something, I call my doctor right away... I see him 3 to 4 times per year' (Dick, 69, retired car mechanic); 'I've had a heart condition for 25 years. The doctor looks at my report and we know exactly where I'm going' (Jean-Marc, 57, civil servant). They were socialized in an environment where health concerns require a medical consultation, are more willing to discuss and consult with a health care professional of their problems, are receptive to their recommendations, and are knowledgeable of the consequences to avoiding medical prescriptions: 'When I have a health problem, I go see my doctor, that's for sure… I want him to suggest what he would suggest for himself. Then, it's up to me to decide if I do it or not' (Connor, 53, retired civil servant).

In contrast, three related themes emerged from the interviews with the underprivileged men. First, they had low and infrequent medical follow-ups and depended mostly on walk-in emergency services for medical consultations. This infrequent contact appears to lower the quality of doctor-patient interactions. In the following quote, Maurice, a 51 year old unemployed man, expresses his difficulty of trusting his physician: 'I didn't believe him… he never explained

to me what arrhythmia was.… I continued to eat the same junk I was eating before... you don't have a follow-up, or anything. It's rare when one will take the time and talk to you and educate you'. Clark (2001) emphasizes the importance of understanding patients' beliefs and perceptions on health and their heart condition in order to provide appropriate recommendations and increase the likelihood of lifestyle changes. Low vertical trust was also connected to scepticism of professional advice doubtfulness of its health outcome. Hence, without circumstantial understanding of their condition, the cultural distance separating patient and health professionals and the perceived abrasive relationships, make it more difficult to feel confident about the information provided and the health benefits following prescribed lifestyles. In this respect, Claude, a 52 year old part time taxi driver, expresses his frustration with his physician; the latter being very removed by the social circumstances of his patient:

> They relate everything back to cigarette. I was telling them that they were doing a mistake. I explained to them that I just got out of prison; it's been two weeks since I slept properly. Since I have had fresh air. That's what caused it, not cigarette […] He gave me a prescription and I never filled it.

A lack of vertical trust is also reflected in the wariness of the opinion of health care professionals and in the participants' low disclosure of risk-oriented behaviours and symptoms of disease. They are more likely to be impervious to discourse of health professionals, downplay symptoms of disease, and least likely to seek medical attention and downplay symptoms of the disease (Richards et al., 2002; Vaananen et al., 2009). As described by Jack, 'For me, you see the doctor because you have pain…. It could also be because of the way I was brought up. During my childhood, we would rarely see the doctor. It was my mom that would take care of us. For example, I fell down a tree and I had a branch in my leg and my mom took it out, put a bandage

on it and sent me back outside to play' (49, mover). This sense of distrust is also seen in the indifference toward health care professionals because they are not perceived as a solution to their problem.

**Social support: reliability and quality of social networks**

This study also shows the impact of socioeconomic conditions on the quality of their social networks and social support. Many studies have identified the positive link between social support and health, that is, as a means of motivation to adopt a healthy lifestyle, participating in rehabilitation programs, or acting as a buffer against the negative effects of stress on the body (Henningway et al., 2001; McNeil et al., 2006; Poortinga, 2006). As seen in Table 2, the social networks in which participants' rely on for support differ significantly between the two groups. Participants from the socially and materially deprived group find security in their self-reliance and autonomy, and are exposed to low quality social support. On the other hand, participants from the middle class group have a stronger, accessible, sustainable, and more reliable support networks from family and by their social environment.

The analysis of the data also implies the necessity of distinguishing between short and long term social support. Short-term support is provided during emergency care and immediate post-operative recovery. This form of support is described as motivational, morally supportive, and encouraging and is provided through actions undertook by friends, family, and employers in order to improve their health. In this respect, the networks of middle class participants were more accessible and reliable during emergency care. It was applied mostly to home based post-operative rest and institutional support (financial & human resources, time) through the supportive procedures in easily obtaining sick-leave from their employer. Middle class

participants often identify the usefulness and gratitude of help and moral support after their discharge from hospital from a heart intervention: 'My wife, my kids, they all came to visit me, my brothers too… it feels good... My wife picked me up at the hospital and took care of me' (Dick, 69, retired mechanic).Some have repeated that members of their family had travelled long distances to be present during their hospital stay: 'My wife and daughter arrived in Montreal at midnight [from Gatineau]. The next morning, they came to the hospital as early as they could… it was pretty rough. I had no strength. I looked at her [wife] and all I could do was cry. I wasn't able to anymore… I was scared' (Donald, 68, retired mechanic). George, an 84 year old woodcutter, explains:

> My wife called the kids. They didn't tell us, but they came [from Gatineau to Florida]. My son and son-in-law flew down then went back with my car…the whole family, about twenty of them were waiting for me at the airport in Ottawa. There were three cars full of people… It warmed the heart… it reassured me.

Similarly, Benoit, a 49 year old firefighter, had both important moral support from his social network and institutional support from his employer who allocated him four months of sick leave in order for him to get back on his feet:

> My oldest daughter stayed with us.... My parents came to visit, my sisters, my friends also... I had to tell my wife to limit the amount of visitors... I told my wife to let my friends know that I will see them over there [vacation spot near the ocean] [...] It happened in July and I was off until November. I had a medical certificate, so I wasn't allowed to go back to work until then. My doctor wanted me to redo a stress test before going back to work.

Such examples of support after a cardiac event were much scarcer in the underprivileged group. Since most of them were single and had limited social ties with family members, friends were often their only for of support during periods of hardship. Additionally, the quality of support was also significant in post-operative rehabilitation. Although the support was well intended, it often encouraged unhealthy behaviours. For example, John appreciated the support of a close friend during his stay in hospital: 'He was like a brother to me. He brought me a walk man, chips, candy with no sugar, flowers… McDonalds… I asked him for a chocolate shake… he brought me two Big Macs, a fry, plus a large chocolate shake' (46, unemployed). A number of participants from this group were socially isolated leaving them with no respite from their physiological and psychological conditions. In the following quote, Jean-Charles, describes his feelings of disappointment in his wife after coming home from his heart intervention: 'I got home, I open the door and she was folding clothes. What are you doing here? she asked... That's welcoming! I come back from the dead and all she has to say is what you are doing here!' (53, part-time delivery man). For Sam, no visitors were present 'No one, zero...It was like a second prison' (Sam, 42, unemployed). Max's (44 year old ex-tower) short term support consisted of his boss who picked him up from the hospital to work: 'I went back to towing two or three hours after I was discharged from hospital [...] My boss had no idea. I called him and he picked me up... no questions asked'. Similar to others from the social and material deprivation group, he didn't have financial support or leave of absence from his job.

Long-term support refers to the supportive networks that play a role in sustaining healthy lifestyles. Here again, weaker levels of long-term support are consistent with lower socioeconomic position: 'I quit for three weeks. I was proud … not one cigarette...I ran out of patches...The boys did it on purpose. We were four in the truck and they all smoked a cigarette.

Just smelling it, I wanted on too' (Alfred, 39, unemployed). Low quality support was also discussed with respect to changing unhealthy behaviours (tobacco smoking and drug addictions). Most of these men are single and often reside in environments characterized by anti-normative behaviours: 'The environment is more, "smoke your weed and stay quiet" ... Crack however is the worst drug … the worse of the worst … they smoke it together and go on their high and becomes very very rough' (Claude, 52, part-time taxi driver).

With respect to the positive effect of companionship, Lochner and colleagues (2005) found that marriage increases the likelihood of healthy eating, encouraging the preparation of full meals and that unmarried people are more likely to skip meals and have more financial barriers to purchasing sufficient healthy foods. Lane and colleagues (2005) exposed the importance of a partner on participation in a cardiac rehabilitation program and found that out of 108 attendees who were interviewed six days post-surgery, only ten indicated that they lived alone, whereas 85% of partnered individuals participated in at least one session of a cardiac rehabilitation program. It is much more difficult to follow a healthy regimen without a partner: When I was single, I would often eat restaurant food for dinner… always alone… you're not motivated to cook alone [....] If I were still single, I wouldn't have participated in the [cardiac rehabilitation] program (Jack, 49, mover).

Participants from the middle class group had a sustainable and were much more likely to have quality social support networks enabling healthy lifestyle. They encouraged participation and adherence in cardiac rehabilitation: 'My friend and I decided together, that we were changing our eating habits... at lunch, we would eat quickly, then walk around the mall' (Frankie, 49, civil servant). Many participants have described the significant role their partner has played in during the CRP. As indicated by Nate: 'For my wife, it was dramatic! She said that

she was going to take care of me ... she spent hours at the grocery store and checked all of the ingredients making sure there wasn't too much salt' (65, retired civil servant). A high social position also involves more control over social networks. In the following quote, an upper management officer describes the qualities his wife had to have in his second marriage:

> My wife read [the documents of the CRP] ... because she also cooks. She must also be sensitive to my illness ... She loves me, then she should support me. Because I've constantly told my wife: "If you make me meals that are high in fat ... it's because you don't love me". Or you know, she does not me love very much ... I told her "do you want to increase my discomfort? If I constantly eat fat, if I constantly eat fatty meats, if I constantly eat desserts that are fattening, well then you do not love me!" … It was clear in our relationship that this was important (Jean-Marc, 57, senior official).

## Conclusion

The concept of social capital has been defined by many schools of thought and has been successfully applied to varying domains of research including health, occupation, and education. By drawing on Pierre Bourdieu's sociocultural theory, this study attempted to bring conceptual focus in order to understand heart-healthy lifestyles. Although not implicitly included in his theory, social cohesion, social support, and trust have assisted in the analysis of the volume and quality of participants' social capital. The use of these concepts allowed a more refined understanding of the health inequalities and variation of lifestyle changes after a heart intervention. This approach to social capital highlights the importance of social determinants of health, and both a macro and micro perspectives in order to grasp distinctive social practices of socioeconomic groups. The analysis of men's biographies shows how life experiences are

embodied from childhood onwards, fashion ones' concerns for health and orient lifestyles. Although agency remains a key factor in choice of lifestyles, social position and corresponding social networks also have determining impacts on their lifestyles. This class-based analysis on Pierre Bourdieu's social capital theory is consistent with previous findings on the bodily habitus (the volume and structure of capital orients ones' bodily dispositions and health related lifestyles) and support the use of his theory on the effects of social capital on lifestyles.

Bourdieu's approach to social capital has been critiqued for its operationalizing difficulties, making it arduous to apply in the context of empirical research studies. For example, Hyyppä (2010) relied on other approaches (e.g. Putnam) and concepts (social cohesion, trust, social support) in his analysis of lifestyles. However, researchers have suggested that Bourdieu's added value lies in its emphasis on social position and material living conditions (Baum et al., 2009; Carpiano, 2006; Giordano & Lindstrom, 2010; Pierce, 2003; Pixten & Lievens, 2014; and Siisianen, 2000). This study supports such claims. Because it was part of a larger research project, results testifies to the close connections between social, economic and cultural capital, and how they are encompassed within the Bourdieu's notion of social position.

The lifestyles disparities observed in the data are explained by three crucial concepts. First, findings show that social cohesion has a significant impact on participants' adherence in a CRP. Similar to Clark and colleagues (2005), the level of homogeneity within a group increases one's willingness to continue a rehabilitation program. The bounded solidarity and sense of sameness felt by members of a group encourage participation and adherence to healthy lifestyles and the completion of the program. Second, the quality of trust was also identified as a key factor. On one hand, horizontal trust, has fashioned the inclination to actively participate in a rehabilitation program. It also deepened the analysis of feelings of reciprocity and mutual respect

and how middle class participants are receptive of public health discourse. On the other hand, vertical trust indicated one's susceptibility to integrate normative health principles and follow health prescriptions provided by health practitioners. Third, findings show that the quality of support provided by one's social network has an impact on lifestyle changes. Similar to findings of Lochner (et al., 2005), Poortinga (2006), and McNeil (et al., 2006), participants with social support (married, children, close friends) were more likely to adhere to healthy lifestyles such as eating healthy and physical activity. The quality of support affects the extent of change of lifestyles after a cardiac intervention, where difficult living circumstances generated little support and encouraged anti-normative behaviours.

From an applied standpoint, this research provides additional information for public health policies, especially with respect to the optimisation of small-scaled health organizations such as local cardiac rehabilitation programs. Cardiac rehabilitation programs could clearly benefit from the inclusion of socioeconomic factors within their control, i.e., establishing means to promote social cohesion by providing individual meetings or smaller groups that provide a more welcoming environment for specific groups of the population. Additionally, personalised group discussions should be centered on the needs of specific groups (the inclusion of drugs and alcohol addictions), the influence of 'unhealthy' social environments, and the employees' rights and compensation associated to cardiac rehabilitation. Because of the multiple health services linked to cardiac rehabilitation and the obstacles faced by many underprivileged men, patients would also benefit from a 'one-stop shop' approach or 'single sign in' policy which could optimise success of adherence to health care services in the initial and later phases of cardiac rehabilitation.

Further studies would allow for a better understanding of how socioeconomic conditions shape the quality of social capital and its impact on lifestyles after a heart intervention. A study in which men and women from varying socioeconomic conditions participate would include the impact of gender in addition to these factors on lifestyles. This would also help understand the large disparity in life expectancy between men and women from contrasting quintiles of income. In addition, the inclusion of five socioeconomic groups in the analysis would allow for a better understanding of the impact of social and material conditions on the quality of social capital.

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[i] The Québec atlas of social and material deprivation maps out the socioeconomic status of neighbourhoods by using census statistics on social and material deprivation.

[ii] Independent = ability to do all of the daily activities such as dressing, feeding and cleaning and require less than 1 hour of assistance per day

[iii] Centre de santé et de services sociaux de Gatineau – Cardiac rehabilitation program helps individuals with education and modification of risk factors to CVD with psychosocial support and a multidisciplinary team consisted of: a cardiologist, nurse, dietician, physiotherapist, occupational therapist, pharmacist, clinic coordinator, psychologist and a social worker (http://publications.msss.gouv.qc.ca/acrobat/f/documentation/2010/10-906-01.pdf)

[iv] suffered from a cardiac event in the last ten years and have participated to at least one session of rehabilitation

[v] Security measures were put into place for interviews that were conducted in the participants' home. These measures included a call or physical appearance from another member of the research team.

[vi] chosen by the interviewee at the beginning of the interview

[vii] Casebook allows the researcher to compare groups of individuals according to certain traits, e.g, social class and smoking.

[viii] Dumas & Bournival, 2011; Savage, Dumas & Stewart, 2013; Bergeron, Dumas & Savage, 2013; Dumas & Gagnon, 2013

[ix] Independent = ability to do all of the daily activities such as dressing, feeding and cleaning and require less than 1 hour of assistance per day

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Table 1. Comparison of attributes of participants from contrasting socioeconomic groups

| **Attributes** | **Social and material deprivation group (n=31)** | **Middle class group (n=29)** |
|---|---|---|
| Age | | |
| 25-39 | 5 | 0 |
| 40-49 | 9 | 2 |
| 50-59 | 10 | 8 |
| 60 + | 7 | 19 |
| Education | | |
| No high school diploma | 22 | 7 |
| High school diploma | 9 | 8 |
| College or University degree | 0 | 13 |
| Cigarette smoking | 24 | 12 |
| History of drug and alcohol abuse | 15 | 0 |
| History of imprisonment | 13 | 1 |
| Medication Intake | 20 | 26 |
| Sedentary behaviour | 18 | 17 |
| Full participation in a cardiac rehabilitation program | | 27 |
| Follow-up with health professionals | 17 | 26 |
| Experiences of childhood abuse | 11 | 2 |
| Violence in environment | 22 | 11 |
| Children | 23 | 28 |
| Proximity to family | 14 | 28 |
| Marital status | | |
| Single (never married) | 15 | 2 |
| Divorced | 9 | 4 |
| In relationship | 7 | 23 |
| Orphanage | 6 | 4 |
| Social Housing | 10 | 0 |

Table 2. Summary of results. Social capital as a key explanation for the social variation of cardiac rehabilitation practices. Major themes reported in in-depth interviews with sixty men from two contrasting socioeconomic groups and suffering from heart diseases.

| Social capital | Social and material deprived classes | Upper and middle classes |
|---|---|---|
| **Social cohesion** | • Experience a cultural distance with health institutions and CRP (feeling out of place) and weak sense of belonging during public group session on CRP: Status anxiety, fear of being shamed or negatively judged due to socioeconomic discrepancies and history of heart disease (causes, treatment, and experience).<br>• Experience apprehension and uneasiness within recommended support groups (Alcohol/Narcotics Anonymous) adapted for marginalised populations (feeling at the wrong place). Fear of regression and falling back into unhealthy, anti-social/normative behaviours. | • Experience solidarity (bounded solidarity), sense of belonging and feelings of acceptance within a medical setting and public group sessions on CR. Share similar values promoted by health care institutions (shared values and concerns with respect to cardiovascular health).<br>• Self identify with other participants from mutual recognition of shared experiences in public group sessions on CR. Receptive to learning health-improving strategies from other members and responsive to mutual help. |
| **Trust** | • Generalized feeling of distrust (acquired from difficult life experiences such as parental unreliability and neglect, childhood abuse, repeated betrayals, antagonistic and unpleasant residential arrangement/rooming environment).<br>• Suspicious of other members of their community (feeling of insecurity and unpredictability within their immediate environment). Poorly inclined to adopt safe outdoor physical activities (e.g. walking)<br>• Low frequency and inconsistent medical follow-ups reduce the quality of interactions with physicians; Sceptical towards authority and advice of health care professionals (prescriptions and recommendations) and doubtful of their positive impact on cardiovascular health; Low disclosure of | • Broad sense of trustworthiness (no conspicuous feeling of distrust). Disclosure of oneself and confidence in the helpfulness of others in a health care setting (mutual respect, optimist, and hopefulness)<br>• Reside in safe neighbourhoods and have trustful of members of their community. Do not feel threatened by outdoor leisure physical activity (e.g. walking, running) through feelings (evening walks/ jogging, park activities).<br>• Confidence in lifestyle prescriptions and recommendations provided by health professionals and optimistic of their positive health outcomes. |

| | | |
|---|---|---|
| | their risk-oriented lifestyle because of their wariness of the opinion of health care professionals. | |
| **Social support** | • Acquired sense of self-reliance and autonomy due to their history of unreliable physical, social, moral, and economical support within their environment.<br>• Weak social support systems linked to emergency care of CVD (short term support) (high level of socially isolation and low moral support provided by friends and family). Little support from employers.<br>• Low quality social support with respect to health improvement (long term support). Presence of unhealthy forms of social support (e.g. moral support provided by friends though unhealthy practices – alcohol and drug consumption). | • Strong social support systems and confidence in the reliability and sustainability of people within their social networks.<br>• Accessible and reliable emergency/short-term care and support (home based quality post-operatory rest, persistent encouragement and esteem received from friends and family, access to institutional support (financial & human resources, time) from their employer; supportive procedures in obtaining sick-leave)<br>• Sustainable and quality social support networks enabling/facilitating healthy lifestyles and lifestyle change (long term support). |

# Chapter VI - Conclusion

The notion of social gradient in health has been extensively used in order to highlight social variation in mortality and morbidity in economically advanced societies (Marmot, 2004). Significant gender and income difference in mortality and morbidity rates in heart diseases constitute some of the most revealing examples of health inequalities (Pampalon, 2008). Previous studies have shown that promotion of heart healthy lifestyles and the development of cardiac rehabilitation programs were provided as a medical and educational solution to prevent, manage, and lower risks of developing further heart-related complications, yet dropout rates are high and participation rates are as low as 37% for eligible individuals (Heart and Stroke Foundation of Canada, 2013). Many key factors, such as income, education, and characteristics linked to social capital were found to have an impact on low participation rates in cardiac rehabilitation programs (Worcester et al., 2004).

This study included two groups of men from varying social and material deprivation levels (socially and economically deprived, and middles classes). Despite the universal health care system and detailed measures of health surveillance, socioeconomic disparities remain highly present and are increasing due to a growing socioeconomic gap (Courteau, Marleau & Garvie, 2014). This thesis is part of a larger study aiming to understand the social variation of lifestyles after a cardiac event requiring hospitalization in the context of cardiac rehabilitation. Thus far, a number of related studies on the larger project have been published, showing clear lifestyle disparities between socioeconomic groups of men. Although socioeconomic conditions and masculinity were found to have an impact on the lifestyles of participants after heart surgery, this study drew on the notion of social capital in order to include a new perspective and provide a

more complete understanding of the social variation of cardiovascular health and lifestyle inequalities.

Pierre Bourdieu (1986) defines social capital as a 'possession of a durable network of more or less institutionalized relationships of mutual acquaintances and recognition' (p.248). Although Bourdieu's approach to social capital has been critiqued for its operationalizing difficulties, making it arduous to apply in the context of empirical research studies, his focus on the quality of resources linked to social networks, and the strength of his wider theory of practices, brings attention to the social and material conditions (Carpiano, 2007; Moore et al., 2005). Many authors have refined the theory of social capital into concepts of social cohesion, trust, and social support in order to provide a more detailed picture of social networks and the resources they provided. Globally, these concepts were central to the analysis and enabled the investigation of: sense of belonging, group homogeneity, self-identification, collective efficacy, family life, reliability, moral social support, isolation, sense of security, confidence in others' willingness to help, suspicion of others, reciprocity, and inclination to follow advice. Consistent with Bourdieu's approach, results show that social circumstances within middle and upper class conditions provide a more favourable social setting within the health care environment, and supportive and trustworthy social networks that tend to encourage the adoption of normative lifestyles, whereas material and social deprivation conditions foster little support, more suspiciousness, and unhealthy environments with regards to cardiovascular health. Hence, this sociocultural analysis of men's' biographies strongly support the idea that health lifestyles are not only the outcome of one's' rational choosing, but also the results of socially acquired dispositions and opportunities engendered by material, family, and social circumstances.

**Recommendations**

The results of this study allow a further understanding of the social variations of lifestyles and the importance of social settings and networks on heart healthy lifestyles after treatment for a heart disease. This type of information can assist in the development of more efficient programs on health promotion. First, health care providers should consider participants' sense of belonging in public health information sessions on cardiac rehabilitation. Similar to what Clark and colleagues (2005) found, the level of homogeneity with others of the group increases one's willingness to continue the program. The similarity of group social background, recognition received from common life experiences, and support provided from members of the group assist participants in completing the program and adopting normative lifestyle changes. Second, consider one-on-one sessions for those who have had difficult past life experiences. Because their distrust and suspicion of others, they are unwilling to share personal experiences in a group environment, therefore limiting the benefits of group sessions. Third, group discussions should be centered to the needs of those specific groups, e.g. the inclusion of drugs and alcohol and how to control its use in an environment where it is constantly present for groups of individuals that have had issues with these behaviours. Fourth, strongly suggest medical follow-ups with participants who have participated in the program. Many participants from the study have suggested that medical follow-ups once the program had ended would further encourage them to adhere to their new lifestyles. Lastly, providing additional social support (moral and financial) to those who feel isolated could assist individuals to adhere to heart-healthy lifestyles. Similar to findings of Lochner (et al., 2005), Poortinga (2006), and McNeil (et al., 2006), isolated individuals must overcome certain financial and motivational barriers to healthy lifetyles.

**Limitations**

This study consists of a secondary analysis of the entire data set of the larger research project. Hence, research assistants conducted participant recruitment, interviews and interview transcriptions. Although all interviews were individually coded for social capital and interviewees were classified using 29 nominal variables, the analysis may have been lacked some contextual factors. Experiencing the interviews would certainly have provided additional meaning on the social networks and cardiac rehabilitation practices. The fact that most interviews were professionally coded and audio material was still available for consultation increased familiarization and depth during the thematic analysis. Furthermore, the construction of the two groups is also subject to debate. Initially, participants were recruited in four socio-economic classes. The decision to regroup participants in two groups eased the comparison in many respects, but may have occulted intra-class differences. There were for example, differences between men with low income and who were unemployed. The results should thus be seen as major trends between the two groups. I further analysis could highlight class fractions and determine other conditions detrimental to health.

Further studies would allow a deeper understanding of how socioeconomic conditions shape the quality of social capital and its impact on lifestyles after a heart intervention. The relationship between poverty, masculinity and masculine forms of self-reliance (autonomy and toughness) is shown to weaken help-seeking behaviours, would allow a further understanding of the relationship between health and social support. This would also help further develop notions of horizontal and vertical trust in this respect. Additionally, a comparative study including men and women from varying socioeconomic conditions would also enable a better understanding of the

specific impact of gender on lifestyles, and explain the large health disparities observed in social epidemiology.

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# Annexes

## Annexe 1 : Letter of recruitment

**Étude sur les hommes ayant subi un incident cardiaque**

Bonjour Monsieur,

Je suis professeur à l'Université d'Ottawa et je mène présentement une étude sur la santé des hommes de l'Outaouais.

Votre nom a été sélectionné à partir d'une liste de personnes ayant suivi le Programme de réadaptation cardiaque du Centre de santé et des services sociaux de Gatineau (CSSSG).

Comme vous le savez peut-être, l'Outaouais détient un des taux de maladies cardiovasculaires les plus élevés au Québec. Nous croyons que vous pouvez nous aider à comprendre pourquoi la santé des hommes est moins bonne qu'ailleurs.

Je suis à la recherche d'individus voulant se prêter à une entrevue de 90 minutes pour discuter de leur santé et de leur qualité de vie après avoir subi un incident cardiaque.

Chaque participant recevra $30 pour sa compensation.

Soyez assuré qu'advenant votre refus de participer à l'étude, aucun suivi quel que ce soit ne sera entrepris après la réception de cette lettre.

Pour plus d'information, veuillez me contacter au XXX-XXXX poste XXXX ou m'écrire par courriel au: XXXXXX

Dans l'espoir de vous rencontrer pour une entrevue, je vous prie d'agréer l'expression de mes salutations distinguées.

## Annexe 2: Letter of anonymity and confidentiality

Monsieur,

Cette étude universitaire a été subventionnée par le Conseil de recherche en sciences humaines du Canada. Les résultats seront analysés et publiés dans des revues scientifiques et contribueront à avancer les connaissances dans le domaine de la santé cardiaque.

Nous devons réaliser plusieurs entrevues pour répondre aux objectifs de la recherche. Notez que chaque entrevue sera dirigée et analysée par un chercheur/étudiant dans le domaine de la santé publique, et se fera avec une seule personne à la fois dans un endroit déterminé par l'interviewé.

Celui-ci a l'assurance que son anonymat sera protégé et que sa conversation demeurera confidentielle.

Votre nom a été sélectionné à partir d'une liste de personnes ayant suivi le Programme de réadaptation cardiaque du Centre de santé et des services sociaux de Gatineau (CSSSG). Cette liste a été produite selon les règles du Comité d'éthique à la recherche du CSSSG et aura été consultée uniquement par le service de réadaptation cardiaque du CSSSG.

Soyez assuré que le personnel du CSSSG n'aura aucune information sur votre acceptation ou refus de participer à l'étude et qu'aucun suivi quel que ce soit ne sera entrepris après la réception de cette lettre.

S'ils le désirent, les interviewés recevront les résultats finaux de l'étude qui englobent l'ensemble des entrevues.

Merci,

## Annexe 3 – Letter of information

Objet : Lettre d'information sur une étude sociologique en promotion de la santé en contexte de réadaptation cardiaque.

Madame, Monsieur,

Je suis Professeur à la Faculté des sciences de la santé de l'Université d'Ottawa et j'aimerais vous signaler le commencement d'une étude subventionnée par le Conseil de Recherche en Sciences Humaines du Canada. L'étude traitera des pratiques de santé des hommes en contexte de réadaptation cardiaque en Outaouais. Pour bien mener à terme cette étude, nous avons besoin de votre coopération pendant notre période de recrutement de participants de recherche.

Nous recherchons donc votre collaboration afin de nous offrir le droit d'exposer nos affiches de recrutement (voir document annexé) dans votre établissement. Pour ce faire, j'aimerais bien vous rencontrer pour vous présenter les détails de l'étude.

L'étude requiert aux participants de recherche de se présenter à une entrevue de 90 minutes traitant de leurs pratiques de santé en contexte de la réadaptation cardiaque. Notre stratégie de recrutement consiste à 1) afficher nos annonces dans certains centres de santé et plus particulièrement des centres de réadaptation cardiaque et 2) d'obtenir la collaboration d'organismes en réadaptation cardiaque pour nous suggérer des noms de participants (préalablement consultés) qui pourraient être intéressés à participer à une entrevue.

Cette enquête de type sociologique vise principalement à mieux cerner les normes et valeurs d'hommes de quartiers moins bien nantis en ce qui a trait à la façon de traiter et d'entretenir leur corps après la manifestation d'un trouble cardiaque. Elle vise également à mieux saisir les facteurs socioculturels qui peuvent inciter ces hommes à poursuivre ou non un programme de réadaptation cardiaque comme stratégies de maintien et d'amélioration de leur qualité de vie. Les résultats contribueront au développement de programmes et de politiques sociales plus efficaces en matière de promotion de la santé**.**

À noter que le projet sera assujetti aux règles du comité de déontologie en recherche de l'Université d'Ottawa et du Comité d'éthique en recherche du centre de santé et de services sociaux de Gatineau.
Dans l'espoir de vous rencontrer, je vous prie d'agréer l'expression de mes salutations distinguées.

## Annexe 4: Consent Form

L'activité physique chez les hommes en contexte
de réadaptation cardiaque

École des sciences de l'activité physique,
Faculté de sciences de la santé, Université d'Ottawa

Note: Les recherches avec des sujets humains requièrent le consentement écrit des sujets de recherche. Cette exigence ne signifie pas que le projet dont il est question comporte nécessairement un risque. En raison du respect auquel ont droit les personnes qui participent à la recherche, l'Université d'Ottawa et les organismes de subvention de la recherche ont rendu obligatoire ce type d'accord.

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Je, Monsieur _____, suis intéressé à collaborer volontairement et librement à cette recherche. L'objectif de cette recherche est d'améliorer la compréhension du rôle de l'activité physique dans la promotion de la santé chez des hommes de milieux moins bien nantis ayant subi un trouble cardiaque. Il s'agit aussi de comprendre ce qui incite ces hommes, lorsqu'ils font face à des évènements ou des éléments stresseurs, à choisir une stratégie de promotion de la santé (par exemple, la pratique de l'activité physique) ou autre stratégie pour améliorer leur santé.

Ma participation consistera essentiellement à prendre part à une entrevue individuelle d'une durée approximative d'une heure et demie, dans un lieu de mon choix et à une heure et une date que j'aurai choisie moi-même. Pendant l'entrevue, je serai invité à répondre à des questions ouvertes à propos de : (a) mon milieu socio-économique et mon environnement social; (b) les ressources matérielles et humaines qui me sont disponibles en matière de loisirs; (c) mon histoire personnelle en matière de pratique d'activités physiques; (d) mes perceptions face à l'activité physique, la prévention en matière de santé, la santé et le vieillissement; et (e) mon expérience de la maladie cardiaque.

J'accepte que mon entrevue soit enregistrée sur bande magnétique (une cassette). Mon entrevue sera retranscrite et après, je recevrai la transcription de mon entrevue. Cette transcription me sera lue ou encore, je pourrai la lire moi-même si je le désire. À ce moment, j'aurai 2 semaines pour changer ou enlever des passages de l'entrevue et corriger les erreurs de transcription s'il y a lieu.

Je m'attends à ce que la transcription corrigée de mon entrevue ne soit utilisée que pour des fins de recherche et qu'elles seront conservées pendant une période de 10 ans et selon le respect de la confidentialité. Ainsi, la cassette de mon entrevue et la transcription mon entrevue sera conservée dans un classeur barré à clé dans le bureau de recherche. La cassette de mon entrevue sera détruite à la fin du travail de recherche.

J'ai l'assurance des personnes effectuant la recherche que l'information que je partagerai avec eux restera strictement confidentielle. L'anonymat sera aussi garanti. On me demandera donc de me choisir un pseudonyme (faux nom) et c'est ce dernier qui sera utilisé pour la transcription de

mon entrevue. Si on cite des parties de mon entrevue dans la recherche, ce même faux nom sera utilisé et toute information pouvant mener à mon identification sera enlevée.

Je comprends que, étant donné que ma participation à cette recherche implique que je donne certains renseignements personnels, il est possible qu'elle crée un léger inconfort émotionnel à certains moments. J'ai reçu l'assurance des personnes effectuant la recherche que tout sera fait en vue de minimiser ce risque d'inconfort. Entre autres, je ne serai pas tenue de répondre à une ou à des questions qui m'apporteront un certain inconfort. Je peux à tout moment décider de ne pas répondre aux questions qui me sont posées, voire me retirer de l'étude. L'entrevue sera faite de façon décontractée et informelle. La personne effectuant l'entrevue utilisera un langage simple et les questions seront reformulées autrement si je ne les comprends pas bien. Il est bien clair que je suis libre de me retirer de la recherche en tout temps, avant ou pendant l'entrevue, sans encourir de préjudice sous aucune forme.

Si j'accepte de participer à la recherche, l'entrevue sera une occasion de partager mes expériences en matière de pratiques de santé et d'activités physiques en contexte de réadaptation cardiaque. À la fin de la recherche, je recevrai une copie du résumé des résultats de l'étude, résumé qui me sera lu si je le désire. Ma participation à cette recherche aidera à identifier des stratégies de promotion de la pratique de l'activité physique, stratégies dont je pourrai éventuellement bénéficier.

Il y a deux copies du formulaire de consentement, dont une que je peux garder. La personne effectuant l'entrevue m'a demandé si j'avais des questions concernant le formulaire de consentement ou la recherche et a accepté de répondre à toutes mes questions.

Chercheur(e): _____ _____

Signature Date

Sujet de recherche:

_____ _____

Signature Date

## Annexe 5 – Receipt

**Hommes, pauvreté et activités physiques en contexte de réadaptation cardiaque**

**Reçu**

Reçu de participation à une étude en science de l'activité physique de l'Université d'Ottawa.
La somme de trente dollars (30 $)

Signature :_____Date :_____

## Annexe 6 – Interview Guide

### INTRODUCTION

Est-ce que vous pouvez me parler d'où vous venez ? Votre milieu ? Votre emploi ? (Interviewé (INT) : Explorer les conditions d'existence et les trajectoires sociales)

### LA MALADIE EN TANT RUPTURE BIOGRAPHIQUE

1. Pouvez-vous me décrire le contexte dans lequel vous vous trouviez lorsque vous avez eu votre crise cardiaque (CC)
   (INT : Décrire la maladie (type et intensité) et le contexte – âge, contexte familial, lieu de résidence, intensité et convalescence)

2. Après une CC, certaines personnes vivent des ***transformations dans*** leur corps (visibles et invisibles). Avez-vous ressenti des changements comme ceux-là ? Lesquels ? Comment vivez-vous ça ?
   - Est-ce que vous ressentez encore des signaux qui vous disent que vous avez eu une CC ?

3. Est-ce qu'il y a un moment donné où vous vous êtes senti que vous n'étiez «plus comme avant» ?
   - Pouvez-vous me raconter dans quel contexte c'est arrivé, ce que vous avez ***ressenti***, fait, etc.
   - Est-ce que le monde autour de vous vous ont déjà fait sentir ça ?

4. Cette expérience vous a-t-elle transformée ? Comment ? (Vision du monde ; pratiques de santé ; émotions)
   (INT : Explorer le contexte spécifique lorsqu'on tient compte de l'âge auquel l'infarctus s'est manifesté).
5. Est-ce que vous pensez que les hommes vivent la CC différemment des femmes ?
   (INT : Explorer les effets secondaires ; sentiment de vulnérabilité, peur, dépendance)

6. Qu'est-ce que vous trouvez le plus ***difficile*** à vivre dans ce contexte ?

7. Est-ce que vous vous êtes donné des ***objectifs***, des choses à faire, à essayer, à expérimenter pour les années qui viennent ?
   (INT : Approfondir)

### LA SANTÉ

2. Est-ce que vous surveillez votre santé de près ? Ça l'a changé après la CC ?

2. Est-ce que vous écoutez votre corps pour savoir s'il y a quelque chose qui ne va pas ? Attendez-vous que votre corps vous donne des 'gros' signaux avant d'aller chez le médecin ?

3. Supposons qu'il vous arrive un petit problème de santé lié à votre condition, quels moyens allez-vous utiliser pour être mieux, pour pouvoir faire face à ce que vous vivez ?
   (INT : Identifier les moyens/stratégies (TRUCS) et **les faire prioriser)**.

4. Allez-vous souvent voir le médecin ? AVANT, est-ce que c'était pareil ? Ça vous dérange ?

5. Qu'est-ce qui a été la ou les causes de votre CC selon vous ? Développer (alimentation, sur poids, abus quelconque, stress, frustration, etc.).

6. Croyez-vous qu'on peu prévenir facilement les CC ? (explorer le de contrôle/fatalisme)

7. Qu'est-ce qui peut être fait, d'après-vous, pour **améliorer votre santé** maintenant ?
(INT : faire identifier les éléments et les faire **prioriser**). Est-ce que vous le faites ?)

**PRATIQUES D'ACTIVITÉS PHYSIQUES**

3. Qu'est-ce que vous faites comme activités physiques actuellement ?

2. Vous considériez-vous comme une personne physiquement active ; (exercice, sport, etc.) ? Prenez souvent l'auto ? Marchez-vous beaucoup ?

3. Est-ce que vous avez toujours eu les mêmes habitudes de vie (INT : Décomposer en tranches d'âge, par ex. enfance, adolescence, jeune adulte, avant mariage et après, le cas échéant, avant et après enfants, le cas échéant),

4. Précisions sur les A.P. pratiquées (en tenant compte des ***saisons*** :
   - avec qui, groupe ou individuel ; fréquence, + ou – régulier
   - à l'intérieur d'un prog. De réadaptation ; lieu ; $
   - la(les)quelles **préférez-vous** ?
   (INT : APPROFONDIR : les ***profits*** escomptés ? ***Internes*** ou ***externes*** au corps ?)

6. APPROFONDIR la question au max, notamment pour voir dans quelle mesure l'activité physique rejoint des stratégies de réadaptation cardiaque
   - **sélection** : cherche à faire converger ses capacités et ses intérêts
   - **compensation** : trouve des moyens pour compenser pour ses incapacités et faire ce qu'elle veut ou aime
   - **optimisation** : met à profit ses ressources internes et externes comme moyen d'actualisation de son potentiel.

7. Qu'est-ce qui fait que c'est facile/difficile pour vous de faire de l'activité physique ?
   - Si quelqu'un organisait un club d'entraînement ici, est-ce que ça vous tenterait «d'embarquer» (explorer l'intérêt pour les clubs de marche) ?
   - Est-ce qu'il y a des choses qui vous empêchent de faire certaines activités physiques/**d'en faire plus souven**t ? (Dans le contexte de la réadaptation cardiaque)

8. Pensez-vous qu'il y a des risques associés à faire de l'activité physique après une maladie cardiaque.

**Perception des ressources matérielles et humaines en matière d'A.P.**

4. Savez-vous s'il y a des endroits où vous pouvez faire de l'activité physique près d'ici ?
   Vérifier le ***degré d'intérêt*** et la ***facilité d'accès*** (distance, prix, partenaires, horaire particulier, jour ou soir) ;
   - Est-ce qu'il y a des activités que vous aimeriez faire et qui ne sont pas offertes près d'ici ?
   - Est-ce que ça vous fait peur d'en faire là bas ? Vérifier sa perception des compétences en matière de supervision pour populations cardiaques des activités offertes.

2. Avez-vous déjà participé à des cours de réadaptation cardiaque ?
   - êtes-vous satisfaite de ce programme (Explorer l'environnement des programmes)
   - environnement
   - information distribuée
   - intervenants ; le cas échéant. Par ex. Aimez-vous la présence d'un instructeur ou une instructrice ? Comment aimez-vous qu'il/elle soit ?
   - modalités (format, intensité, etc.)
   - installations (e.g. piscines, vestiaires, douches fermées ou non)

3. Qu'est-ce que vous conseilleriez à des responsables de programmes de réadaptation cardiaque pour inciter les hommes à prendre mieux soins de leur santé (AP et alimentation) ?

**PRATIQUES D'ACTIVITÉS PHYSIQUES/ALIMENTAIRES/SOINS DE SANTÉ**

**Perception des ressources matérielles et humaines en matière d'alimentation**

5. Où sont les endroits où vous pouvez faire votre épicerie près d'ici ?
   Vérifier le ***degré d'appréciation*** et la ***facilité d'accès*** (distance, prix, qualité).

2. Est-ce que votre alimentation a changé au fil des années ? Et après l'infarctus ?

3. Est-ce que vous évitez des aliments que vous aviez consommés dans le passé. Pourquoi ? Comment les percevez-vous maintenant (gras trans, gras, alcool, cigarette)

4. Dans quelle mesure les pratiques alimentaires s'inscrivent dans une stratégie pour améliorer leur santé
   - **sélection** : cherche à faire converger ses capacités et ses intérêts
   - **compensation** : trouve des moyens pour les aliments prohibés pour les cardiaques
   - **optimisation** : met à profit ses ressources internes et externes comme moyen d'actualisation de son potentiel.

5. Où prenez-vous vos informations sur l'alimentation (livre, médias, médecins, professionnels de santé, etc.)

6. Quelle importance prennent les médicaments dans votre vie depuis la CC ?

7. Est-ce que ça vous dérange d'en consommer ? Pourquoi ?

**CONCLUSION**

Si vous aviez des ***conseils*** à donner à des jeunes pour « bien vivre en santé » qu'est-ce que vous leur conseilleriez

**Annexe 7: Ethics approval**
**Université d'Ottawa**

Numéro de dossier: H04-13-15 Date (mm/jj/aaaa): 05/02/2013

Université d'Ottawa
Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

## Certificat d'approbation déontologique

### CÉR Sciences et science de la santé

**Chercheur principal / Superviseur / Co-chercheur(s) / Étudiant(s)**

| Prénom | Nom de famille | Affiliation | Rôle |
|---|---|---|---|
| Alexandre | Dumas | Sciences de la santé / Activité physique | Superviseur |
| Julie | Diotte | Sciences de la santé / Activité physique | Étudiant-chercheur |

**Numéro du dossier:** H04-13-15

**Type du projet:** Thèse de maîtrise

**Titre:** Hommes, pauvreté et activités physiques en contexte de réadaptation cardiaque

| Date d'approbation (mm/jj/aaaa) | Date d'expiration (mm/jj/aaaa) | Approbation |
|---|---|---|
| 05/02/2013 | 05/01/2014 | Ia |

**(Ia: Approbation complète, Ib: Autorisation préliminaire de libération de fonds de recherche)**

**Conditions Spéciales / Commentaires:**
N/A

## Annexe 8: Participant Identification Sheet

**PROJET HOMMES, PAUVRETÉ ET ACTIVITÉS PHYSIQUES EN CONTEXTE DE RÉADAPTATION CARDIQUE**

**FICHE D'IDENTIFICATION**

No d'identification :
Région :
Pseudonyme :
Nom véritable :
Quartier :
Date de l'entrevue :
Lieu de l'entrevue :
Durée de l'entrevue :
Intervieweur :

**Caractéristiques démographiques**
Âge :
Lieu de résidence :
Lieu de naissance :
Scolarité :
Statut civil (a été marié ou non) :
Si marié, occupation du conjoint :
Occupation antérieure:
Proximité et présence de la famille :

**Code**
A: Physiquement actif
I : Physiquement inactive
01 à 10 : numéro chronologique de réalisation de l'entrevue selon la catégorie.

## Annexe 9 : Notes and impressions post-interview

**PROJET HOMMES, PAUVRETÉ ET ACTIVITÉS PHYSIQUES EN CONTEXTE DE RÉADAPTATION CARDIQUE**

***Notes et impressions post-entrevues (à remplir par l'intervieweur)***

**Le logement**
Type et nb de pièces :
Décorations et style dominant :
Valeur (riche, moyen, pauvre, très pauvre):
Environnement extérieur :
Autres :

**Habillement**
Tenue lors de l'entrevue :
Chaussure :
Autres :

**Coiffure**
Longueur/teinture :
Style :
Autres :

**Langage**
Qualité de la langue :
Accent :
Autres :

**Impressions générales post-entrevue**