

THE ROLE OF SOCIAL CAPITAL IN RACIAL AND CLASS HEALTH
DISPARITIES: HOW HEALTH INFORMATION SEEKING BEHAVIORS IMPACT
SELF-PERCEIVED HEALTH STATUS

by

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Certificate of Approval

This is to certify that the accompanying thesis by Cirila Estela Vasquez Guzman has been accepted in partial fulfillment of the requirements for graduation with Honors in Sociology.

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ABSTRACT

There is a strong consensus among scholars who study racial, ethnic and socioeconomic health disparities that minorities who disproportionately suffer from chronic conditions are more likely to experience related complications, and lack access to health services (Nelson 2003). Studies also consistently find those with lower income have higher prevalence of chronic conditions, worse health status, and lack of access to health care services (Lynch and Kaplan 2000; Murthy 2007; Swart et al. 2005). I apply the concept of social capital to assess the impact of health information seeking behaviors (HISB) via social networks on patients' with chronic conditions self-perceived health status. Following previous literature, I define social capital as social networks by which individuals can access, borrow, and use health information to facilitate health management behaviors. Studies find that patients with chronic conditions are most likely to seek in-depth health information and are more likely to use that information to better their health status (Tu and Cohen 2008; Fox 2009). In light of persisting racial and socioeconomic health disparities I ask the following research questions: What is the relationship between race and self-perceived health status? What is the relationship between income and self-perceived health status? How does the quantity and form of health information seeking behaviors (HISB) mediate the relationship between race and health status? Do HISB mediate the relationship between income and health status? To answer these important research questions I conducted quantitative analysis on 305 surveys completed by Chronic Illness Management Clinic patients in a Northwest hospital/research institution. I hope my findings can be useful in better meeting the health information needs of minorities and lower income patients suffering from chronic conditions.

INTRODUCTION

The topic of racial and class health disparities among patients with chronic conditions in particular is of great interest to me and to many scholars. Our health care structure in the U.S was originally designed to meet the needs of those with acute illnesses, not for the growing population diagnosed with chronic conditions and an aging population who present unique barriers and challenges to health care (Burdy and Taylor 2008). Addressing the needs of patients with chronic conditions are important because severe and well documented, racial and class health disparities exist (Laditka J. and Laditka S. 2006; Dalstra et al. 2005). Scholars point to the fact that patients with chronic conditions are more likely to be people of color and/or come from lower income groups. The study of health disparities, however, is still an area that continues to expand due to the complexity of identifying factors that affect health. I investigate these multiple interconnected factors that research shows affect health status and self-perceived health status in order to gain a better understanding of how to address such health inequities.

I particularly want to emphasize how social networks matter in everyday experiences and in determining life chances -- especially among patients with chronic conditions. Humans participate in various formal and informal networks that facilitate actions and decision-making processes. Social ties enable individuals to accomplish feats that otherwise would be difficult to do alone (Field 2003). Resources, and in particular health information, are the key elements that are present and available via our social networks as other individuals give us this ability to use or borrow resources to make health related decisions and/or facilitate our health behaviors and actions (House, Landis, and Umberson 1988). This idea that social networks embedded in social structures are a

kind of “capital” available to the individual for their benefit (or disadvantage) is referred to as social capital.

In this study I examine one particular form of social capital using the phenomenon Health Information Seeking Behaviors (HISB) to highlight the important role of social networks in relation to health. Wilson (2000) defines HISB as the purposive seeking of health information as a need to satisfy a particular goal or question. I more specifically define HISB using the theoretical framework social capital, as access to social networks that enable the retrieval of health information. This is a form of social capital I explore guided by the works of Bourdieu (1986), Coleman (1990), and Putnam (1995, 2000, and 2002) to investigate how the HISB of patients with chronic conditions along both race and SES affect their self-perceived health status.

A growing number of scholars study the link between social capital, health, and even with self-perceived health status (Hawe and Shiell 2000; Kawachi, Sabramanian, and Kim 2008; Lomas 1998). Race and class both are certainly related to social capital (Ajrouch, Antonucci, Janevick 2001; Tyler and Cassell 1964). These scholars have demonstrated the negative effect lack of integration and/or social isolation that is present among lower income and minorities has on health status. There is a growing number of scholars’ investigating the role of social networks revealing the number and even types of social networks among minorities and lower income groups differ (Chatman 1991; Hsia 1987). Very few scholars, however, have defined social capital as the product of social networks, which individuals use to retrieve health information. The question remains whether HISB via social networks mediates the relationship between race and perceived health status, and between class and perceived health status.

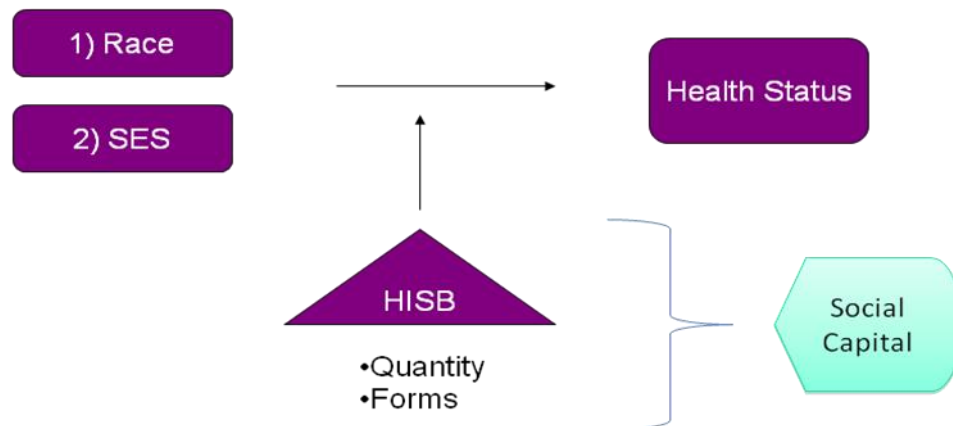
Patients' role as individuals who must tap into their social networks to gain accurate, helpful health information captured my attention as a result of an internship during the summer at a Northwest Hospital/Research Institution. This program explores how patients with chronic conditions rely on social systems (e.g. physicians, family, friends etc.) in order to facilitate their understanding of their condition thus facilitating their ability to better self-manage their conditions (e.g. diabetes). During my time at this organization, I observed how patients who have information about their condition are able to make better informed health decisions and feel more in control of their chronic condition. Therefore it seems that their self-perceived health status was affected not only by what they know, but also *who they know*.

My aim is to advance our understanding of the persisting racial and socioeconomic health disparities from a perspective that focus on the power of social networks in regards to health. Access to health information is a crucial piece of the racial and socioeconomic health disparities puzzle among patients with chronic conditions I address in this study.

RESEARCH QUESTIONS

This research study has multiple parts. Refer to figure 1.1 for a visual representation of what the study investigates. First, I investigate the relationship between race and self-perceived health status and between socioeconomic health status and perceived health status in order to see how my data fits into past researchers' findings. Secondly, I complicate this initial analysis by investigating the relationship between race, socio-economic status (SES), and Health Information Seeking Behaviors (HISB) which is measured in two forms: *Quantity* of HISB and *Forms* of HISB. And, finally, I explore whether the amount of HISB mediates any effects that race and SES may have on self-perceived health status.

Figure 1.1: Research Questions in Visual Format



This study thus investigates the relationship between racial/ethnic identity and class and perceived health status among patients with chronic conditions as well as applies the concept of social capital to assess whether either/both the quantity and form of HISB via social networks mediate the relationship between race and perceived health status, and between class and self-perceived health status.

LITERATURE REVIEW and THEORY

Racial and Socioeconomic Health Disparities

Health inequities based in differences in populations' characteristics such as race, ethnicity, class, culture, and gender are at the root of present day health care system problems in the United States. Health disparities are defined as "difference[s] in which disadvantaged social groups such as the poor, racial/ethnic minorities, women and other groups who have persistently experienced social disadvantage or discrimination systematically experience worse health or greater health risks than most advantaged social groups" (Braveman 2006). The literature on health disparities is extensive, but for the purposes of this study I investigate the literature concerning health disparities in two ways: self-perceived health status and the rate of chronic conditions among different racial and socioeconomic groups.

Self-Perceived Health Status Self-perceived health status is based on asking individuals to assess their health status on a five point scale; poor, fair, good, or excellent. This kind of measure of health is actually the most frequent health indicator used in sociological health research since the 1950's (Garrity, Somes, and Marx 1978; Jylhaa 2009; Maddox 1962; Suchman, Phillips, and Strib 1958). Many scholars assert self-perceived health status is a better indicator of future health outcomes (Idler and Angel 1990; Idler and Benyamini 1997; Idler and Kasl 1995, 1991). Although self-perceived health status is subjective, it also reflects a given social and cultural environment individuals find themselves. Self-perceived health status is thus a very useful term to use because of its ability to capture the individuals' social/cultural environment that is important to consider in regards to predicting future health outcomes. Data on self-rated

health reveals these differences in the manner minorities and lower income groups self-perceive their health status.

It is a documented fact that minorities self-report worse health status in comparisons to Whites. Health and self-perceived health status are worse among minorities. The report of the Secretary's Task Force on Black and Minority Health documented that non-Whites have poor health status compared to Whites (US DHHS 1985). Lee et al. (2007) found self-perceived health status is better among Whites than other groups. A study concerning race, health status, and chronic conditions found American Indians/Alaskan Natives have worse self-perceived health in comparison to Whites (Denny et al. 2005). The authors attribute this to the higher prevalence of chronic conditions among this population compared to Whites. Multiple studies continue to reveal the disparities in self-perceived health status between Whites and racial ethnic minorities.

The positive correlation between self-perceived health status and class are also well documented (Dowd & Sajacova 2007; Huisman et al. 2007; Kawachi, Kennedy, and Glass 1998; Kennedy et al 1998; Kondo et al. 2009). Socioeconomic status (SES), like race, is also a widely recognized socio-demographic factor that contributes to the gap in health status and well-being. Those from lower SES self-perceive their health status to be worse. A study that compares the United States and Poland concludes that income and education had a strong influence in the United States than in Poland when it came to self-perceived health status (Szaflarski and Cubbins 2004). Szaflarski and Cubbins thought this was because of the strong capitalistic society that characterizes the US, which meant class is an important predictor of various social indicators such as health. The findings

show those on the lower end of the socioeconomic ladder tend to report worse health status. It is clear that individuals from the lower income groups self-perceive having worse health status.

Self-perceived health status inequities along minorities and lower SES groups can be related to the higher prevalence of chronic conditions among these groups. Some scholars argue actual health status and self-perceived health status patterns are related to the disproportionate prevalence these populations suffer from chronic conditions (Jonngadda and Diwan 2005; Thomas et al. 2009). Among these populations, chronic conditions are found to be at higher rates.

Chronic Conditions According to the U.S. National Center for Health Statistics (2008) a chronic condition is a health condition that lasts three or more months, requires ongoing medical attention and affects a person's daily life. Any of the following is considered to be a chronic condition: asthma, hypertension, diabetes, arthritis, and cancer.

Members of racial-ethnic groups suffer disproportionately from chronic conditions. The evidence of health disparities is fairly consistent across a range of illnesses with a few exceptions (Geiger 2003). Many scholars even find the persistence of these health disparities after socioeconomic factors and health access related factors were controlled (Kressin and Petersen 2001; Mayberry, Mili, and Ofili 2000). Cardiovascular, cancer, diabetes and asthma to name a few are among the well-documented health disparities. Heart disease and cancer are both leading causes of death for American Indians and Alaska Natives (Office of Minority Health and Health Disparities 2008). African Americans are twice as likely to suffer from a stroke compared to Whites (4.6%

v 2. 4%) and diabetes is the condition most prevalent among older Hispanics than other racial/ethnic groups (20-30%) (“Beyond 50.09...” 2009). In regards to asthma, Hispanics/Latinos in the Northwest U.S. from 1993-1995 have an asthma death rate of 34 per million, more than twice the rate for White Americans (Office of Minority Health and Health Disparities 2008). Also minority populations are more likely to suffer from chronic illness related complications. For example, end state renal disease (ESRD) is more likely to develop for African Americans than for Whites who have type 2 diabetes (Perneger et al. 1994). As these studies show, racial groups suffer from chronic conditions at higher rates.

The prevalence of chronic conditions is also higher among lower income groups. Zwart et al. (2005) specifically find individuals with low SES have a greater prevalence of chronic conditions (2005). Another study reports income and wealth are significant predictors of having a chronic condition(s) (1997). Approximately 25% of low-income populations are burdened by chronic conditions (Newacheck et al. 1980). Pickett et al. (2005) find that obesity, diabetes, and mortality rates were all positively correlated with low income, and Glover et al. find socioeconomic inequality is largest for diabetes mellitus, as SES decreased the prevalence of the condition increased (2004). Other diseases in this study demonstrated a similar pattern such as hypertensive disease. Chronic conditions are most prevalent among lower socioeconomic groups.

In regards to both self-perceived health status and the prevalence of chronic conditions the literature demonstrates there are differences along both racial and socioeconomic groups. Minorities and lower income groups tend to perceive their health

status worse and have higher numbers of chronic conditions. The next section examines how scholars conceptualize these health disparities today.

Biomedical Model vs. Social Model of Health

The sociology of health and illness has expanded our conceptualization of health and understanding of health disparities. I define health according to the definition provided by the World Health Organization in 1948: “health is a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity.” Here I wish to discuss and compare two well-used models of health: the biomedical model and the social model of health to enter into a discussion of how scholars can more comprehensively understand health disparities. Both of these models are important to consider because of the different explanations they offer as to why individuals and even communities become sick. They can even impact and structure the manner policy makers decided to reduce health disparities because these models are not just a conceptual model but a way of thinking that then impacts our understanding of what are considered to be health factors and thus our response and reaction to health disparities. It is thus crucial to understand both of these models in order to address health disparities comprehensively.

A large body of research investigates the biological determinants of health disparities (see, for example, Barker 1991, 1992, 1994). These are factors over which individuals have no control such as age, sex and hereditary factors. This model is referred to as the biomedical model. From this perspective bad health or illness is the result of the presence of a disease or ill symptoms that is due to injury or infections. This

model focuses on physical processes such as pathology, biochemistry, and physiology to explain and account for an individuals' propensity to become sick (Brown 1989). The health problems are defined, diagnosed, and treated by health care professionals from a perspective grounded in biosciences.

Numerous scholars, however, challenge the biomedical model because it fails to recognize social factors that contribute to bad health and illness. Elliot G. Mishler (1989) argues the biomedical model essentially ignores the social contexts and sociocultural frameworks in which people live and experience. Mishler claims it is important to move towards a model where disease is defined as a disturbance in social relationships, a perspective framed socially rather than solely biologically. These social determinants of health highlight the economic and social circumstances in which individuals are embedded and that ultimately does shape and impact health status and health related decisions and behaviors (Marmot and Wilkinson 2006). The social institution of medicine cannot be stripped away from its social characteristics, but instead must acknowledge the multiple factors outside of the biological model. Such social factors are wide ranging including poverty, poor housing, social class, pollution and others. Overall the social model of health asserts there are social factors that affect health.

Figure 1.1 illustrates the social model of health as proposed by Dahlgren and Whitehead (1991). The model lays out the different social layers that impact health. The first layer beyond constitutional factors is "individual lifestyle factors" which characterize the behaviors in which patients engage. Such actions are affected or influenced by the second layer titled "social and community networks". This layer provides support and recourse to either enhance or negatively impact the individuals'

health behaviors via social networks. Next, structural factors such as housing or working conditions are taken into consideration. What one experiences at the work place or in one's home affects health.

Figure 1.2: Landscape of Influences on Health Disparities



Figure by Dahlgren and Whitehead, 1991; Pg. 61 in “The Sociology of Health Inequalities” written by Mel Bartley, David Blane, and George Davey Smith.

I use the social model of health to analyze the existing racial and socioeconomic health disparities among patients with chronic conditions. Although there is interconnectedness between race and class, for the purposes of this study I investigate these two health disparities independently. However, it is critical that I clarify that the social model of health sees social class as a determinant of health. Income, employment, and education are all considered to be factors affecting the everyday experiences and thus health of individuals. Race, however, is not considered a social determinant of health, but scholars use the social model of health to explain and address racial health disparities. This can be debated because the term race is regarded as a social construction rather than having a biological basis (Thisted 2003). Race often manifests itself via structural barrier

such as cultural differences in lifestyles. Some scholars allude to the idea that social class explains the racial and ethnic health disparities (Meyers 2007). However, as I previously demonstrated other scholars demonstrate race does matter even when controlling for SES. Thus I conceptualize race and social class as independent entities and view both as important social determinants of health in order to understand both racial-ethnic and socioeconomic health disparities using the social model of health.

The component part of the social model of health that I highlight to potentially add to our understanding of the previously highlighted health disparities is social networks. In this next section I wish to elaborate a particular phenomenon central to the idea of social networks that illustrates the direct impact social networks has on health - Health Information Seeking Behaviors.

Health Information Seeking Behaviors (HISB)

I employ the concept of health information seeking behaviors (HISB) to provide a framework in which to highlight the critical role of social networks in relation to health. Wilson (2000) defines HISB as intentional information seeking to satisfy a health-related goal. That is, individuals seek out sources to then help make health related behavior changes with the goal of leading a higher quality of life. To explore the relationship between social networks and health in a more specific context I thus use the concept of HISB to reveal the resource health information.

The kinds of sources patients tap into to get health information are extensive; including both social relationships and media-based resources. They range from books, magazines, the internet, and family or friends, to government agencies and health care

professionals. Patients are accessing a wide variety of sources including radio, television, newspapers, and health care professionals as well etc. (Hesse et al. 2005; Lewis et al. 2005). The use of newer media-based resources (e.g. the internet), however, does not replace, but complements more traditional forms (e.g. family) (Dutta-Bergman 2004). Patients look on the web, but still read the newspaper and go to their doctor with questions. Patients, are however, no longer solely rely on health care professionals to gain access to health information, but instead are starting to use a variety of social relationships and media-based resources outside of the health care system for a variety of reasons. A report by the Audit Commission (2003) identified a few reason as to why patients do not receive all the information they need from medical institutions: the amount and context of information (insufficient amount and/or presentation of material difficult to understand), the communication process (time provided to discuss or timing of the information is not adequate), and the environment (need of privacy). As a result patients' even though are reporting providers as the primary source for health information, 56% in a study of 500 people in New Jersey (Kempson 1987), the reliance on health care professionals as the main and only source has limitations. Thus, the second major source for patients are family and friends for lay health information (Elliott-Binns 1986). Another common source of health information is the Internet. Tu and Cohen (2008) reported a double increase from 2001 to 2007, 16% to 32%, in the percentage of Americans going on-line seeking health information. In general patients are tapping into a wide range of sources both social and media-based, no longer solely relying on the medical institution to access health information. HISB is thus dependent on social

networks and media-based resources in order for patients to retrieve health information. That is engagement in HISB requires for individuals to have access to such sources.

What the literature strongly demonstrates is that HISB affect the health behaviors/actions. The seeking of health information is a crucial step in the enactment of discretionary health-related behaviors and preventative behaviors (Budden et al. 2003; Fahrenwald & Walker 2003; Shi et al. 2004; Warner & Proscaccino 2004; Yu & Wu 2005). HISB is a factor that influences the extent to which an individual is able to engage in certain health behaviors that are either lifestyle behavior changes or preventative behavior adaption. The scope and nature of the information flowing via social networks affects judgments, beliefs, attitudes of patients' towards health behaviors, the amount of alternative courses of action known to the patient, and knowledge about the pros and cons of difference actions (risk perception) are made available (Burbank et al. 2002; Griffin, Dunwoody & Neuwirth 1999; Holmes & Lenz 1997; Huber & Cruz 2000). Therefore, HISB is central to health and illness behaviors.

HISB and Chronic Conditions Among patients with chronic conditions HISB is even more critical and relevant. The literature conveys the notion that patients with chronic conditions experience disruptive biographies that lead this population to engage in two primary coping mechanisms: *normalization* and *consequences*. Burdy elaborates on the process of individuals living with a chronic condition. First, he speaks in regards to how different chronic conditions carry a unique connotation and imagery that is often negative. Therefore, patients engage in a process of *normalization* in order to re-categorize their condition from being perceived as “abnormal” to “normal.” Robinson expands on this notion of normalization, which is the process by which an individual

attempts to lead a “normal” lifestyle without limitation (1993). Burdy argues, however, this is only part of the disrupted biographies individuals experience when diagnosed with a chronic condition. The disruptiveness also encourages individuals to seek information either from other sufferers, self help groups, or acquaintances in order to gain knowledge about the best methods to manage and alter their daily life to fit around the limitations of their conditions (1991). This second part, he calls *consequences*, characterizes the mobilization and compensation for lost resources as a critical aspect of dealing with chronic conditions. It is important to understand because of the uncertainty and trade-offs patients undergo (Burdy 1991). Other scholars also assert that during an illness-related uncertainty it is common to engage in information management, meaning patients actively engage in controlling the health information they access and use (Mishel 1988, 1990). In summary, the act of seeking health information has been characterized as an important mechanism in which patients with chronic conditions engage to help adjust and maintain a normal lifestyle while also enhancing their quality of life.

In addition, unlike acute illness care, managing chronic conditions requires continuous and often complex disease management and care coordination over a prolonged period of time (Harold and Hippel 2007). As a result, more and more of the responsibility for better health in today’s health care structure falls on these patients. These patients use multiple health information sources in order to cope with this increased responsibility. Social integration in social networks is thus especially important for patients with chronic conditions in order to access the much needed health information that guides their health related decisions and behaviors. HISB engagement results in better self-management of chronic conditions.

It is well documented that patients with chronic conditions are not only the population most likely to engage in HISB in comparison to any other group, but are also more likely to use the retrieved health information for health related decisions. In a study concerning a multitude of measures at which the general Americans population engage in HISB such as frequency, types of information, and use of such information found that patients with chronic conditions are keen seekers and are more likely to do in-depth searches about specific diseases or conditions, as well as search for their own use of benefit (Fox 2009). In addition the study found patients with chronic conditions take the information retrieved for application or behavior change. Some scholars have even found that once access to health information among this population occurs it leads to better inform decisions making and improves their quality of life (Faircloth et al. 2004; Burdy 1982). Thus it can be argued that studies investigating HISB for chronically ill patients are an increasingly important kind of social research.

HISB is an intriguing social phenomenon that helps explain how social networks affect health status. While it is clear that social networks influence health information seeking behaviors, what is not clear is how this functions for patients with chronic conditions along race and socioeconomic class. The study of social networks in relation to health information access along race and class is of particular interest to explore considering the racial and socioeconomic health disparities among this population previously explored. I will examine the empirical material relating social networks to race and class after discussing the theoretical framework, social capital, by which this study uses to understand the role social networks play in the social phenomenon of HISB.

The Origins and Development of Social Capital

A growing area of interest concerns social capital. This concept is the idea that social networks as a form of social structure provide resources to those individuals who are a part of the social network. Three of the well-known scholars who contributed to the expansion of social capital are Bourdieu (1986), Coleman (1990), and Putnam (1995, 2000). From the origins of social capital, these scholars use the concept of social capital to investigate social disparities and to understand inequities by highlighting the role of social networks.

In the late 1960's and early 1970's Pierre Bourdieu was among the earlier contributors to the development and understanding of social capital. He was primarily concerned with explaining the reproduction of class inequalities. To do this, he employs the concepts of cultural capital, economic capital, and social capital. His use of social capital revolved around characterizing how elite groups use their connections with other powerful elites to reproduce privilege. His theory of cultural reproduction reflects social reproduction using the concept social capital. Although economic capital is the major form of capital Bourdieu investigates, social capital becomes very important in his analysis of class reproduction. Economic capital and cultural capital are not sufficient to account for how elites maintain their status. He defines social capital as follows: the sum of resources, actual or virtual that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition (Bourdieu and Wacquant 1992; 119).

Bourdieu's work on social capital puts emphasis on the conflicts and power functions that increase the ability of the actor to advance his/her interests. Individuals in certain social positions have access to different economic and social resources. Bourdieu's conceptualization of social capital is thus broken down into two components: group memberships and social networks. Thus, he argues, "the volume of social capital possessed by a given agent...depends on the size of the network connections that he [or she] can effectively mobilize" (Bourdieu 1986, 249). The focus is for actors to gain membership to multiple social networks in order to employ resource(s) to advance their social position. His unique perspective in regards to class brings attention to the important role social capital could play in explaining socioeconomic health disparities.

Coleman during the 1990s utilizes and understands social capital in relation to educational achievement and social inequality. He finds that poor and marginalized communities benefit from social capital just as rich elites do. Similar to Bourdieu, Coleman also understands social capital as a source of educational advantage. He argues that social capital profoundly impacts the acquisition of educational credentials. Even though both Coleman and Bourdieu define social capital as the set of resources one has access to via social relationships that differ from person to person, James Coleman makes the statement clearly – that marginalized communities also benefit from social capital -- because of his consideration of social capital among non-elites that enables him to escape the somewhat circular argument that powerful people remain powerful by virtue of their contact with other powerful people. Coleman defines social capital by its function: "it is not a single entity, but a variety of different entities having two characteristics in common; they all consist of some aspect of a social structure, and they facilitate certain

actions of individuals who are within the structure” (Coleman 1994). Social capital, for Coleman, has a collective dimension. He explains that social capital does not just benefit individuals, but is also a public good because everyone in the social structure also benefits. In the context of education, he defines social capital as “the set of resources that inhere the family relations and in community social organization and that are useful for the cognitive or social development of a child or young person. These resources differ for different persons and can constitute an important advantage for children and adolescents in the development of their human capital” (Coleman 1994: 300). Thus disadvantaged individuals and as a group have an unequal opportunity in terms of educational achievement. He found children from disadvantaged socio-economic and ethnic background are more likely to drop out and had higher levels of absenteeism. He accounts for this not as the result of an individual’s lack of access to social networks, but as the social structure’s lack of resources to provide individuals access to such resources to enhance academic achievement. Thus, social capital places value on social networks that are embedded in social structures. James Coleman’s work with social capital expands our ability to use the concept of social capital as a way to explore differences between social groups’ outcomes across a variety of fields. Social capital is thus an important element to consider when investigating social inequalities.

Putnam (2000) examines social capital in relation to civic engagement in the field of political science. His work has strengthened the concept of social capital in monumental ways. Firstly, although James Coleman and even Pierre Bourdieu seem to highlight action or goal in their definition (Coleman more so than Bourdieu), Putnam engages in an extensive discussion surrounding *action*. He clearly argues that resources

found in social networks are tools that enable individuals to then accomplish a goal or a task, and thus social capital has an action element by definition. Secondly, he takes this concept of social capital a step further and asserts that the use and possession of social capital is not only dependent on the number of social networks one is embedded in but rather the characteristics of the social networks individuals are part of also matters. Coleman's work starts to allude to the importance of factors shaping the resources endowed by social capital such as general level of trustworthiness, which increases use of social networks or the degree affluence, which would decrease the use of social networks. Putnam in particular highlights trust and reciprocity as important elements of social capital to consider. His definition of social capital is as follows, "social life-networks, norms, and trust-that enable participants to act together more effectively to pursue shared objectives" (Putnam 199; 56). Therefore, being socially integrated (having social capital) gives individuals a means by which to reach their goal or receive benefits and these social networks increase in strength as elements of trust and others relational characteristics exist. Putman's research concerns how activation of civic involvement in community is dependent on the degree of social capital that is present. Putnam proposed a Social Capital Index, which he used to measure and compare different regions. His index included measures of reciprocity and trust elements. This acknowledges that people trust levels may contribute to lubricating the social life in a positive manner that promotes more exchange of resources. That is the present of trust strengthens a social network and the absence weakens a social network. The relationship of trust and reciprocity in turn generates a system of expectations and obligations. During an analysis performed by Putnam (1995) using a central composite index of social capital including measure of

trust found across different desirable social conditions high levels of social capital is important (e.g. lower crime rates, better levels of health and happiness). Lastly, the third manner Putnam has substantially contributed to our understanding of the concept of social capital is by highlighting the “dark side.” Social capital may not always bring about positive actions but instead could just as easily stir and result in negative outcomes.

These scholars have illustrated three important elements that are essential to the definition of social capital: social relationships, resources, and action. While Bourdieu understood social capital in regards to unequal access to resources and to maintain power, Colman expands this concept of social capital among non-elites to explain for educational disadvantages. His ideas of individuals pursuing own interest is unique. Then Putnam used social capital as the basis for social integration and well being in relation to civic activity. His emphasis was on the importance to consider the characteristics of social networks that brings a distinction between stronger and weaker social networks. Although each of these scholars understood the concept of social capital in different disciplines the common thread is that these scholars have illustrated important dimensions to social capital. First, social networks embedded in social structures provide members of the social network with access to use, borrow, and retrieve valuable resources that ultimately affect their likelihood of achieving the intended goal or action. And, secondly, other important elements to consider are not just the number of social networks an individual is part of, but also the characteristics of the social networks that could provide more information as to the kind of social capital found either among individuals or communities.

Finally, as discussed, their work has demonstrated the application of this concept, social capital, to be vast and especially useful in understanding the role social networks play in relation to social inequalities. Therefore, I employed the concept of social capital to study racial and socioeconomic health disparities in regards to both the structure of social networks such as number of social networks (quantity) and relational characteristics of social networks strength such as trust (forms). This theoretical framework will provide the context by which social networks take on a value in regards to potentially facilitating better health among disadvantage populations. I thus now will explore the empirical studies that demonstrate the importance of having social capital in order to have better health status before narrowing down the use of social capital to studying Health Information Seeking Behaviors (HISB).

Social Capital and Health

The literature strongly asserts the connection between social capital and health. Research shows that social networks affect a wide range of behaviors such as education, employment opportunities, and criminality (Granovetter 1973; McCarthy and Hagan 2001; Portes 1998). What these studies demonstrate is that the quantity and strength of an individual's relationships will variably impact his or her quality of life. There has been a considerable amount of research specifically investigating the relationship between social capital and health. The logic is that individuals with more social capital are more integrated in social networks and thus have disposable to them resources, e.g. health information, that then enable them to make better-informed decisions thereby affecting their behaviors/actions that directly affect their health status. With respect to health, those

individuals who are better able to exploit the social capital found in their networks are healthier than those who cannot.

Multiple studies consistently report the positive function of social network in relation to health. James S. House et al. (1988) finds that social capital integration is critical for better health status. Hendryx et al. (2002) finds that well-connected individuals are more informed and also better able to influence and access local health services. A number of scholars report the lack of social integration is negatively harmful to health status measured either by psychological wellbeing, illness, and even death (Berkman and Syme 1979; Henderson et al. 1978; Miller, Ingham, and Davidson 1976; Turner 1981; Williams, Ware, and Donald 1981). Schaefer, Coyne, and Lazarus (1981) found that social networks influences health-related behaviors, enhances immunity of illness, and even maximizes adaptation and recovery from illness. The benefits to being socially integrated are extensive. In fact scholars have even begun asserting incidences of certain conditions are at lower rates in regions where there is high social capital. For example a study by Bruhn (1965) found there are lower incidences of mental illness and heart attacks in communities characterized by close-knit and stable ties. In addition, the role of social networks is of particular relevance to health status in buffering perceptions of stress, providing support or specific care, influencing help-seeking behaviors through social norms and trust, as well as acting as referral agents to professional services (Ell 1984). Thus social integration has multiple benefits to health in a variety of ways.

Clearly social capital matters when it comes to health status, but how? Drawing on previous research, Kawachi, Kennedy & Glass (1999) and Kawachi & Berkman (2000) present three primary ways in which health is influenced by social behaviors. The

social networks influences health related behaviors and decisions first, through norms and attitudes that affect health related behaviors; second, as a psychological mechanism that influences emotions, confidence, and control that then affects health related behaviors; and third, by increasing access to health care and resources that also affects health related behaviors. I am primarily concerned with this third function. Social networks provide individuals with health care and resources, in particular health information. Health information is the capital that is available via social networks.

Vulnerable Populations Unfortunately not all individuals or communities have the same degree of social capital available to them. Social integration differs along race and class in particular has been explored among scholars. Tyler and Cassell (1964) actually argue that poverty may be associated with weak social ties and social disintegration and therefore partially explains the higher rates of chronic illnesses among the poor. Another study found poverty results in a lack of social networks available to African American communities (Tigges, Browne, and Green 1998). However, other evidence suggests that strong ties exist among member of low-income minority groups (Hay and Mindel 1973; Keefe, Padilla, and Carlos 1979; Delgado and Delgado 1982). Although strong ties are not always indicators of strong social capital as scholars are voicing. Close-knit networks may be associated with poorer health status if the group's values and or norms reduce access to new information via limiting the use of medical care (McKinlay 1973). Social capital Kaplan and colleagues (1996) claim to be a possible mediator between health and income. Kawachi and colleagues (1997) have thus concluded that income inequality is the result of disinvestment in social capital. It therefore seems as though social capital is an important contributor to socioeconomic

disparities. It remains inconclusive to the degree social capital plays along race. In one study by Ajrouch, Antonucci, and Janevic (2001) concerning social networks among Blacks and Whites found Blacks had smaller networks but with more family and friends part of their social networks. However, these scholars all recognize the need for more research to investigate the causal routes.

HISB and Social Capital

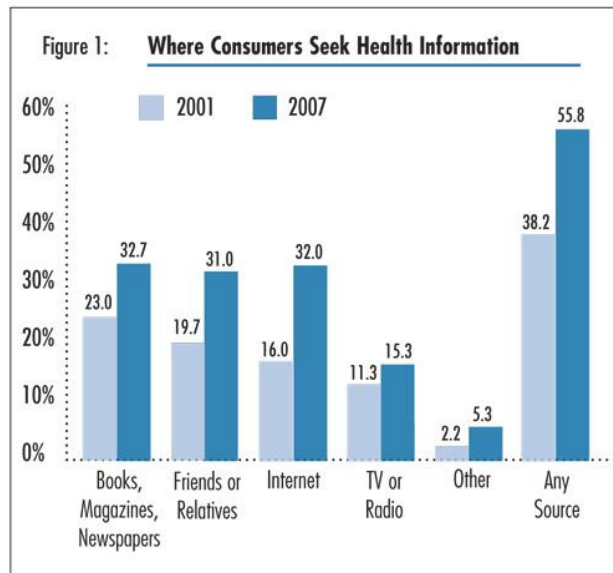
This study is interested in the theoretical concept of social capital in relation to Health Information Seeking Behaviors (HISB). That is, I define social capital as a form of capital an individual does not possess, but is instead embedded in the social networks itself. By virtue of his or her membership to social networks, they are able to retrieve health information. Therefore social capital is essential in order to engage in HISB. The lack of integration in social networks prevents the engagement in health information seeking via social networks thereby the individual experiences a diminished access to health information. Social capital is thus the theoretical framework under which to investigate the role of social networks play along race and class in regards to HISB. I thus will dive into the literature to reveal what we do know in regards to HISB along both race and class.

Social Capital, Health Information Seeking Behaviors, and Racial/Class Health Disparities

Over the last six years the number of Americans who engage in HISB has increased substantially. In 2001 72 million Americans sought health information and in 2007 this number rose to over 122 million (Tu and Cohen 2008). This pattern seems to be

consistent across demographic factors. In every category of age, education, income, race and ethnicity, the level of information seeking increased. The figure below, figure 1.3, demonstrates education level and health information seeking from any source (e.g. health care professional, internet, family, etc.).

Figure 1.3: Growth Increase in Health Information Seeking Behaviors



All 2001-2007 differences are statistically significant at $p < .05$.
 Note: Categories are not mutually exclusive; respondents could select multiple categories.
 Sources: HSC 2001 Community Tracking Study Household Survey and HSC 2007 Health Tracking Household Survey

Although we see an increase in each category of education level there is still a general trend. Those with higher levels of education are engaging in HISB more often than those without high school diplomas. Tu and Cohen (2008) also reports similar trends for race and income. Whites and African Americans are more likely than Hispanics and people with higher income levels are more likely than lower income groups to seek health information. Another study finds race to have very little significance. Instead, income, education and employment have a stronger impact on the degree to which individuals use the internet for health information (Goldner 2004). Thus scholars argue that there are

differences in the frequency of health information seeking along racial-ethnic and socioeconomic status; however, research to determine the degree to which race affects HISB remains inconclusive.

Greater gains have been made in determining the number of social networks to which individuals have access and how this impacts their health. Scholars have examined the importance of having an extensive network of contacts in order to gain appropriate health related information. Effective communication and access to information are especially important for minorities and other disenfranchised groups (Gollop 1977; Lin 1995; Metoyer-Duran 1993). Courtright (2005) discusses how newcomers such as Latino immigrants are unable to obtain needed health information in order to make better decisions about their health because institutions have not yet provided the information in a format easily accessible to that population. This population is limited in the number of resources they can access for health information and thus lack necessary health information. Chatman investigates the number of resources among a sample of largely female African Americans with an average age of 38, who have average educational levels of tenth grade, are heads of household with three children, and who have been employed for seven years at minimum wage. She examines data over a two year period from 1984 to 1985 using participant observation and an interview guide of 28 questions. The study concludes that the access to a wide range of resources for health information is limited among poor African Americans because of their perception that they don't have means to tap into sources and increase their advantages (Chatman 1991). What these and other researchers strongly suggest is that there are barriers for racial, ethnic and lower

socioeconomic groups that limit their resources and thus the potential amount of health information related to conditions disposable to them.

Access to particular kinds of resources, such as medical related social networks and family/friends social networks are deemed important because of their frequent use by patients for health information. A survey conducted by Buckland et al. (1994) found general participants or any medical staff to be the primary source of health information. However the use of medical doctors is not the first option among minority population. A study found Mexican Americans rely mostly on their families and relatives for health information (Hsia 1987). The difference between formal and informal sources may reflect limited opportunities in terms of accessing health care professionals (Bishop and Charnley 1991). Part of the explanation for relying on family and friends is because they are viewed as more approachable and friendly (Elliott-Binnns 1986), though the quality and accuracy of information may be limited and is of a concern. Thus it is of importance for the literature to focus on how these two social networks in particular are similar or different along both race and class.

In order to understand racial and socioeconomic differences in the reason as to why tap into a medical social network or a family/friends social network I investigated the literature for relational characteristics of social networks that could provide insight concerning specifically trust and reliability. These are elements that the concept of social capital has alluded to being important in having a strong social network rather than a weak one, which then enhances the degree of information or resource exchange. To commence I will first discuss trust and then reliability.

Michael R. Welch et al. discusses the concept of social trust and how it relates to social capital (2005). Social trust is necessary to understand because it is needed for individuals to better access social capital in their networks. It provides grounds by which meaningful social relationships develop (Welch et al. 2001). Individuals choose whether and how to act/react towards other individuals based on the amount of trust that is present within such social relationship (Hardin 2002). Luhmann (1979) argues that trust is associated with reducing complexity or uncertainty. This reduction in complexity characterizes the coping mechanism in which individuals engage to adapt to modern societies. One can argue then that trust is “a property embedded in the social relations that occur between people” (Welch 2001). Thus trust could actually be conceptualized as a concept that allows the manifestation of actions.

Trust is particularly relevant to the health care system. At one level, it facilitates the co-operation that is necessary for health production between provider and patient (Gilson 2003). That is the level of sharing information increases and there is a gained sense of respect (Mooney 1998). However, surveys indicate that public trust in medical sources has significantly diminished (Blendon, Hyams, and Benson 1993). There remains, however, high degree of trusting personal physicians numerous of scholars consistently report. A study reported 64% of their population, which consisted of 6,369 individuals primarily trust health care professionals (Hesse et al. 2005). Physicians or health care professionals are the most trusted source of information.

In regards to differences along race or socioeconomic status, the literature does reveal differences although there are still variations in the literature. One particular study suggested African Americans have limited access to health information because of their

mistrust in medical sources e.g. doctor (Matthews et al. 2002). Another study highlights one reason why African Americans do not take part in clinical trials is because of the mistrust present towards health institutions and professionals (Harris et al. 1996). Doescher and colleagues (2000) found patients from racial ethnic minority groups compared to Whites have lower perception levels of trust in health care professionals and are also more likely to be less satisfied. In addition another study found Hispanics were significantly less trustworthy of physicians and the health care system than did African Americans and Whites (Morrison et al. 1988). Corbie-Smith et al. 2002 found a relationship between race and trust even after controlling for socioeconomic factors – African Americans more likely than Whites to trust physicians. Thus it is clear that minorities trust medical social networks less compared to whites. The relationship between trust of medical social networks and socioeconomic status is less clear, however, because of the lack of studies regarding this relationship. It is certain that minorities trust medical social networks less compared to Whites.

Family and friends are another frequently cited source as trusted sources, but primary among minorities. A study investigating the dynamics between doctors and families found that it is imperative for physicians to first gain the trust of the family in order for them to be effective (Eugenio 2004). The inner trust circle of the family is a very powerful one among Hispanic families. Another study found older African American women trust and heavily rely for care and information from family as well as experience the most influenced of own self-care by family members (Findlow and Prohaska 2007). Very few studies investigate trust in a general sense, but it seems as though minorities have higher levels of trust and dependence on their family for

resources. In regards to the relationship between socioeconomic status and trust of family and friends social networks very few scholars have explored this. What we do know is that minorities trust family and friends on a relatively higher scale.

The second important measure I highlighted is reliability. Previous scholars have investigated trust and reliability together in order to capture a more in depth perspective of the factors influencing the frequency use of certain social networks. Reliability is argued to be a dimension of trust that has received attention for validation (Mishra 1996; Thorn et al 1999). Here the term reliability refers to the extent to which individual feels they can rely on a social network for health information. A study concerning perceived reliability of various health information sources found from a sample size of 677 who randomly received a mail survey regarded formal sources which included family doctors or any health professional as more reliable and informal sources which included friends and relatives to be less reliable. And the least reliable were commercial or media sources such as TV, magazines, etc (Worsley 1989). The authors also found differences along various socio demographic factors. Another study found doctors and pharmacists to be among the most reliable sources in every age category. Any other drug information leaflets and/or medical guides or books were the next most reliable and lastly were relatives and friends among a sample size of 714 who use prescribe or self-medication (Narhi 2007). The question does remains as to whether perception of reliability for medical social networks and family/friends social networks differ along race and socioeconomic status.

I have thus covered what we know in regards to the use of social networks to retrieve health information, but I will now turn my attention to the literature concerning

media based resources. What is known is that media-based resources are increasingly becoming a major form of health information seeking. However, there are severe limitations among both racial-ethnic minorities and low socioeconomic groups. Hoffman and Novak (1998) report differences in access to computers and internet usage between African Americans and whites. In a 1997 analysis of data by the Commerce Net/Nielsen Internet Demographic Study, who reported Whites are more likely to use the internet (26% vs. 22%) and more likely to have a home computer (44.2% vs. 29%). Another study by the Health Information National Trends Survey reported Whites and non-Hispanics (e.g. Asians) are more likely to use the internet to access health information. The literature seems to suggest media-based resources usage, although increasing among all Americans citizens, may result in racial-ethnic and lower socioeconomic groups' differences in terms of using such resources.

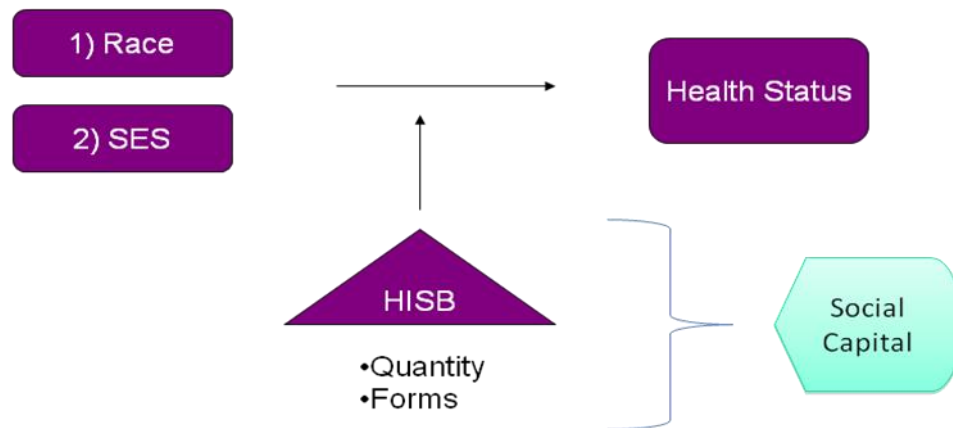
HISB both in the frequency, number of social networks and number of media-based resources, and even forms of health information concerning relational characteristics (trust and reliability) may account for some of the racial-ethnic and/or socioeconomic health disparities. Currently, there are few studies specifically investigating such HISB patterns among patients with chronic conditions. The literature seems to highlight that “necessity drives frequency.” That is people with chronic conditions have more needs and thus engage in HISB more frequently (Fox 2006). The more HISB this population engages in the more likely they are to experience health behaviors changes (Lambert and Loiselle 2007). And the literature among the general population suggests HISB patterns differ along both racial and socioeconomic groups. It remains unknown, however, as to whether and how HISB matters among patients with

chronic conditions. This area of research becomes of interest in light of the racial and socioeconomic health disparities that persist among patients with chronic conditions. The investigation of access to health information via social networks could be a piece of the multifaceted health disparity issue among the growing population of patients with chronic conditions.

Summary

In the literature review I have discussed multiple relationships that are correlated. I first began with the relationship between demographics and self-perceived health status, I then transition into the importance of social networks as a social determinant of health capture by the concept social capital. This led me into the direction of exploring HISB as a form of social capital that impacts health status via its impact on health related behaviors. I therefore spent time investigating the relationship between demographic and HISB patterns. Figure 1.4 is a visual representation of the conceptual model of the manner social capital measured by HISB matters in health. This model is where my three research questions originated.

Figure 1.4: Theoretical Model of HISB Social Capital in Health Disparities



The purpose of this study is to reveal how HISB matters among patients with chronic conditions in light of both racial and socioeconomic health disparities. However, I do not assume this to be the case and therefore felt compelled to first investigate whether self-perceived health status differs along both race and socioeconomic social groups before exploring whether engagement in HISB ameliorates the relationship between race and self-perceived health status as well as between socioeconomic status and self-perceived health status. There are two ways this study measures HISB social capital in light of the theoretical and empirical literature discussed: quantity of HISB (frequency of using resources, number of social networks, number of media-based sources) and the form of social networks (rust and reliability of medical social networks and family/friends social networks). The literature seems to reveal I will find racial and socioeconomic differences among patients with chronic conditions.

CURRENT STUDY

Based on the previous research findings I discuss in the literature review and theory section, several hypotheses emerge which I categorize into three main categories:

Demographics and Self-Perceived Health Status:

H1: Non-Whites will have *lower* Self-Perceived Health Status than Whites.

H2: Individuals with lower socioeconomic status will have *lower* Self-Perceived Health Status than individuals with higher socioeconomic status.

Demographics and Health Information Seeking Behaviors:

H3: Non-Whites will have *lower* levels of Health Information Seeking Behaviors Quantity than Whites.

H4: Individuals with lower socioeconomic status will have *lower* levels of Health Information Seeking Behaviors than individuals with higher socioeconomic status.

H5: Non-Whites will have *lower* levels of trust of medical social networks than Whites.

H6: Non-Whites will have *higher* levels of trust on family/freinds social networks than Whites.

H7: Non-Whites will have *lower* levels of reliability on medical social networks than Whites.

H8: Non-Whites will have *higher* levels of reliable on family/friends social networks than Whites.

H9: Individuals with lower socioeconomic status will have *lower* levels of trust on medical social networks than individuals with higher socioeconomic status.

H10: Individuals with lower socioeconomic status will have *higher* levels of trust on family/friends social networks than individuals with higher socioeconomic status.

H11: Individuals with lower socioeconomic status will have *lower* levels of reliability on medical social networks than individuals with higher socioeconomic status.

H12: Individuals with lower socioeconomic status will have *higher* levels of reliability on family/friends social networks than individuals with higher socioeconomic status.

Demographics and Perceived Health Status and Health Information Seeking

Behaviors:

H13: Controlling for Health Information Seeking Behaviors Quantity will *lessen* race effects on self-perceived health status.

H14: Controlling for Health information Seeking Behaviors Quantity will *lessen* socioeconomic status effects on self-perceived health status.

H15: Controlling for Health Information Seeking Behaviors Forms will *lessen* race effects on perceived health status

H16: Controlling for Health Information Seeking Behaviors Forms will *lessen* socioeconomic status effects on perceived health status.

METHODS

To better understand the Health Information Seeking Behaviors (HISB) of patients with chronic conditions, using the concept of social capital to explore racial and socioeconomic health disparities, I performed analysis on a data set that was created and distributed on behalf of a Northwest Hospital/Research Institution. As an intern, I crafted a survey to assess patients with chronic conditions' health information behaviors, needs, and preferences. The original study centered on enhancing the health care system's ability to provide sufficiently, accurate, and timely health information to the growing and high-needs population of individuals suffering from one or more chronic conditions. This Health Information Survey captures the role social capital plays mediating the relationships between race and health status as well as between class and health status. I therefore performed secondary data analysis on this data set to answer the current research questions I have proposed for this study using statistical analysis for the social sciences (SPSS) software.

Survey Design

The Health Information Survey is divided into five sections: A) Seeking Health Information; B) Health Information Needs; C) Information Preferences; D) Health Status and Health Services and lastly E) About You. The volume of data available could provide significant insight into numerous research questions and topics. The sections most relevant and used for the purposes of this study concerning the quantity and relational characteristics of HISB are Sections A, D, and E.

The survey contains questions from two standardized and well-validated surveys previously administered, the Health Information National Trends Survey (HINTS) and the Center for Disease Control (CDC) Health Quality Life Measures. The HINTS survey was primarily used for Section A, Seeking Health Information. HINTS is a national wide survey conducted by phone or mail gathering information about how Americans find and use cancer information. Researchers use this data to investigate which communication channels are used among adults 18 and older to access information, to identify the barriers in accessing health information, and to gain information as to how to create more effective communication pathways to strengthen access to cancer information. The information channels explored are both social and media-based resources such as doctors, family or friends, health insurance providers, television, newspapers, or magazines. In addition, this survey contains a multitude of in-depth questions concerning their reasons for accessing certain resources, their concerns when seeking health information, as well as perception of their ability to retrieve health information. Questions from HINTS that were used to craft the Health Information Survey had the word cancer omitted in order to gain a better understanding of health information seeking behaviors patterns for any chronic condition.

The other major nation-wide survey questions used in crafting the Health Information Survey were derived from the CDC Health Related Quality of Life Survey. These questions were used for section D, Health Status and Health Services. The mission of the CDC is to promote health and quality of life by preventing and controlling disease, injury, and disability. Health Related Quality of Life Survey uses multiple questions to assess the quality of life and health status. The well known quality of life 14 item

“Healthy Days Measure” was included into the Health Information Survey in order to accurately measure respondents’ health status with more validity and reliability. This is divided into three parts. The first standard 4-item set of health days have been in used by the State-based Behavioral Risk Surveillance System (DRFSS) since 1993. The Standard Activity Limitations module and the Healthy Days Symptoms module, which both consist of 5 items, have been in use since 1995. These three measures comprise the full CDC-HRQOL-14 Measure. Multiple surveys have employed these questions thus giving validity to these measures. However, because this research is concerned with self-perceived health status, the only survey question I use in this section concerned self perceived health status.

The last section of the survey I used is E: About You. These questions came from the HINTS demographics section. The survey used in this study can be found in Appendix A.

IRB & Survey Administration

The IRB approval from the board residing at Northwest Hospital/Research Institution was obtained prior to administering the survey. Under their direction the survey was administered by mail to patients from the Chronic Illness Management Clinic in 2009. The Northwest Hospital/Research Institution granted permission to access and use the data collected by them for the purposes of this thesis. Thus prior to secondary analysis of the data set, IRB approval for the current study concerning social capital and health information was granted by Whitman College’s Institutional Review Board.

Participants' Enrollment

Recruitment of the survey participants occurred in two stages. As the intern, I did most of the recruitment. The first stage consisted of contacting the providers in the Chronic Illness Management Clinic. I e-mailed all of the providers to inform and gain permission to contact their patient panel about the study. The principal investigator then retrieved addresses and telephone numbers of potential participants from the provider's panel who gave permission for the enrollment process. Eligible patients were those who had at least one chronic condition diagnosis and are regular patients at the Northwest Hospital/Research Institution. That is patients who have a designated primary provider and have previously been seen in the office based practice. The second stage is the mailing of the surveys to potential respondents. I enclosed a pre-paid envelope for the participant to return the Health Information survey at no cost. All potential participants and surveys were numbered for corresponding purposes. Surveys did not include the participants' names to protect patients' confidentiality.

Twenty one providers gave permission to mail a survey to their eligible patients. From these 21 providers, I began with a total of 2,918 potential patients. Then 1,855 were excluded because they did not meet criteria of having a diagnosis of 1 or more chronic conditions, which left me with 1,053 participants. An additional 180 were excluded because they had VIP status. The VIP status at the Northwest Hospital/Research Institution means these patients had notified the clinic they do not want to be contacted in regards to any study. I therefore mailed out a total of 872 surveys on July 23rd and July 27th, 2009. Eight of the surveys were undeliverable either because of wrong addresses or because the patients had passed away.

Data Collection Period

The survey collection period occurred within a short three month timeframe. Therefore in order to increase the survey response rate, those patients who submitted their completed surveys before late August 2009 I entered into a drawing for one of the three \$100 grocery-shopping certificates. I also originally planned to make follow up phone calls in order to increase response rate. The number assigned to each of the surveys enabled me to track who has completed their surveys for the purpose of entering those whose surveys we have received into the gift drawing and to follow-up with those who had not yet returned their survey. However, due to time constraints I contacted none of the non-survey responders. The collection period for this study remained open until late January. Incoming surveys were entered into the database using the identified number assigned.

Ethical Considerations

There are very minimal ethical considerations because of the less intrusive nature of surveys conducted by mail. However, all measures of precaution were taken to further protect the confidential health information of participants. As previously mentioned, I gave each participant an identification number. This number was written on each of the surveys. The survey itself specifically indicated that participants should not provide any personal information. I also mailed the potential survey respondents a pre-paid envelope so they do not have to provide their address to send it back.

In addition to protecting patient's information, data entry occurred only on the campus grounds of the Northwest Hospital/Research Institution in order to minimize

losing or misplacing received surveys. During the month of January 2009 I entered into the database all additional surveys that arrived since the summer time. The original surveys are kept under the possession of the Northwest Hospital/Research Institution in order to protect patients' information. The actual data set used for this study was provided through a secure network. Only the principal investigator residing at the Northwest Hospital/Research Institution has access to it and is able to de-identify if necessary. When I had any additional questions or concerns as I was analyzing the data while on Whitman College's campus, I contacted them to verify and ensure correct data entry.

Measures

This study investigates whether social capital, as measured by both the quantity and relational characteristics of health information seeking, affects or changes racial and socioeconomic health disparities. The key measure indicators used to answer the research questions are race, socioeconomic status, self-perceived health status, and health information seeking behaviors.

Race: Survey respondents were, first, asked, "Are you Hispanic or Latino?" followed with "Which one or more of the following would you say is your race?" Five options are provided those including: American Indian/Alaska Native, Asian, Black/African American, Native Hawaiian/other Pacific Islander, White, and Other. Prefer not to answer was also provided as an option. Hispanics were included in the minority racial group. There were two groups used for the analysis section: Whites Non-Hispanics referred to as Whites and Non-Whites Hispanics referred to as Non-Whites.

Socioeconomic status: Two of the survey questions were used to assess respondents' socioeconomic status: income and education level. For part of the analysis income was collapsed into three categories (less than \$35,000, \$35,000 to \$75,000, above \$75,000) and education into four categories (high school or below, vocational or some college, college degree, and post-graduate). Analyses of income and education were measured ordinarily.

Self-Perceived health status: Respondents were asked "Overall, how would you rate the quality of health care you received in the past 12 months?" Responses were Poor, Fair, Good, Very Good or Excellent. This question is measured and analyzed as an ordinal variable. Self-perceived health measures have been found to be a reliable indicator of an individual's overall wellbeing.

Quantity - Health Information Seeking Behavior (HISB): Quantity of HISB was assessed using two survey items: first, a question asking respondents to state the frequency with which they seek health information, and secondly, two questions that asked how many of the listed sources they utilize in seeking health information.

The first question item, frequency, is captured with the survey question "How often do you look for health information about health topics?" Indicators are measured as an ordinal variable. Options are Rarely, Sometimes, Often, and All the time.

The second survey item in regards to the number of sources utilized is measured by a combination of two questions, the first asked where they went first and the second asked where else did they went when they looked for information about health or medical topics. These questions listed both social and media-based resources. I therefore

investigate the number of sources utilized in two parts using both questions: number of social networks contacts used to retrieve health information and number of media-based resources to retrieve health information. *Social networks* reflect the number of resources used from the following: organizations, families, friends/co-workers, libraries, complementary, alternative or unconventional practitioners, and health insurance providers. *Media-base resources* reflect the number of sources used from the following: books, Brochures/Pamphlets, Internet, Magazines, Newspapers, Telephone information number, and Television.

Form - Health Information Seeking Behavior (HISB): Two survey items were used to measure the form of health information seeking.

The first survey question asks about the perception of patients' trust of the health information to which they have access from two social network resources (medical and family/friends social networks).

The second survey item asks about the perception of retrieving current/reliable information from the two same social relationships (medical and family/friends social networks).

These measures were kept independent and were not collapsed into a single measure to provided one score for the purpose of simplifying the model and gaining a better understanding of each variable-trust and reliability.

Analysis

The data collected is all statistically analyzed using SPSS software. Data analysis is reported in four sections. The first section, demographics, is to characterize the population with basic statistics. The second section, demographics and self-perceived health status, tests hypothesis 1 and 2 using t-tests and ANOVAs to determine whether there are any mean differences statistically significant in perceived health status for both racial groups and socioeconomic groups. The third section, demographics and HISB, tests hypothesis 3 through 12. It concerns assessing quantity of HISB along both racial and socioeconomic groups. That is looking at the number of resources for social and media-base networks as well as the frequency participants engage in HISB. This section also explores the relational characteristics, *forms* of health information seeking behaviors, along racial and socioeconomic groups; perception of trust and reliability of two social relationships resources (medical and family/friends). In regards to models predicting perceived health status, section four addressing hypothesis 13 through 16 contains regression analysis to see if any of the investigated variables affects or explains self-perceived health status. These statistical analyses specifically investigate any significant changes to the racial or socioeconomic status and self-perceived health status in reference to both *quantity* and *form* of HISB.

These analyses will inform us of the role social capital plays in regards to health information seeking as a mechanism by which minority or lower socioeconomic status groups/ individuals could substantially benefit from strengthening their social networks. Race and income are considered important social characteristics that impact health information seeking behaviors. It remains unclear, however, as to how health information

seeking affects self-rated health status along race and income among patients with chronic conditions.

Limitations

There are a few limitations to this study. Firstly, the response rate was lower than anticipated. In my study there was a 35% response rate. This was, however, sufficient to achieve statistical significance. In other words, I had enough survey samples to enable me to generalize to my sample population. Secondly, the number respondents belonging to specific racial/ethnic were low. There were insufficient numbers in different racial/ethnic groups that I decided to place them all together into one group. The group Non-White accounts for different Non-White racial groups and includes everyone who identified themselves as Hispanic. This Non-White group is still small and therefore is a major limitation. However, the group is large enough to run statistical analysis but statistical significance is more difficult to achieve.

And, lastly, although self-perceived health status is a reliable indicator and numerous studies have previously used it, future research could investigate if social capital measured by both HISB quantity and quality differ in regards to actual health status. There are some studies that indicate self-perceived health status maybe a better indicator than actual health status, but other studies have also found that self-perceived health status is not an accurate measure and therefore it is better to use actual health status. It would be interesting to know and explore whether perceptions disguise or enhance any social capital inequalities in comparison when using actual health status.

RESULTS

General Population Characteristics

A total of 305 surveys were returned and entered into SPSS. About 93% of respondents indicated not receiving any help completing the survey. A large percentage of the population (N: 302 Missing 3), 95%, indicated engaging in health information seeking behaviors (HISB). Sixty one percent indicated seeking health information for their own use, 10.7% indicated seeking health information for someone else and 27.3% of the survey respondents indicated engaging in health information seeking behaviors for both themselves and for someone else. When questioned about the last time they sought out health information (N: 289) Missing: 16), 84.6% reported doing so within the last week, 38.8% indicated within the last month, 5.5% indicated within the last year.

The kinds of health information most needed among this population are diagnosis information, medication, and prevention information. Sixty six percent indicated diagnosis information, 30.3% indicated medication, and 25.8% indicated prevention information as their primary kind of health information needed. These numbers are not mutually exclusive. For the type of health information needed: 45.9% of the respondents indicate they would like explanation information (e.g. information that describes a diagnosis), 45.6% reported wanting to receive advice information (e.g. next step information), and lastly 20.4% reported wanting recommendation information (e.g. web sites or visit).

On average, health care utilization among this sample population is high. Within the past 12 months of taking the survey 59.7% report visiting a health care professional

five or more times to get care not including emergency room encounters. Out of this percentage, 28% indicated visiting a health care professional 10 or more times. Literacy questions revealed the following: more than half of the population (N = 298; missing 7) indicated understanding medical statistics: 52.2% reported statistics are/were easy and 29.2% reported they were very easy. 49.5% reported generally preferred numbers when giving information about the chance of something happening. A fourth of the responders, about 21%, reported preferring word and 28% indicated no preference.

Demographics

About half of the population identified as male (44.9%). The age ranged from 22 to 97, with a median age of 65 (N = 296 Missing: 9); 42.3% of the responders are between the age of 18 and 64 and 54.8% of the responders are 65 years or older. The following are tables break down education and annual income level (N = 305; Missing 2).

Education Level	Percent
High School Diploma or less	12.8
Some College	24.3
Postgraduate Degree	32.5

Income Level	Percent
Less than \$35,000	12.8
\$35,000 to \$ 75,000	24.3
More then \$75,000	32.5

The racial breakdowns of the responders are as follows (N = 297 Missing: 8): 84.9% White, 3.9% Asian-American, 2.3% Black/African-American, 0.7% American Indian/Alaska Native, 0.3% Native Hawaiian/Other Pacific Islander, and 3.9% Other. Nearly 95% of respondents (N = 298 Missing: 8) are not Hispanic/Latino. For the

purposes of this study we used the following racial groups: 83.9% White and 13.4% Non-White.

Demographics and Self-Perceived Health Status

The hypotheses that are tested during the statistical analysis and the findings will each be reported simultaneously. This section reports on the significant relationships found between self-perceived health status along racial and socioeconomic status.

1. H1: Non-Whites will have lower Self-Perceived Health Status than Whites.

Table 1 displays the mean differences on multiple independent variables between Whites and Non-Whites. There is no significant difference between race and Self-Perceived Health Status, but there is a significant difference ($P < .001$) between race and income as well as between race and education. Whites have higher income than Non-Whites. Whites are also more educated compared to the Non-Whites. Therefore hypothesis one is not supported. Non-Whites do not differ in their Self-Perceived Health Status compared to Whites when income and other factors are controlled for.

Table 1: Mean Differences between Whites and Non-Whites

	White	Non-White	T-Test Sig
Self-Perceived Health Status	3.085	2.846	
Income	5.59	3.9	***
Education	5.64	4.88	**

* $P < .1$, ** $P < .05$, *** $P < .001$

2. *H2: Individuals with lower socioeconomic status will have lower Self-Perceived Health Status than individuals with higher socioeconomic status.*

Socioeconomic status is measured by both income and education. Table 2 demonstrates the mean differences of self-perceived health status for the three categories of income and for the four categories of education. There is a statistically significant difference between income and Self-Perceived Health Status ($P < .001$). As income increases, higher Self-Perceived Health Status is reported. Self-perceived Health Status also increases as the level of education increases. The mean differences are statistically significant as well. Thus, hypothesis 2 is supported. Both income and education are significantly related to Self-Perceived Health Status.

Table 2: Mean Differences among Income and Education Levels

Income	Self-Perceived Health Status
< \$35,000	2.51
\$35,000 to \$75,000	3.01
> \$75,000	3.54
ANOVA	$P < .001$
Education	
HS or Less	2.62
Vocational or Some College	3.03
College Grad	3.13
Postgrad Deg	3.23
ANOVA	$P = .035$

Demographics and Health Information Seeking Behaviors

This section reports relationships between first demographics and HISB quantity followed by the relationship between demographics and HISB form along both racial and

socioeconomic status. Once again, I will re-introduce the hypothesis, report the results, and present a table for each.

Hypothesis 3 investigates the degree to which race and socioeconomic status impacts the quantity of health information seeking behaviors. Quantity characterizes the number of sources individuals’ access to retrieve health information. There are two parts to the quantity measure: first, the total number of resources individuals use to access health information (for both social and media-based resources), and second the frequency at which individuals engage in seeking health information.

3. *H3: Non-Whites will have lower levels of Health Information Seeking Behaviors Quantity than Whites.*

Tables 3 demonstrate there are no statistically significant differences between Whites and Non-Whites. Non-whites are no different compared to Whites in the amount of resources for both types of resources (Social Relationships and Media-Base Resources). It seems Non-Whites have a higher mean for Frequency of Seeking, but this difference is not statistically significant and therefore hypothesis 3 is not supported. Thus, Non-Whites do not have lower levels of Health Information Seeking Behaviors Quantity.

Table 3: Relationship between Race and HISB Quantity

	Social Relationships	Media-Base Resources	Frequency of Seeking
White	1.38	1.64	2.38
Non-White	1.22	1.46	2.63
T-Test	P=.417	P=.427	P=.097

*P < .1 , **P < .05, ***P < .001

4. 4: *Individuals with lower socioeconomic status will have lower levels of Health Information Seeking Behaviors Quantity than individuals with higher socioeconomic status.*

Hypothesis four, testing the relationship between socioeconomic status and HISB Quantity, is demonstrated in table 4. Income is not statistically significant with either Frequency of Seeking or with the number of sources for Social Relationships. However there is a slight significant relationship with Media-Base Resources ($P < .05$), although the difference is not linear. Although education is statistically significant when considering Frequency of Seeking, this is attributed to the gap between HS or Less group and the Postgraduate Degree group. The other means are not increasing linearly and therefore education cannot be concluded as statistically significant with either Frequency of Seeking or Social Relationships or Media-Base Resources.

Table 4: Relationship between Socioeconomic Status and HISB Quantity Measures

Income	Frequency of Seeking	Social Relationships	Media-Base Resources
< \$35,000	2.41	1.47	1.63
\$35,000 to \$75,000	2.44	1.35	1.34
> \$75,000	2.42	1.26	1.84
ANOVA	P=.987	P=.479	P=.027
Education			
HS or Less	2.11	1.08	1.44
Vocational or Some College	2.39	1.53	1.70
College Grad	2.29	1.15	1.50
Postgrad Deg	2.63	1.40	1.71
ANOVA	P=.005	P=.097	P=.517

* $P < .1$, ** $P < .05$, *** $P < .001$

Forms of HISB are measured with concepts of trust and reliability. These measures are specifically in reference to the health information individuals receive from both

medical and family/friends. These two social networks are the primary focus for this section. Forms of Health Information Seeking attempts characterize the strength of these social networks.

5. *H5: Non-Whites will have lower levels of trust on medical social networks than Whites.*
6. *H6: Non-Whites will have higher levels of trust on family/friends social networks than Whites.*

Table 5 reports the results of t-tests that examine if there are any differences between Whites and Non-Whites perception of trust in regards to Medical social network and Family/Friends social networks. There was no statistically significant difference in the degree of trust Whites (5.53) and Non-Whites (5.41) have over the health information provided by Medical social networks. However, Non-Whites reported more strongly trusting the health information they retrieve from their Family/Friends (3.63) compared to Whites (2.98). Therefore hypothesis 5 was not supported, but hypothesis 6 was supported. Family/Friends social network trust is significantly higher among Non-Whites.

Table 5: Relationship between Race and Perceived Trust of Health Information Source

	Medical Trust	Family/Friends Trust
White	5.53	2.98
Non-White	5.41	3.63
T-Test	P=.501	P =.027**

*P < .1 , **P < .05, ***P < .001

7. *H7: Non-Whites will have lower levels of perceived reliability on medical social networks than Whites.*
8. *H8: Non-Whites will have higher levels of perceived reliability on family/friends social networks than Whites.*

Table 6 reports the results of the t-tests that examine if there are any differences between Whites and Non-Whites reliability of Medical social networks. As table 6 demonstrates there are no statistically significant differences on the degree Whites and Non-Whites perceive reliability of their Medical or their Family/Friends social network. Thus, there is no relationship between race and perceived reliability of these two sources. Hypothesis 7 and hypothesis 8 are not supported.

Table 6: Relationship between Race and Perceived Reliability of Health Information Source

	Medical Reliable	Family/Friends Reliable
White	63%	9%
Non-White	53%	9%
ANOVA	P=.280	P= .932

*P < .1 , **P < .05, ***P < .001

9. *H9: Individuals with lower socioeconomic status will have lower levels of trust on medical social networks than individuals with higher socioeconomic status.*
10. *H10: Individuals with lower socioeconomic status will have lower levels of trust on family/friends social networks than individuals with higher socioeconomic status.*

Table 7 demonstrates trust on Medical or Family/Friends social networks did not differ along the three income groups. This is the case for education as well; individuals from the four groups did not differ significantly in respect to their perception of trust of doctors/health care professionals or family/friends. Thus, there is no relationship between

socioeconomic status and trust on Medical social networks or for Family/Friends social networks. Hypothesis 9 and 10 are both not supported.

Table 7: Relationship between Socioeconomic Status and Perceived Trust of Health Information Source

Income	Medical Trust	Family/Friend Trust
< \$35,000	5.45	3.18
\$35,000 - \$75,000	5.62	2.95
Above \$75,000	5.43	3.05
ANOVA	P=.379	P =.666
Education		
HS or Less	5.31	3.56
Vocational or Some College	5.47	2.94
College Grad	5.58	2.86
Postgrad Deg.	5.54	3.08
ANOVA	P=.642	P=.228

*P < .1 , **P < .05, ***P < .001

11. *H11: Individuals with lower socioeconomic status will have lower levels of reliability on medical social networks than individuals with higher socioeconomic status.*
12. *H12: Individuals with lower socioeconomic status will have higher levels of reliability on family/friends social networks than individuals with higher socioeconomic status.*

Lastly for HISB forms and demographics, table 8 does not reveal income to differ in the degree of reliability perception for either Medical social networks or Family/Friends social networks. For education, the value of the mean increases as income increases, but for the Postgrad group it drops. Perceptions that Family/Friends provide reliable health information were also not statistically significant along income. Hypothesis 11 and 12 are not supported. Thus, socioeconomic status and reliability of these two sources have no

statistically significant relationship meaning there is no relationship between social class status and degree of perception for reliability on the two social networks.

Table 8: Relationship between Socioeconomic Status and Perceived Reliability of Health Information Source

Income	Medical Reliable	Family/Friend Reliable
< \$35,000	55%	12%
\$35,000 - \$75,000	65%	10%
Above \$75,000	65%	6%
ANOVA	P=.314	P =.395
Education		
HS or Less	45%	14%
Vocational or Some College	61%	10%
College Grad	64%	4%
Postgad Deg.	64%	10%
ANOVA	P=.286	P=.394

*P < .1 , **P < .05, ***P < .001

Regression Analysis for Self-Perceived Health Status

The hypotheses that are tested during the statistical analysis and the findings will each be reported simultaneously. This section reports on whether health information seeking behaviors quantity and/or characteristics significantly explain or account for Self-Perceived Health Status; and, whether these variables change any racial or socioeconomic relationship with self-perceived health status.

13. *H13: Controlling for HISB Quantity will lessen race effects on self-perceived health status.*
14. *H14: Controlling for HISB Quantity will lessen socioeconomic status effects on self-perceived health status.*

Table 9 reports the results of regression analysis investigating whether racial or socioeconomic status relationship changes due to HISB quantity (both social relationships and media-based resources). Model 1 and Model 2 test hypothesis 13 while Model 3 and Model 4 tests hypothesis 14. From Model 1 to Model 2 the amount predicted by the independent variables remains unchanged. Both models explain for only 2.5-3% of the variance for Self-Perceived Health Status. Therefore, HISB quantity has no significant effect on the relationship between race and Self-Perceived Health Status. Hypothesis 13 is not supported.

Model 3 and Model 4 explain more of Self-Perceived Health Status, 15%. Notice that education is no longer significant; instead only income remains statistically significant in explaining the Self-Perceived Health Status. Income however does not change significantly as HISB quantity variables are added as Model 3 and 4 shows. Therefore hypothesis 14 is not supported.

Models 5 and 6 include all demographic variables in the same model, and provide further confirmation that the data does not support Hypotheses 13 and 14. The effects of income and race stay consistent when HISB measures are added. Indeed, the only variable in Model 6 that has any effect on Self-Perceived Health Status is income. Overall these models are not strong, predicting only about 15% of the variance in Self-Perceived Health Status.

For the last two models, 7 and 8, an interaction variable between Frequency and Social networks as well as Frequency and Media-based resources are added into the regression analysis predicting perceived health status in order to further explore the

relationship between HISB and Self-Perceived Health Status. In Model 7 when Frequency*Social networks there was an increase in the degree the model accounted for the Self-Perceived Health Status, 1.163. However everything remained the same. But in Model 8 with the Frequency*Media-based resources, both this variable and Media-based resources were significant ($p < .05$). This indicates that the relationship between Number of Media-Based Resources and Self-Perceived Health Status is dependent on the Frequency of Seeking. The last section of the results develops this interesting finding further.

Table 9: Regression Analysis Predicting Self-Perceived Health Status & HISB Quantity

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Race (White)	0.246	0.134			-0.1	-0.142	-0.153	-0.175
Age	-0.003	-0.003			0.002	0.002	0.002	0.002
Female	-0.295**	0.279***			-0.116	-0.104	-0.109	-0.093
Income			0.178***	0.178***	0.169***	0.173***	0.175***	0.175***
Education			0.003	-0.038	0.015	-0.033	-0.039	-0.033
Frequency		0.032		0.016		0.030	-0.047	0.257*
Social Relationships		-0.092		-0.032		-0.025	-0.158	-0.022
Media-Based Resources		0.027		0.004		-0.006	0.000	-0.389**
Freq* Social							.051	
Freq* Media								.158**
R Square	0.024	0.027	0.151	0.138	0.148	0.133	0.136	0.163

* $P < .1$, ** $P < .05$, *** $P < .001$

Interaction Variable: Frequency*Media-Based Resources

Further exploration of the relationship between HISP and Self-Perceived Health Status reveals interaction term between Frequency*Media-based resources is significant

as demonstrated in the multiple regression analysis Model 8 and income remained a significant predictor. Thus, the relationship between Media-based Resources and Self-Perceived Health Status is dependent on the Frequency of Seeking. As table 10 demonstrate, for predicted values while holding age, income, education, race, and gender (white and female) constant, as the number of sources increases among individuals who seek health information rarely or sometimes, their Self-Perceived Health Status gets worse. However, as the Number of Media-based Resources increases for individuals who claim to seek often or all the time, their self-perceived health status gets better. Number of Media-based resources has a negative effect among rare seekers, but a positive effect on individuals who seek all the time.

Table 10: Interaction between Frequency of Seeking, Media-Based Resources, and Self-Perceived Health Status.

Frequency of Seeking	Number of Media Resources	Predicted Perceived Health Status
Rarely	1	3.72
Rarely	3	3.26
Rarely	5	2.79
Rarely	7	2.33
Sometimes	1	4.13
Sometimes	3	3.99
Sometimes	5	3.84
Sometimes	7	3.69
Often	1	4.55
Often	3	4.72
Often	5	4.89
Often	7	5.06
All the Time	1	4.96
All the Time	3	5.45
All the Time	5	5.93
All the Time	7	6.42

15. *H15: Controlling for HISB Forms will lessen race effects on self-perceived health status.*
16. *H16: Controlling for HISB Forms will lessen socioeconomic status effects on self-perceived health status.*

Table 11 reports the results of regression analysis, investigating whether racial or socioeconomic status relationship changes due to the form of HISB (both trust and reliability of two social networks). Model 1 and Model 2 test hypothesis 15. From Model 1 to Model 2 the amount of variance explained by the independent variables does increase; however, race remains insignificant. The form of HISB, for Medical and Family/Friends social networks, incorporations do not change the original relationship. The strongest predictor in these two models is gender. Therefore, form of HISB has no significant effect on the relationship between race and Self-Perceived Health Status. Hypothesis 15 is not supported.

Model 3 and Model 4 test hypothesis 16. Education once again is no longer significant in these models. Income is the only variable that remains a significant predictor of self-perceived health status. When the forms of HISB variables (trust and reliability) are added they do not change from model 2 or demonstrate any significant relationships. Income did remain a significant predictor of health. Therefore, form of HISB has no significant effect on the relationship between socioeconomic status and Self-Perceived Health Status. Hypothesis 16 is not supported.

Lastly, Models 5 and 6 include all demographic variables in the same model, and provide further confirmation that the data does not support Hypotheses 15 and 16. The effects of Income and Race stay consistent when forms of HISB measures are added. Indeed, the only variable in Model 5 and 6 that has any effect on Self-Perceived Health

Status is Income. The amount of variance predicted by these models overall are not strong, predicting only about of the variance in Self-Perceived Health Status.

Table 11: Regression Analysis Predicting Self-Perceived Health Status & HISB Forms.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Race (White)	0.246	0.18			-0.1	-0.146
Age	-0.003	-0.004			0.002	0.002
Female	-0.295**	-0.292**			-0.116	-0.074
Income			0.178***	0.192***	0.169***	0.184***
Education			0.003	-0.026	0.015	-0.007
Medical Trust		0.068		0.078		0.077
Family Trust		0.09		0.086		0.087
Medical Reliability		0.11		0.009		0.047
Family Reliability		-0.33		-0.271		-0.269
R-Square	0.024	0.050	0.151	0.19	0.148	0.187

*P < .1 , **P < .05, ***P < .001

Summary:

SPSS analysis of the 305 surveys returned by patients with chronic conditions concerning their Health Information Seeking Behaviors (HISB) revealed three major important findings. First, my data did not demonstrate a linear relationship of Self-Perceive Health Status by race, but did reveal one for socioeconomic status. Secondly, quantity of HISB did not differ by either race or socioeconomic status, but form of HISB measured by trust revealed Non-Whites trust their Family/Friends social networks significantly more compared to Whites. And, lastly although the HISB measured did not alter the original relationship between race and Self-Perceived Health Status nor between socioeconomic status and Self-Perceived Health Status, my data did reveal an interesting interaction effect concerning Self-Perceived Health Status and Media Based Resources.

This relationship is dependent on the Frequency of Seeking. That is while holding demographic factors constant, an increase in the more Number of Media-based resources used among less frequent seekers the worse of Self-Perceived Health Status they reported, but an increase in the more Number of Media-based Resources used among all the time seekers the better of Self-Perceived Health Status they reported.

DISCUSSION

I investigated the role of Health Information Seeking Behaviors (HISB) as a means to measure social capital in terms of amount and frequency use of social relationships and media-based resources as well as in terms of amount of trust and reliability of medical and family/friends social networks among patients with chronic conditions. Among the growing population of patients with chronic conditions, the ability to effectively access social networks is of critical importance. Social capital is necessary to cope with the everyday difficulty of managing a condition that necessitates many physical and emotional adjustments. It has been shown that a lack of knowledge and insufficient social support network will function as barriers to higher quality of life perceptions among patients with chronic conditions (Bayliss et al. 2003; Jerant et al. 2005). It is thus imperative for these individuals to be socially well integrated in order to access valuable information concerning health issues.

The study was designed to assess whether participating in HISB ameliorates any harmful impacts of race and socioeconomic status on self-perceived health status. That is, does frequent usage and access to more sources, and trust and reliability of medical and family/friends social networks that are utilized for health information translate into a better perception of health status, and does this differ by race and class? These next sections highlight three major findings and I use the concept of social capital in each section to help explain and account for either the significant or lack of significant relationships among self-perceived health status, race, socioeconomic status, and HISB.

A Dialogue between Race and Socioeconomic Status

Contrary to the literature on racial health disparities but consistent with the literature on socioeconomic health disparities, I did not find a significant relationship between race and self-perceived health status (H1), but I did find a strong relationship between socioeconomic status and self-perceived health status (H2) for patients with chronic conditions. This suggests that income is a better predictor for self-perceived health status than race. Because of the small minority population within my sample, I am unable to conclude that race does not matter. However, it is certain that socioeconomic status is a strong predictor for self-perceived health status. To help explain my results I further examined the interconnectedness of socioeconomic status and race in regards to health.

A growing number of scholars assert that racial/ethnic health disparities are best understood from a social class perspective. In other words, scholars have argued that socioeconomic status is the real culprit behind racial disparities. Kawachi et al. (2005) discuss this in two ways. First, they point to the over-representation of racial and ethnic minorities among socioeconomically disadvantaged groups, and second, they cite the growing body of literature that suggest when adjusting racial disparities in health for social class indicators the racial differences in some cases are entirely eliminated. For example, the amount of wealth and debt at an income level differs by racial/ethnic groups: Hispanics and African Americans have less wealth than non-Hispanics Whites (Bravemen et al. 2005). As a result, some scholars argue that health policies need to solely focus on social class because race is secondary. Addressing the economic inequalities will essentially address the racial/ethnic inequalities.

There are studies, however, that demonstrate the persistence of racial health disparities even when controlling for SES. Scholars assert that race, independent of socioeconomic status, is an important variable necessary to address and investigate in order to tackle health disparities (Meyers 2007). Studies that explore factors not directly related to social class but integral to the study of racial health inequities such as racial discrimination and harassment find they are related to poorer health status (Sage 2004). These are some things against which a socioeconomic status cannot buffer. The racial ethnic differences between groups should not be viewed as autonomous, but as the consequence of the longer history of institutional racism and discrimination that is present within numerous structural institutions such as hospitals. Racism in particular reproduces disadvantages in health outcomes among racial and ethnic groups but is not a direct measure of socio-economic status. Some studies have found that doctors are somewhat less likely to refer African-American women for cardiac catheterization than White men (Schulman et al. 1999). These biases, although subjective, have quantifiable outcomes that reveal racial health disparities. Poor communication between the provider and the patient is another example of how race can affect health disparities. Racial and ethnic minorities' values and cultures influence the degree of question asking, concerns expressed, and the manner they are assertive during a medical interaction. Ashton et al. (2003) theorize that racial ethnic minorities are less likely to provide an illness narrative, which prevents the exchange of important health information. A racial or ethnic minority may not feel a sense of entitlement control, is very likely to be racially profiled by physicians or police, and feels the need to actively buffer against stereotypes or stigmatization during his or her illness process. These complex non-class factors must be

addressed. Race is a term that carries a lot of significance in everyday interactions. To ignore race is to disregard the historical context in which racial minorities have struggled and continue to do so today.

Despite an overwhelming amount of data regarding the inequities between racial groups, Americans seem to favor the perception of a color blind society due to the increasing attention class has gained as a stronger indicator of numerous outcomes such as health. Radicalized health inequities become mitigated as socioeconomic status has gained more importance. Part of the reason for the shift in focus from race to class is the numerous policies in the last century that address racial discrimination and other racial issues (e.g. higher education). It has been argued that such policies strip away hardships and barriers facing various racial minorities. In doing so, these policies facilitate the mobility of racial minorities into middle and even upper class. As a result, our modern society faces a time when hardships are more along socioeconomic status. Not all African Americans have limited access to resources, but all African Americans and other racial/ethnic groups including Whites from the lower socioeconomic ladders have limited access to resources. Although it is still debatable to what extent racial discrimination policies are effective.

Further discussion of the relationship between race and class is needed. As to whether SES is a stronger indicator of lower-self-perceived health status than race remains a much debated area (see, for example, Hayward et al. 2000). What is certain is that both are important and must be investigated in order to address health disparities. Even though my data reveals there are no racial differences in self-perceived health status and socioeconomic status is a better indicator of self-perceived health, I am unable to

agree with some scholars and recommend that health initiatives should thus center their efforts on social class because race does matter in a less economic manner. There remains a debate among scholars as to whether race or class more significantly affects health. What is certain is that both are important social variables. Neither can be disregarded. Both are imperative to study and central to continue investigating the multiple interconnected factors involved in the health disparity among patients with chronic conditions.

Future Research Some scholars explain studies' lack of finding racial health inequities is the result of either a) placing all minorities into one category and/or b) categorizing all chronic conditions into one category. In actuality, differences are inconsistent between different ethnic minority groups. For example, a study demonstrates Asians report better health than Whites while Native Americans consistently report worse health status (McGee et al, 1999). There are also differences in the manner racial/ethnic health disparities depending on what condition is being discussed. For example heart disease is the strongest type of chronic conditions that consistently reveals racial/ethnic inequities. In my study, I included all minorities into one category and all chronic conditions into one category. Therefore, race may still be an important variable in explaining the health disparities among patients with chronic conditions in regards to self-perceived health status. Further research may be needed to narrow the focus. My study that attempts to address a wide range of racial/ethnic populations and chronic illnesses could have suppressed potential differences.

HISB Quantity Social Capital – Does Quality Matter *More*?

The relationship between race and self-perceived health status as well as between class and self-perceived health status enabled me to set up the context through which to explore the manner social capital measured by various health information seeking behaviors (HISB) dimensions intersects these relationships. My focus on HISB reveals that measuring social capital by either HISB quantity may not be the best option to understand health disparities among patients with chronic conditions. This kind of measurement that reflects the concept social capital only captures a portion of the concept social capital. Therefore, future research should focus on other aspects of HISB to potentially understand and capture other important elements related to social capital that could add to the literature understanding the role of social networks in reference to racial and socioeconomic health disparities among patients with chronic conditions.

My findings were inconsistent with previous literature suggesting minorities and lower income groups are less socially integrated compared to Whites and upper class social groups (Tu et al. 2008). I did not find differences in the frequency by which any racial and ethnic or socioeconomic group (H3 & H4) engage in HISB. Nor did I find any difference in the number of either social networks or media based resources by race or socioeconomic status (H3 & H4). All of these groups seem to be engaging in HISB to the same degree. The lack of difference in either frequency or number of resources used that captures how equally socially integrated in social networks these groups are in comparison to one another. These findings could reflect the mere fact that patients with chronic conditions are in general heavy seekers of health information because they more

frequently experience uncertainty and disruptive biographies that drives and encourages social integration in order to cope successfully.

HISB social capital is particularly important for patients with chronic conditions. Patients with chronic conditions are real individuals who live day by day with conditions that require them to adjust their lifestyle in order to successfully manage their chronic condition(s). Regardless of the specific diagnoses, most patients suffering from chronic conditions often face similar challenges, such as dealing with symptoms, disabilities, negative emotional impacts, complex medication regimens, difficult lifestyle adjustments, and the struggle to obtain helpful medical care (Wagner 2001). Managing chronic conditions is not an easy task. Such an event radically transforms a patient's social reality and everyday life experiences. Access to resources such as support or information via social networks and even via media based resources is critical to successfully live with a chronic condition. It is possible then for patients with chronic conditions in general to actively become socially integrated in order to retrieve health information. Given these factors, it should not be surprising that there are apparently no racial or socioeconomic differences in the frequency of seeking health information. I found patients with chronic conditions across racial and socioeconomic group, are all engaging in HISB to the same degree.

This population's high health information seeking characteristic stems from a) uncertainty and b) disruptive biographies that among patients with chronic conditions is more common because of their higher complex needs and everyday lifestyle adjustments. Thus, their need for resources to cope with their role as a constant "sick" with many questions and concerns as well as actively trying to lead a "normal" life is difficult to do

alone. This population requires for themselves to put in more effort and attention in integrating themselves in order to have access to resources that will enable them to successfully cope and manage. This population would logically for obvious reasons regardless of race or socioeconomic status to more frequently engage and tap into multiple resources.

This finding regarding HISB quantity remains surprising though considering the multiple barriers racial/ethnic minorities and those from lower income groups face socially integrating into a wide number of social networks (see, for example, Kawachi, 2008) e.g. culture or language. It is possible, however, that because my sample population was prominently the racial ethnic identity White (about 84%), well educated (about 30% had at least post grad education) and largely an older age population (average age is 65), for such social factors such as language to no longer be relevant. Education level is a strong indicator of the lack of literacy issues. Literacy is a major barrier more common among less educated groups that prevents individuals from fully engaging in HISB (Cline and Haynes 2001). It is thus possible for my sample population to have those skills and abilities necessary to foster their social capital and expand. In addition, older age populations are characterized to be much more actively seekers in becoming socially integrated, because in the absence it is detrimental to their health. These demographic factors of my sample population could explain for the lack of significance.

Bourdieu and Coleman both made claims about the important of having extensive social networks thereby giving the individual/group more social capital. The increasing number of resources equates to more access to the resources. The results suggest that the *quantity* of health information that a person seeks via their social networks does not affect

self-perceived health status. Again I measure *quantity* of HISB by both the frequency and number of social and media-based resources. It is possible that the *quality* of health information seeking behaviors could reveal significant relationships along race and class lines. Kawachi (1991) concludes that both the *quantity* and *quality* of social networks matter. Having access to an extensive social network does not automatically ensure that individuals will make *effective* use of their social networks to access information. It may be the case that *quantity* of health information seeking may not matter as much if certain social or media base networks are stronger and therefore individuals are more likely to use those networks. It is necessary to consider the efficacy of the social capital, not simply the expanse of the social network. It is also important to consider the efficacy of media-based resources because numerous scholars have written about the danger of relying heavily on sources such as the internet. *Quality* may matter as much as, if not more than *quantity* when it comes to social capital.

Future Research This portion of the study would benefit from a qualitative expansion. What remains unknown are the kind of social networks minorities and lower socioeconomic groups among patients with chronic conditions are using. Such analysis would expand our understanding of how social capital matters among patients with chronic conditions. It would be incorrect to assume that ability to engage in HISB equates similar social network structures. That is the *quality* of the social networks matter as well. This kind of social capital could differ by race and class and should be more actively explored. I suggest the following two ways.

It is very possible that racial minorities might have the same number of social networks as Whites, but for Non-Whites' social network to be characterized as more

bonding social capital instead of bridging social capital. I bring these terms up in order to provide an explanation and a possible direction for future research to account for the lack of significant difference. Granovetter (1973) examines these different forms of social capital more in depth. Bonding social capital captures social networks that are similar to one another, while bridging social capital cross-cuts social groups capturing social networks that are not similar and often go beyond the actors' characteristics. A qualitative study exploring the different social capital – bonding or bridging - along racial/ethnic groups and socioeconomic groups give us more information as to the health information seeking behaviors patients with chronic conditions engage in.

Another interesting form of analysis that requires more qualitative research methods focuses less on the quantity and more on the quality of the social networks by investigating whether minorities and/or lower socioeconomic groups are closer to or further away from the *centrality* of their social networks. I bring this up because Christakis and Fowler (2009) argue the ease of obtaining resources available through networks is much higher if actors are closer to the center of their social networks rather than on the outer ends where information may eventually, if at all, trickle down. Thus although my study did not reveal any significant differences along the quantity of HISB social capital, research should more closely investigate the different forms and structures of social capital individuals can possess. These could also add to our knowledge of the relationship between social capital and health status in regards to understanding racial and socioeconomic health status health inequities.

Types of Social Networks along Race and Class

Lastly, although quantity and quality of social capital are both important, my study supports the claim that other researchers have made that we need to further investigate whether certain social networks are better at influencing patients' health more effectively (Lynch et al. 2000; McKenzie et al. 2002). This study explored two: medical social networks and family/friends social networks because of the possible racial and socioeconomic differences. Although my survey was limited I relied on two measures – trust and reliability – of the health information from these two social networks. Putnam (1995) discussed the importance of measuring trust because it facilitates more cooperation and exchange of resources within social networks. That is it strengthens the social capital individuals are embedded in making them more likely to affect behavioral change.

Findings, however, did not support previous literature, there was no difference in trust or reliability of medical social networks either along race or class (H5 & H7 & H8 & H9 & H11 & H12) and there was no difference in reliability of family/friends social networks (H10) but there was a statistical significance in reference to trusting family/friends social networks but only by race (H6). Non-whites more strongly trusted family and friends. Among patients with chronic conditions the support of both medical and family/friends are crucial to the successful management of their conditions, especially when speaking about an older age population.

Medical social networks encompasses a wide range of health care professionals, thus medical social networks is a reflection of the medial institution that historically has

gained credibility and trust because of its symbolic meaning. The lack of differences in trust or reliability would presume both groups among patients with chronic conditions are engaging in a collaborative provider-patient relationship. Trust fosters a meaningful social relationship that is action oriented and aligns with degree of familiarity (Fukuyama 1999). Social capital in both groups consists of not only having access to but also having established a stronger relationship with medical social networks. Trust is an indicator that reflects the degree of disclosure, the degree of comfort, and the frequency at which to use that social network when in need. My results reveal minorities and lower income groups are not in a disadvantage, but instead are just as likely to retrieve health information from medical social networks. Although contrary to the literature among patients with chronic conditions trust differences towards medical social networks are no different by race or class. This could be a reflection of the higher health care utilization rates among this population with frequent doctor appointments and other medical related tasks.

My finding concerned with perceived trust of family/friends social network by race is consistent with the previous literature. Non-whites are more likely to trust family or friends compared to Whites. Family and friends are more likely to have a stronger influence on the health practices of minorities. Although it is critical to note that family and friends do not always provide the most accurate or reliable health information. Regardless, the higher level of trust towards family and friends among minorities could be a reflection of culture, degree of comfort, or the extent to which family members can identify with their disease and illness.

Lastly, the extent to which identification with family or friends is another explanation for the finding one of the most common reasons I noticed on the survey when

individuals indicated highly trusting their family/friends social networks was they also mention because the family or friend could relate to what they are experiencing. In other words, the disease or condition the individual has been diagnosed has also been a diagnosis made in the family previously and so therefore the patients would rather go to the family or friend who has experience their illness and could provide guidance/information as to how to manage and understand their condition. This explanation could also explain the higher number of chronic conditions minorities suffer. Such prevalence I would argue has created a community and social networks by which individuals (in particular minorities) turn to when in need of health information or support.

Future Research An interesting pattern I picked up but could not further pursue because of the inconsistency was the surprising number of individuals who only trusted their family or friends if their family/friends social network included a medical or health care professional such as a doctor, a nurse, or a specialist. It would be of interest for future research to examine if trust is dependent on having medical family or friends as well as if the number of medial family or friends is at a higher rate in more affluent or among Whites rather than lower class or racial-ethnic minorities.

Not all social networks are equally weighed nor do they impact heath behaviors to the same degree. Lin (2001), in particular, speaks about how certain social networks have greater benefits and are therefore more likely to affect actions or behavior changes of individuals. For example, individuals located in a particular strategic location or position will have valuable social credentials and therefore be able to exercise a greater degree of power. The health information provided by these social networks would have

more impact on a patient's decisions. Individuals embedded in more useful social networks could result in much better health outcomes. The difficult is, however, in measuring what is considered to be "better" or more "useful."

Reflection and Summary

Another possible explanation for the lack of a significant findings among many of my HISB variables that captured social capital along both race and class may be that survey respondents receive care from a Northwest Hospital/Research Institution that has implemented a model to better meet the needs of older populations and those dealing with chronic conditions. The care model in this clinic uses people and technology to improve care coordination and the quality of care delivered in office based practices. This model specifically implements care managers into practices to facilitate care, motivate behavioral changes, and teach self-management for non-compliant or struggling patients. Under this model, the care team provides the support to help patients make decisions and to take appropriate action(s). This could consist either of providing basic education concerning their conditions, providing information concerning conditions or treatment, or providing resources to aid patients' ability to manage their conditions. Care managers specifically play an integral role in promoting positive self-management practices among patients.

Although I do not know which patients in my sample currently work with a care manager, all patients do receive care from the clinic where many of the health providers work with care managers. It is possible that health information seeking behavior practices are emphasized and encouraged at this facility with greater frequency than in the overall

population. This study therefore suggests the need for further investigation on the impact of the care models on patients' degree of health information seeking behaviors. Patient participation in such models would exemplify highly effective social capital even if the patient's social network is limited. I hypothesize that minority populations are receptive to such care models that diminish the impact of racial or ethnic minority and self-rated health status. However, more extensive research is needed before this claim can be proven definitively.

My general findings reveal that social capital is more complex than simply the social relations embedded in the social structure of society that enable people to retrieve resources such as health information to then co-ordinate action and to achieve desired goals. There are intervening variables that are necessary to consider holistically in order to gain a better idea of the process by which social integration via social networks along race and class facilitate health information seeking behaviors among patients with chronic conditions.

General Limitations:

One major limitation of my study that I would advice future scholars who wish to replicate my study is to included non-insured patients with chronic conditions. My study primarily focused on a population who all had access to health care services, this could potentially explain for the lack of difference in either the number of resources and perceived trust or reliability between racial or socioeconomic group. Individuals who lack insurance often find themselves with limited social capital and with social capital that may not included any kind of health care professional compared to an individuals who

are insured and thus via his membership with a health organization has access to a vast number of services and information. It would be of interest for future scholars to explore how social capital matters comparing insured and non-insured populations among patients with chronic conditions. Especially when the data reveals populations who are uninsured are likely to come from disadvantage background and insurance is a major barrier to any health care services or information. Thus, it is possible that the access to a medical professional in my study could have skewed the results. Future research should investigate into a comparison study.

CONCLUSION

Historically the medical profession has held power in terms of defining and responding to health and illness. Freidson in the field of medical sociology refers to this era as medical dominance, a time when medical professions determined how society understood the very nature of health and illness (1970/1988). The medical professions were the gatekeepers to any information concerning health and physicians had complete authority and power (McKinlay and Marceau 2002). During this time period, the medical profession was a glamorous activity because of their high degree of power and authority. However, the golden age of medicine is now arguably over due to a variety of factors, and this decline in medical dominance had led to a growth of a managed consumerism type of health care system.

Managed consumerism, an increasingly popular view that now characterizes our modern health care system, is when patients fully engage in protecting? Diagnosing? Treating? Need some kind of verb here their health. During the medical dominance period patients' wishes were not taken into account (Freidson, 1970/1988). However, the evolving needs of patients and the kind of patients with which health-care profession now work (particularly patients with chronic conditions) have shifted the social relations within health care. Physicians are no longer able to assert authority, but instead give up some of the power and authority to the patient. It is unrealistic for a provider to adequately meet all the support and information needs of patients if, for example, patients have five chronic conditions, are aged 65, and have caregivers. It is unrealistic for responsibility to fall solely to the physician. As a result, a move towards patients' power and control over their health has emerged. Coulter asserts that the era of treating patients

as passive is no longer acceptable and has come to an end (1999). Patients have no choice but to take on more responsibility because of the complexity of chronic conditions.

My concern, however, is that this transition has ignored the fact that patients with chronic conditions are not all in a position to adequately take on that kind of responsibility. Stacy et al. argue that the increase in the amount of health information seeking outside of the health care system strengthens this new conceptualization of patients' role as active participants of their health care and within the larger social institution of medicine (2009). Although my study did not find any differences between demographics and *quantity* of health information seeking or between demographics and health information seeking *forms*, it would be prudent for future researchers to further explore these relationships in light of the managed consumerism era. In order for patients to display an active role and be fully engaged in their health, a variety of resources and access to resources are necessary. This area of study has recently grown and I argue sociologists have an important role to play in this dialogue surrounding health disparities.

The Increasing Need to Employ the Concept of Social Capital in Health Literature

In the field of sociology there is minimal research being conducted on the role of social capital in health. There is a large body of literature on public health and social epidemiology. Although existing literature contains important and valuable information, the sociology field offers a unique perspective and contributes to the dialogue of health disparities. This study is one of the few studies among sociology that integrates social capital into the discussion of health disparities. The term social capital encompasses much and scholars have defined and operationalized it in multiple and various ways.

Social capital could be studied in relation to health behaviors or health attitudes via formal vs. informal social networks or horizontal vs. vertical social network analysis. The kind of model I examine is centered on HISB. However, as previously stated, social capital can be conceptualized in many different ways. An expansion is especially relevant during today's era because of the growing interest in health care due to the recent health care reform that resulted because of the growing outrageous health care costs. A body of literature has boomed in the last ten years concerning the enhancement of patients' self-management abilities in order to minimize the pressure and high utilization needs upon the health care system. Health care system are playing a large role in ensuring patients are successful in their active role. Thus investigating the multiple and interconnected social factors affecting health is important in order for our society to move towards the social model that acknowledges how intertwined our daily experiences are with our environmental surroundings.

Policy Implications in relevance to Health Care Reform

On December 24th, 2009 the house bill H.R. 3590 titled "The Patient Protection and Affordable Care Act" passed. President Obama signed this piece of legislation into law on March 23rd, 2010. Currently there are major changes that may be passed concerning our health care system in order to expand coverage for the large uninsured population. A portion of these changes actually entails the government giving more health information to citizens, such as mandating fastfood location to verbally inform citizens of the calorie intake for each and every meal item. Health information is an area of growing interest among politicians and in academia.

Based on the findings of my study I would strongly recommend policy makers to center their focus on the role of the health care provider as potential health information facilitators or transmitters. As previous literature and my study indicate, patients trust their providers. Providers thus have a unique position in the health care system to convey and/or suggest to their patients reliable and accurate internet sites to visit, or other resources they could look into further. One manner in which this could more systematically be implemented is to increase the providers' recommendations via the After Patients Visit Summary sheet that is provided to the patient after their visit. Currently, however, this is an unsystematic intervention and not all states require this process. This kind of intervention minimizes the potential for patients to retrieve inaccurate health information by providing patients a tangible paper with a list of resources and/or websites they can further explore after their visit.

The health care system should be invested in having patients access accurate and reliable information in light of the direct effects health information has on health behaviors. Access to health information could contribute to minimizing the current health care expenditures as well as health disparities.

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Appendix I: **Health Information SURVEY**

This survey is estimated to take about 20 minutes. There are five sections to this survey: health information seeking, health information needs, health information preferences, health status & health services, and an about you section. All information provided is kept confidential and will not be shared. **DO NOT INCLUDE ANY IDENTIFYING INFORMATION IN THIS SURVEY** (such as name, date of birth, or medical record number).

Please return the completed survey in the pre-paid envelope enclosed. **THANK YOU!** ☺

- ❖ To choose an answer, simply check the box that best represents your answer.
- ❖ Choose only one answer per question, unless the question indicates *mark all that apply*.

SECTION A: Seeking Health Information

1. Have you **ever** looked for information about health or medical topics from ANY source?
 - Yes
 - No *If no, Skip to Section B*

2. The most recent time you looked for information about health or medical topics, **where** did you go? *Mark one*
 - Books
 - Brochures / Pamphlets etc.
 - Organization
 - Family
 - Friend / Co-worker
 - Doctor or health care provider
 - Internet
 - Library
 - Magazine
 - Newspapers
 - Telephone Information number
 - Complementary, alternative, or unconventional practitioner
 - Health insurance provider
 - Television
 - Other

Specify: _____

3. Did you look or go anywhere else?

- Yes
- No

4. Where else did you go look? *Mark all that apply.*

- No, nowhere else
- Books
- Brochures / Pamphlets etc.
- Organization
- Family
- Friend / Co-worker
- Doctor or health care provider
- Internet
- Library
- Magazine
- Newspapers
- Telephone Information number
- Complementary, alternative, or unconventional practitioner
- Health insurance provider
- Television
- Other

Specify: _____

5. The most recent time you looked for information about Health or medical topics was it for...

- Myself
- For someone else
- Both myself and someone else

6. **When** was the last time you looked for information about health or medical topics?

- Within the last week
- Within the last month
- Within the last year
- Over a year ago
- Never

7. How **often** do you look for health information about health topics?

- Rarely
- Sometimes
- Often
- All the time

8. Based on the results of your most recent search for information about health or medical topics, how much do you **agree** with the following statements?

Strongly agree
Somewhat agree
Somewhat disagree
Strongly disagree

It **took a lot of effort** to get the information you needed ...

You **felt frustrated** during your search for the information...

You were **concerned about the quality** of the information...

The information you found was **hard to understand**...

9. Overall, how **confident** are you that you could get health-related advice or information?

- Completely confident
- Very confident
- Somewhat confident
- A little confident
- Not confident at all

10. In general, how much would you **trust** information about health or medical topics from each of the following?

A lot
Some
A little
Not at all

Doctor or health care professional...

A lot
Some
A little
Not at all

Family or Friends...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Newspapers....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Magazines...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radio...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Internet...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Television...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Charitable organizations...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government health agencies...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Religious organizations or leader...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. In the past 12 months, how often did you use the **doctor or health care professional** to look for health and medical information (for yourself or someone else)?

- Once a week
- One a month
- Every few months
- Less often

12. **Why** did you decide to use the doctor or health care professional to look for health information

Mark all that apply.

- A lot of information available
- Could get information immediately
- Convenient
- Free/inexpensive
- Could investigate anonymously
- Easily accessible/quick
- Most current/reliable information
- Other

Specify: _____

13. In the past 12 months, how often did you use the **internet** to look for health and medical information (for yourself or someone else)?

- Once a week
- One a month
- Every few months
- Less often

14. **Why** did you decided to use the internet to look for information? *Mark all that apply.*

- A lot of information available
- Could get information immediately
- Convenient
- Free/inexpensive
- Could investigate anonymously
- Easily accessible/quick
- Most current/reliable information
- Other

Specify: _____

15. In the past 12 months, how often did you use **family or friends** to look for health and medical information (for yourself or someone else)?

- Once a week
- One a month
- Every few months
- Less often

16. **Why** did you decided to use family or friends to look for information? *Mark all that apply.*

- A lot of information available
- Could get information immediately
- Convenient
- Free/inexpensive
- Could investigate anonymously
- Easily accessible/quick
- Most current/reliable information
- Other

Specify: _____

17. In the past 12 months, how often did you use **government health agencies** to look for health and medication information (for yourself or someone else)?

- Once a week
- One a month
- Every few months
- Less often

18. **Why** did you decided to use government health agencies to look for information?

Mark all that apply.

- A lot of information available
- Could get information immediately
- Convenient
- Free/inexpensive
- Could investigate anonymously
- Easily accessible/quick
- Most current/reliable information
- Other

Specify: _____

SECTION B: Health Information Needs

1. How many **community organizations** are you currently a member of?

- 1 2 3 4 5 6 7 8 9 10 11
- 12

2. Do any of these community organization(s) provide you with information on health?

- Yes
- No

3. Do you have friends or family members that you talk to about your health?

- Yes
- No

4. How **frequent** do you talk to these friends or family members about health?

- Very frequently
- Somewhat frequently
- Not very frequently

5. What **types** of health information do you most need (most being a 1 and least being a 7)? *Rank in order*

- ___ Diagnosis/Disease information
- ___ Medication
- ___ Prevention
- ___ Coping information
- ___ Support groups
- ___ Lifestyle (nutrition/exercise)
- ___ Access – e.g. insurance

Specify: _____

6. What **kind** of information do you most need?

- Recommendations (e.g. web links to visit)
- Advice (e.g. next steps guidance)
- Explanations (e.g. process description / education)

7. Specify your **top 3** concerns you are trying to address when you search for information?

SECTION C: Information Preferences

1. How would you like your health care team to provide you with information?

- On the After Visit Summary (AVS)
- In your medical records

- Letters/leaflets
- Via some health care professional (doctor or nurse)
- Through the patient site on-line (PHR)
- Having someone call by phone
- In person meeting or appointment
- Other

Specify: _____

2. **When** would you like to receive health information?

- During my appointment
- Directly after my appointment
- A week after my appointment
- Only when requested

3. Through what channels would you like to receive information?

- TV
- Newspapers
- Magazines
- Internet
- Doctor
- Other care professional (e.g. nurse)
- Family
- Friends
- Other

Specify: _____

4. Are you willing to fill out a questionnaire to tailor the health information you receiving to meet your specific needs?

- Yes
- No

SECTION D: Health Status and Health Services

1. Not including psychiatrists and other mental health professionals, is there a particular doctor, nurse, or other health professional that you see most often?

- Yes
- No

2. What **kind** of health professional do you see most often?

- A doctor
- A nurse
- Other health professional

Specify: _____

3. In the past 12 months, not counting times you went to an emergency room, how many times did you go to a doctor, nurse, or other health professional to get care for yourself?

- None
- 1 time 2 times
- 3 times 4 times
- 5-9 times 10 or more times

4. In the past 12 months, how often did you feel you could rely on your doctors, nurses or other health professionals to take care of your health care needs?

- Always
- Usually
- Sometimes
- Never

5. Overall, how would you **rate the quality** of health care you received in the past 12 months?

- Excellent
- Very good
- Good
- Fair
- Poor

6. Overall, how **confident** are you about your ability to take good care of your health?

- Completely confident
- Very confident
- Somewhat confident
- A little confident
- Not confident at all

7. Would you say that in **general** your health is:

- Excellent
- Very good
- Good
- Fair
- Poor

8. Now thinking about your **physical health**, which includes physical illness and injury, for how many days during the past 30 days was your physical health **not good**?

- Number of days: __ __
- None

9. Now thinking about your **mental health**, which includes stress, depression, and problem with emotions, for how many days during the past 30 days was your mental health **not good**?

- Number of days: __ __
- None

10. What is the **major** impairment or health problem that limits your activity?

- Arthritis/rheumatism
- Back or neck problems
- Fractures, bone/joint injury
- Walking problems
- Lung/ breathing problems
- Hearing problem
- Eye/vision problem
- Heart problem
- Stroke problem
- Hypertension/high blood pressure
- Diabetes
- Cancer
- Depression/ anxiety/ emotional problem
- Other impairment/ problem

Specify: _____

11. During the past 30 days, for about how many days have you felt **very healthy** and **full of energy**?

- Number of days: __ __
- None

12. During the past 30 days, for about how many days have you felt **very sad, blue, or depressed**?

- Number of days: __ __
- None

SECTION E: About you

1. What is your age? _____

2. Are you a male or female?

- Male
- Female

3. What is the highest grade or level of schooling you completed?

- Less than 8 years
- 8 through 11 years
- 12 years or completed high school
- Post high school training other than college (vocational or technical)
- Some college
- College graduate
- Postgraduate

4. Are you Hispanic or Latino?

- Yes
- No

5. Which one or more of the following would you say is your race?

- American Indian/Alaska Native
- Asian
- Black/African American
- Native Hawaiian/other Pacific Islander
- White
- Other: _____
- Prefer not to answer

6. What is your combined annual household income?

- \$0 - \$9,999
- \$10,000-\$14,999
- \$15,000-\$19,999
- \$20,000-\$34,999
- \$35,000-\$49,999
- \$50,000-\$74,999
- \$75,000-\$99,999
- \$100,000 to \$199,999
- \$200,000

7. Did anyone help you complete the survey?

- Yes
- No

8. In general, how easy or hard do you find it to understand medical statistics

- Very easy
- Easy
- Hard
- Very hard

9. People can talk about the chance of something happening using either words, like “it rarely happens” or numbers, like “There’s a five percent chance.” When people tell you the chance of something happening do you prefer they use words or numbers?

- Generally prefer words
- Generally prefer numbers
- No preference

THANK YOU for your time.
You responses are very helpful.

*Enclose this survey in the pre-paid envelope
and send it to us at OHSU. ☺*