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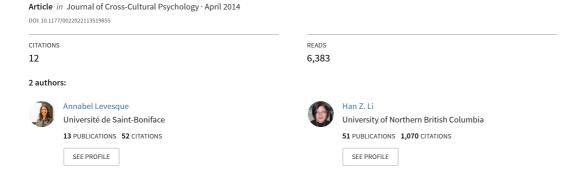
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What is This?

The Relationship Between Culture, Health Conceptions, and Health Practices: A Qualitative–Quantitative Approach

Annabel Levesque[1] and Han Z. Li[2]

Abstract

This study investigated cultural variations in health conceptions and practices using a quasi-experimental design. A total of 60 participants, recruited from three cultural groups in Canada, were individually interviewed between the fall of 2009 and the fall of 2010. Transcribed interviews were quantified according to the importance participants ascribed to emergent themes. The data generated three intriguing findings: (a) Consistent with an interdependent self-construal or ecological self, First Nations participants were more likely to report health conceptions and practices that expand beyond the individual self to include their family, the community, and the environment when compared with Anglophones and Francophones of European ancestry; (b) First Nations participants placed more importance on maintaining their traditions and culture as a health-promoting strategy, compared with Anglophones and Francophones; and (c) some of the health conceptions identified by all three groups significantly predicted the practices they engage in to promote health. These findings suggest that culture has a noticeable impact on health conceptions, which in turn influence health practices. There are at least two important implications: (a) Health policy makers need to take into account the role culture plays in the way people conceptualize health to ensure that health policies and programs reflect the particular beliefs and needs of their target populations and (b) health-care professionals need to be aware of the diverse views of their patients to provide culturally appropriate care.

Keywords

health conception, health practice, culture, Canada

Introduction

Health-care systems in many regions of the world face the challenge of addressing the varying health needs of their multicultural populations (Hakim & Wegmann, 2002; Jobanputra & Furnham, 2005; Torsch & Ma, 2000). Indeed, ethnic disparities with respect to certain health outcomes have been documented in many developed countries (House & Williams, 2000). In

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Canada, while recent immigrants often benefit from a healthy-immigrant effect (Beiser & Stewart, 2005; Newbold, 2005), long-established minority groups, including Aboriginal Peoples and Francophone Canadians, consistently rate poorly on health indicators (Bouchard, Gaboury, Chomienne, Gilbert, & Dubois, 2009; Health Canada, 2009).

To effectively address the health needs of cultural minority patients, it is imperative that health-care strategies be adapted to their social and cultural reality (Torsch & Ma, 2000). Yet, the biomedical model continues to dominate health-care practices (Armstrong & Swartzman, 1999; Jovchelovitch & Gervais, 1999; McMullin, 2005). As a cultural system, biomedicine promotes certain beliefs that guide health professionals in their attempts to understand, explain, make sense, and respond to health-related phenomena (Kleinman, 1978; Kleinman, Eisenberg, & Good, 1978; Landrine & Klonoff, 1992; O'Connor, 1998; Pachter, 1994; Winkelman, 2009). One such belief is the definition of health as the absence of physical illness (Engel, 1977; Huff, 1999). Being enculturated within the biomedical tradition, health professionals often disregard the notion that other conceptions of health exist (McCarthy, Ruiz, Gale, Karam, & Moore, 2004; Pachter, 1994; Sterlin, 2006; Winkelman, 2009).

Although patients' views on health tend to depart from the biomedical model, the pathogenic, body centered view it entails is more likely to resonate with the values and beliefs of middle-class, English-speaking patients of European ancestry (Ailinger & Causey, 1995; Kleinman et al., 1978; Landrine & Klonoff, 1992; McCarthy et al., 2004; O'Connor, 1998). In turn, conceptual differences between health professionals and their patients can impede therapeutic processes (Pachter, 1994; Winkelman, 2009), including patients' satisfaction with care (Armstrong & Swartzman, 1999), patients' trust in their doctors (Schlomann & Schmitke, 2007), and adherence to doctors' recommendations (Kerse et al., 2004).

Providing culturally competent health care requires that health professionals, planners, and policy makers gain awareness of cultural differences and similarities in people's health views and adapt their health strategies and programs accordingly (Bermejo, Kriston, & Muthny, 2012; Hakim & Wegmann, 2002; Jobanputra & Furnham, 2005; Torsch & Ma, 2000; Winkelman, 2009). Cross-cultural analysis represents a valuable tool that can contribute to increasing our understanding of health perceptions and beliefs across diverse cultural groups (Bermejo et al., 2012; Torsch & Ma, 2000). Using a combination of qualitative and quantitative methods, this research intends to shed light on the influence of culture and the minority status on health conceptions and practices among Anglophone, Francophone, and First Nations Canadians.

Culture, Health Conceptions, and Health Practices

Humans develop their conceptions of health and illness on the basis of their experiences within the context of their culture (Jovchelovitch & Gervais, 1999; Winkelman, 2009). The construction of health and illness is a dynamic process that progresses from the top down, meaning that new knowledge and experiences are assimilated to fit into existing cognitive structures or schemas (Edman & Kameoka, 1997; Landrine & Klonoff, 1992). The cultural belief system already in place provides a lens through which people can make sense, interpret, explain, and label their experiences (Goins, Spencer, & Williams, 2011; Jobanputra & Furnham, 2005; Kleinman, 1978; Kleinman et al., 1978; Torsch & Ma, 2000). Culturally based health conceptions and beliefs are then organized into what Kleinman (1978) referred to as "explanatory models" of health and illness, which include beliefs about possible causes of illness, onset and evolution of symptoms, pathophysiology of illness, severity of illness, and possible treatments (Huff, 1999).

Ample evidence has demonstrated cultural variations in health and illness beliefs, most notably with respect to etiological factors of illness. Helman (2001) described four categories of beliefs related to possible causes of illness, namely, the individual, natural, social, and supernatural worlds. A quantitative study in Great Britain (Jobanputra & Furnham, 2005) revealed that

Gujarati Indians believed in the influence of supernatural factors to a greater extent than British Caucasians. Beliefs about supernatural causes of illness are also prevalent among other Asian cultural groups, including Chinese, Vietnamese (Armstrong & Swartzman, 1999), and Filipinos (Edman & Kameoka, 1997), and among African countries (Chalmers, 1996), such as South Africa and Uganda (Furnham, Akande, & Baguma, 1999). In a systematic review, Landrine and Klonoff (1992) explored etiological beliefs of illness among American cultural groups and found a greater adherence to supernatural factors among Americans of African, Haitian, Mexican, Puerto Rican, Chinese, and Native ancestry when compared with White Americans.

Despite these evidences, the literature on cultural conceptions of health and illness is limited in that most studies focused on illness beliefs, especially beliefs about the causation and treatment of illness. Fewer studies have investigated definitions of health using a cross-cultural, comparative approach (Sterlin, 2006).

Torsch and Ma (2000) compared two groups of elders: Chinese in the United States and Chamorros of Guam. Members of both groups defined health in terms of wholeness among the physical, mental, and spiritual aspects of the self. They also believed that being healthy means having healthy relationships with others. Differences were noted on certain health definitions. Chamorros tended to define health in terms of functional capability, which the authors attributed to the influence of Spanish Catholicism and traditional Chamorro beliefs. Chinese participants, on the other hand, placed more importance on achieving a balance between opposite elements, reflecting Confucian, Taoist, and Buddhist traditions.

Hakim and Wegmann (2002) interviewed elders of African, Latin, Vietnamese, and First Nations ancestry in the United States. Functionality and independence were central to the participants' conceptions of health. Participants in all four groups defined health as a balance: among elements in the body for the Vietnamese; among the body, the the mind, and the the spirit for the other groups. First Nations interviewees were the only ones who did not include the absence of pain in their definition of health. Finally, African Americans were the only participants to describe a healthy person in comparison with other less healthy individuals. The authors highlighted that the participants' health conceptions were more similar than different, especially with respect to the functionality theme, which they attributed to the age factor.

A group of Swedish researchers (Hjelm, Bard, Nyberg, & Apelqvist, 2005) conducted a qualitative study among Arab, Yugoslavian, and Swedish men with diabetes to understand their health beliefs. Swedes and Arabs tended to define health as the absence of illness, while Yugoslavians defined health in terms of strength and described it as the most important resource in life. Arabs and Yugoslavians also emphasized the ability to function, to work, and to be financially independent as well as sexual functioning as health indicators, while Swedes talked about the ability to adapt to their current situation. Arabs described a healthy individual as someone who could perform his or her social roles, such as taking care of children and being the breadwinner. Diabetes was mostly attributed to individual and social factors. Swedes emphasized the role of lifestyle and genetic factors, while non-Swedish men mentioned the stress related to the adaptation process to a new country, disturbed relationships, and supernatural factors as possible causes of illness. Some of the Swedish respondents also identified family relationship as a factor that could affect their health. The authors highlighted the role of cultural and religious factors in the respondents' health beliefs as well as other social factors, such as age, employment, and the adaptation process to a new country.

Felton, Parsons, Misener, and Oldaker (1997) conducted a quantitative study among a group of Caucasian and African American students. The participants completed two health conception questionnaires. While the findings revealed no difference in the way these women defined health, differences were found in the practices they used to promote health. In comparison with African American participants, Caucasian women reported engaging in healthy nutritional practices and using interpersonal support to a greater extent. The authors attributed similarities in health

definitions to socioeconomic factors, while differences in nutritional practices were attributed to the influence of culture and traditions on eating habits.

Independent–Interdependent Self-Construals

Theoretical concepts and research findings presented above highlight the potential role culture plays in the way people conceptualize health and the practices they use to promote health. One dimension of cultural variability that appears relevant to our investigation of health conceptions and practices among Euro-Canadians and First Nations Canadians is the independent–interdependent self-construals. Markus and Kitayama (1991) stated that independent individuals see themselves as unique and distinct from others, whereas interdependent individuals view themselves "as part of an encompassing social relationship" (p. 227). Independent self-construal is the primary cognitive pattern in individualistic cultures, as is interdependent self-construal in collectivistic cultures, including Asian cultures.

Fryberg and Markus (2003) found that First Nations Americans were more interdependent in construing the self in relation to others compared with European Americans. However, this emphasis on interdependence should not be understood as evidence of First Nations Americans not having an independent view of the self. Fryberg and Markus (2003) found that with respect to the independent self subscale, European Americans and First Nations Americans did not differ. They concluded that while First Nations Americans value individuality (e.g., self-knowledge), they do not value individualism.

The concept of interdependent self shares many defining features with the ecological self. Both concepts involve an expanded sense of self that extends beyond the boundaries of the physical self. While the former consists in the integration of the social world into the structural configuration of the self, the ecological self also includes the natural world—all living beings, humans, and non-humans (Bragg, 1996). An ecological sense of self or "ecocentric identity" has been observed among Aboriginal Peoples (Bragg, 1996), including Canadian Inuit (Stairs, 1992).

Conceptual theories of the self, including independent–interdependent self-construals as well as the ecological self assume that the way the self is conceptualized has implications with respect to certain cognitive patterns (Bragg, 1996; Markus & Kitayama, 1991). One such consequence could be on the process of conceptualizing health.

A group of researchers (McCarthy et al., 2004) interviewed older Anglophone and Hispanophone women living in the United States to understand the meaning they ascribe to health. Anglophone women's views of health seemed to reflect individualistic values and an independent self-construal. They saw health as a personal construct and as the result of one's efforts. They emphasized the ability to function and to be independent, which depends on their physical wellbeing and the absence of illness. In contrast, Hispanophone women saw health as integrated with all other aspects of their lives, including their relationships with others, with God, and their environment. They explained, for instance, how their health could impact their relationships with others. These health beliefs correspond to a collectivistic cultural orientation and an interdependent self-construal.

In their review of health conception studies among Polynesian islanders, Capstick, Norris, Sopoaga, and Tobata (2009) stressed the influence of the relational self and of communal values, which are widespread in Polynesia, in the way Pacific islanders conceptualize health. They hold an expanded notion of health that incorporates the wellbeing of other people and the environment. They often describe a healthy person as being in harmony with the family, the community, and the natural world. Similar views of health articulated in terms of harmony and balance between the individual and the social, the natural, and even the supernatural worlds are evident among Native Hawaiians (McMullin, 2005), Haitians (Sterlin, 2006), Africans (Chalmers, 1996), and Chinese people in England (Jovchelovitch & Gervais, 1999). These notions of health are

reminiscent of an interdependent or ecological view of the self. It contrasts with the conception of health described as a bounded concept contained within the limits of the individual self commonly found in Western cultures, including the biomedical tradition (Chalmers, 1996). However, this independent view of health does not imply that social factors can not be considered as potentially affecting one's health. In fact, beliefs in the causal influence of social factors are common in Western and non-Western cultures alike. For instance, Swedish participants in the study by Hjelm et al. (2005) conceptualized health as an individual concept, but they believed that stress and family relationships could impact their own health.

Based on these empirical evidences, we hypothesized that First Nations Canadians in comparison with Euro-Canadians would adhere more to a conception of health and to health practices that transcend the boundaries of the self to include their social and natural environment.

Minority Status

In addition to culture, minority status should be taken into account when investigating health conceptions and practices in multicultural societies characterized by inequalities between cultural groups in terms of demographic weight, power, and social prestige.

In the recent past, Aboriginal and Francophone communities in Canada have been the targets of assimilationist policies aiming at eradicating their cultural knowledge, traditions, and languages (Bédard, 2002; Indian and Northern Affairs Canada, 2003). The effect these policies had on individuals' identification with their cultural heritage varies greatly within Francophone and Aboriginal communities, but they did not succeed in completely eradicating cultural traditions and languages (Morrissette, McKenzie, & Morrissette, 1993; Stebbins, 2000).

Recent studies have revealed that the revitalization of cultural beliefs, knowledge, and traditions, including traditional health beliefs and practices, is linked an effort to promote health and wellness among cultural minority groups (Jobanputra & Furnham, 2005; Jovchelovitch & Gervais, 1999; McMullin, 2005). For instance, the United Nations Forum on Indigenous Issues workshop conducted in Ottawa, which reunited Indigenous delegates from developed countries, focused on health indicators from the perspective of Indigenous Peoples. Along with the right to self-determination, the maintenance of culture and traditions was identified as an important health indicator (Taylor, 2008). A group of Canadian researchers reported lower suicide rates among First Nations youth living in communities engaged in practices aiming at ensuring cultural continuity, especially through the use of Aboriginal languages (Chandler & Lalonde, 1998; Hallett, Chandler, & Lalonde, 2007). McMullin (2005) investigated the health conceptions and practices of Native Hawaiians. The participants believed that regaining health requires Native Hawaiians to know and practice their traditional culture, which includes gaining access to traditional lands, establishing community gardens, and sharing food. Engaging in traditional cultural practices as a health-promoting strategy has been reported by members of other cultural minority groups, including Arab and Yugoslavian men living in Sweden (Hjelm et al., 2005), Chinese individuals in Britain (Jovchelovitch & Gervais, 1999), and Pakistani immigrants in the United States (Jan & Smith, 1998). It seems that regardless of their cultural origin, members of cultural minority groups are likely to report maintaining their traditions and cultures as a health strategy.

As members of cultural minority groups, we expected First Nations and Francophone participants to stress the importance of maintaining their traditions and culture as a health-promoting strategy.

Other Social Determinants of Health Conceptions and Practices

In addition to intercultural variations in health conceptions and practices, past research has shown significant variations within cultural groups, which highlights the concomitant influence of other

social determinants (Huff, 1999; Landrine & Klonoff, 1992). Past studies have shown that gender, age, health status, education level, employment status, place of residence, income, and marital status could also affect health conceptions (e.g., Goins et al., 2011; Mansour, 1994; Provencher, 2003).

Since these social factors tend to correlate with cultural affiliation, they should be taken into consideration when investigating the influence of culture on health conceptions.

Relationship Between Health Conceptions and Health Practices

Being part of the same rational system of thought and action, health conceptions and practices should be related to one another (Hufford, 1992; Kleinman, 1978; O'Connor, 1998). It has been suggested that the way health is defined and conceptualized represents a guide for actions; health behaviors and practices are thus informed by the conceptions of health held by individuals (Edman & Kameoka, 1997; Furnham et al., 1999; Hakim & Wegmann, 2002; Kleinman, 1978; Landrine & Klonoff, 1992).

Despite this theoretical assumption, few studies have attempted to link health conceptions and health practices (e.g., Bagwell & Bush, 1999; Phillips, 2005). For instance, Laffrey, Fong, and Loustau (1985) found that people who defined health in terms of the absence of illness tended to engage in illness-preventing behaviors, aiming at reducing the risks of contracting an illness, while those who defined health as a sense of wellbeing engaged in health-promoting practices, seeking to achieve a better, positive health status.

We expected that the health conceptions held by the participants would significantly predict the practices they engage in to promote their health.

The Present Study

Despite past efforts to investigate cultural conceptions of health and illness, these studies pose a number of limitations. First, few studies have focused on health definitions using a cross-cultural and comparative approach. Second, no researcher has yet investigated health conceptions across cultures using a mix of qualitative and quantitative research methods. Third, researchers have rarely controlled for potential confounders, making it difficult to draw conclusions about the influence of culture on health conceptions. Fourth, the relationship between health conceptions and health practices has not been fully investigated.

The present study addressed a gap in the literature by investigating health definitions and practices among three cultural groups, using a mix of qualitative and quantitative research methods, while controlling for potential confounders, and by linking health definitions to health practices. More specifically, four hypotheses were tested.

1. First Nations Canadians, in comparison with Francophones and Anglophones, would hold an interdependent view of health, that is, they would adhere more to a conception of health that transcends the boundaries of the self to include their social and physical environment.
2. First Nations Canadians, in comparison with Francophones and Anglophones, would be more interdependent in their health practices, that is, they would be more likely to engage in practices aiming at promoting the health and wellbeing of their social and natural environment.
3. Being minority groups in Canada, First Nations individuals and Francophones, in comparison with Anglophones, would be more likely to report maintaining their traditions and cultures as a health-promoting practice.
4. The health conceptions held by the participants, regardless of culture, would significantly predict the practices they engage in to promote their health.

Method

Participants

The study was conducted in an urban setting in Central Canada. Participants were 20 English-speaking Canadians of European ancestry (Anglophones), 20 French-speaking Canadians of European ancestry (Francophones), and 20 First Nations Canadians. Each group was comprised of 10 men and 10 women, who ranged in age from 20 to 68 years old.

Procedure

After a research ethics board granted its approval to conduct the study, participants were recruited in an urban setting. Those who self-identified as part of one of the three target groups were invited to take part in the study. Participants were selected to ensure that the three cultural groups were comparable with respect to other potential confounders, namely, gender, place of residence, and socioeconomic status.

A trained bilingual research assistant conducted face-to-face individual interviews between the fall of 2009 and that of 2010. The participants were asked to talk about the way they define health and the practices they use to promote their health. The interviews were audio-recorded and later transcribed with the participants' written consent. The participants also completed a short questionnaire measuring a few variables that have been linked to health conceptions in past studies, including age, education level, employment status, income, marital status, and perceived health status.

Interview responses were analyzed according to recurring themes with the use of NVivo 8. An inductive approach was used during the analysis, which means that the researcher let the themes emerge from the data instead of using theoretical codes identified a priori. A detailed description of the health definition and health practice dimensions is reported in Levesque (2011). The identified health definition dimensions included: (a) *negative health*, defined as the absence of illness, disability, and pain (e.g., "You know when you're healthy when you don't have indicators of un-healthiness, so that would be symptoms of disease, pain, wheezing."); (b) *functionality*, described as one's ability to function in one's daily life (e.g., "Because he can do all of his regular life things, I would consider him healthy even though he's in a wheelchair."); (c) *wellbeing*, meaning that being healthy involves a general sense of wellness (e.g., "Wellness is beyond not being ill. It's one step beyond where you actually have an exuberance of health."); (d) *developmental health*, which reflects a view of health as a continuous process toward better health as opposed to a static, achievable end state (e.g., "I don't think there's an end-goal in being healthy . . . it's travelling in the right direction, toward being more healthy."). (e) *physical health*, described in terms of physical appearance, level of energy, and physical functions (e.g., "My body functions on its own."); (f) *mental health*, which means feeling well emotionally and having good cognitive functions (e.g., "I think that it also has to do with the way you feel emotionally or psychologically and how you feel about yourself" and "Alertness, ability to do some reasoning on a quick level."); (g) *social health*, which involves having healthy relationships with others and the community (e.g., "Being connected in the community, getting up and interacting with people."); (h) *spiritual health*, defined in terms of spiritual wellbeing, a sense of peace, purpose, or meaning in life, and being grounded or connected (e.g., "In terms of the spiritual, having sort of a sense of purpose, connectedness to whatever it is that feeds one's soul."); and (i) *interdependent health*, which reflects a view of health that transcends the individual self to include one's family, community, and the environment (e.g., "If we're balance as individuals, then the two of us living together as a couple and as a family, the family can be in balance.").

Health practice dimensions are (a) *being proactive* (e.g., "There's probably a certain amount of luck in genetics and everything else and it's part hard work. I've always worked hard to stay

healthy."); (b) *understanding health needs* and selecting health practices accordingly (e.g., "I'm learning to know my body and what my body asks of me. If I need rest, to listen to my body and rest."); (c) having a healthy *lifestyle*, which involves eating well, exercising, and avoiding unhealthy behaviors (e.g., "I try to eat decently good. I try to stay away from a lot of the real junk foods or highly processed foods."); (d) maintaining a *balanced life*, which means getting involved in a variety of activities and not focusing on only one sphere of one's life (e.g., "I work and I go to school but I try to make it so that I still have time to do things I like, so that it's not just school and work."); (e) *managing stress* (e.g., "I go for a really hard run or something or I come home, I have a good meal, maybe have a glass of wine and just relax."); (f) *maintaining good relationships* with others and having a support system (e.g., "I see the importance of having a good circle of friends and of talking and sharing how I feel."); (g) seeking *medical care* (e.g., "I would see the doctor if there's an issue that I'm concerned about."); (h) engaging in *spiritual or religious practices* (e.g., "I still go to church regularly. Nature also has a spiritual side. Just appreciating nature. I find that for me when I'm sitting on the dock by the lake, it's almost like meditating."); (i) *maintaining traditions and culture* (e.g., "Once I started finding my culture is when I started becoming even more healthy."); and (j) *interdependent health practices* aiming at promoting the health of others and the environment (e.g., "With our environment, we have to be reciprocal in everything we do.").

Scoring procedure. The interview transcripts were randomly assigned to two research assistants, blind to the research hypotheses. They each scored half of the data according to the major health definition and health practice themes that emerged during the qualitative analysis. They evaluated the frequency and amount of details with which the participants discussed each of the health definition and health practice dimensions described above. Later, they assigned scores between 0 and 3. For the dimensions that were not identified, participants received a score of 0. Those who mentioned a dimension but did not elaborate or provided minimal details were given a score of 1. A score of 2 was assigned when participants discussed and elaborated on a dimension. Finally, they received a score of 3 for the dimensions that were central to their health conceptions, frequently discussing and providing elaborate descriptions and examples and emphasizing its importance in terms of their health conceptions.

Interview passages coded under negative health and for which seven participants received scores of 1, 2, and 3, respectively, are presented in Table 1. The proportion these passages represent relative to their entire interview is also presented in terms of percentages.

Since culture may influence health conceptions, the cultural background of the coders was taken into account as it can affect the way they interpret and assign meaning to the qualitative data they were asked to score. They were recruited from two different cultural groups: one being a Canadian of European ancestry, the other being an Aboriginal Metis Canadian. They are both fluent in English and in French. To ensure that the scoring procedure is reliable, the first author and the two research assistants independently scored the same nine interviews (15% of the data), which were randomly selected from the three cultural groups. Interscorer reliability coefficients (Pearson correlation) between each pair of scorers ranged from .91 to .93 and were deemed satisfactory.

Results

Descriptive Statistics

The descriptive statistics of the demographic variables and perceived health status are presented in Table 2. The three cultural groups were contrasted to verify whether they were equivalent with respect to these variables to ensure that cultural differences in health conceptions

Table 1. Interview Excerpts Coded as "Negative Health," Representing Each Scoring Category.

3	2	1
I think a person is healthy, umm, primarily if they don't get sick a lot. . . don't feel pain … He doesn't feel sick, he doesn't cough or spit up phlegm or bleed or any of the things that I would think about in somebody who's not healthy … Well chronic pain I think would stop you from being healthy … If you had to be very careful because you bruised easily, I would say that would make you not especially healthy . . . If you, umm, had difficulty with breathing, umm, my sister has chronic asthma and while she has it under control by drugs, I think she's ok but she's not healthy. She's not like robust about doing things all the time, she has to watch it. And I think that if you have to kind of be very careful, umm, with what you do because you might have trouble breathing or you might start coughing or you might bruise or you might break something, then, I would say that I wouldn't qualify that as a healthy body … Somebody with severe osteoporosis, a chronic lung issues, I wouldn't say that they're very healthy … There's a health reason why they don't have that mobility, they've gotten weak or they've broken bones multiple times or they've had a stroke. And I would say at that point their health is declining … I think lots of people are just generally healthy and it means that, yeah, they're not sick … I don't know if I feel healthy. I know when I'm sick and I know when I'm not sick. Umm, so if I'm not sick I would say that I was healthy. It's not something that weighs on my mind. I pay more attention to the time that I'm sick I guess and basically in absence of sickness, absence of that sort of thing, I don't, I don't think of myself as not being healthy … I wouldn't have any pain and I wouldn't have any, you know, soreness or anything like that and no cough and no runny nose and then I would feel healthy … They have no debilitating panic attacks or anything like that. They don't have depression to a debilitating degree so that they're able, very similar to physical health, they're able to get out there and do the things that make up a human life. I would think that a lot of people would define health as the absence of sickness and whether that be physical or mental sickness. If you're not crazy, you don't hallucinate, then maybe you're healthy, you know, like you don't cry all the time, you know. If you don't think about suicide, then you're mentally healthy … My body functions on its own. I don't have to take any medications, so that's a big thing to me. But my sister has to take medication every day and I don't have to take any, you know … You know, or other people who even have to take, umm, insulin all the time because they are, have diabetes, umm, I think they can maintain their health through that intervention. But their bodies themselves aren't that healthy. If they were stuck on an island, then they couldn't get their medication, they would, their health would deteriorate very quickly. So I think, I think of myself as having a healthier body than they have because mine can just sort of survive. Like primarily (respondent laughs), back in the days … When before there was a medication and in the caveman days, I would probably be still alive. So I think of that as kind of my body is healthy (9%).	Health is not feeling sick. … little colds and things that are, those things that are regularly even a flu can be regular, and I think it's more like worst things that prolong sickness I guess is not healthy. You know even as age, you know, little aches and pains and things that go wrong and it's all about aging. Or if it's like you know being sick for a week that's not unhealthy that's just kind of people get colds and flu's, that's kind of common but things that are, I guess, uncommon, you know, like, umm (silence), I know cancer is and heart attacks, strokes, those sorts of things … Well for me I don't have, umm, mental illness that requires medication, but other people just, you know, will and they will require medication so that's different so I'm just lucky. Like, umm, you know, like, some people they suffer with fibromyalgia or different, you know, arthritis and things like that, umm, you know, not very healthy when they're in chronic pain (5.89%). An absence of illness obviously and of wounds and problems with pain. I don't have any big booboos, I don't particularly feel any pain, I don't have any, any illnesses or the flu or any . . . I suppose you could describe it as a favorable physical state … well obviously there's an absence of illness, an absence of wounds, an absence of health problems. Umm, but also more than that, someone who, who finds time to exercise, to eat well, to make good food … To be healthy you have to be lucky enough to avoid illnesses, to avoid different things that can affect you . . . It's sad if you suffer from a mental illness that prevents you from being happy or from being well with your health. I suppose for certain things, the standard's more obvious. Umm, if you have cancer, that you're healthy if you don't have cancer. But, on the mental side … what standard do we give ourselves? Who's healthy? What's the standard for mental health? It's not as obvious (3.14%).	Physical health is not being sick (0.19%). When others are sick and I'm not, I feel healthy (0.40%). I do believe that if there's no underlying illness, obviously that impacts on your mood. Certain depressive disorders, etc., and you can't talk yourself out of it, and if again, if there's a chemical unbalance (1.06%). If you'd just asked me that in the street, quickly like that, that's pretty much what I would have said. Quick like that, I would have said, umm, no illnesses. Something like that. Quickly, Umm, to that question, I'd give a quick simple answer. But, the more I was able to think about the question, the more I was able to elaborate (1.74%).

Table 2. Frequencies, Means, and Standard Deviations for Scores on the Demographic Variables as a Function of Culture.

Variable	Francophones (n = 20)	Anglophones (n = 20)	First nations (n = 20)	χ^2	p
Perceived health				1.89	.756
Excellent	5	4	2		
Good	8	10	10		
Somewhat good	6	5	7		
Not very good	0	0	0		
Very poor	0	0	0		
Missing data	1	1	1		
Education				18.63	.017
Not finished school	0	1	0		
High school	1	0	8		
College	5	3	3		
Undergraduate	8	12	6		
University	6	4	3		
Graduate university					
Marital status				8.00	.434
Single	11	8	12		
Common law	2	3	2		
Married	3	8	5		
Divorced	3	1	0		
Widow	0	0	0		
Other	1	0	1		
Employed				2.50	.287
Yes	16	18	14		
No	4	2	6		
Student				0.95	.622
Yes	9	7	10		
No	11	13	10		
Income				7.06	.315
<20,000	0	0	0		
20,000-40,000	12	7	13		
40,000-60,000	1	6	3		
60,000-80,000	4	4	3		
80,000-100,000	3	3	1		
>100,000	0	0	0		
				F	p
Age				0.66	.519
M	32.15	35.45	36.20		
SD	10.20	13.93	11.02		

and health practices are not confounded with differences in age, health status, or other demographic variables. A series of chi-square analyses and an analysis of variance (ANOVA) were performed to examine the homogeneity of the sample. Since multiple comparisons were conducted, the alpha level was adjusted to .009, using a Šidak correction. Using that criterion,

Table 3. Means (and Standard Deviations) for Scores on the Health Definition Dimensions as a Function of Culture.

Dimension	Francophones (*n* = 20)	Anglophones (*n* = 20)	First nations (*n* = 20)	ANOVA			ANCOVA		
				F	*p*	η_p^2	*F*	*p*	η_p^2
Physical health	2.20 (0.41)	2.25 (0.55)	1.70 (0.57)	6.96	.002	.20	6.96	.002	.20
Mental health	2.40 (0.50)	1.90 (0.97)	2.25 (0.44)	2.85	.066	.09	3.37	.042	.11
Functionality	1.00 (0.97)	1.60 (0.94)	1.10 (0.97)	2.24	.116	.07	2.02	.143	.07
Negative health	0.90 (0.72)	1.40 (0.94)	0.80 (1.01)	2.57	.085	.08	0.51	.601	.02
Social health	1.50 (0.83)	0.95 (0.76)	1.35 (0.88)	2.39	.100	.08	1.29	.285	.05
Developmental health	1.20 (0.89)	0.50 (0.69)	1.55 (1.15)	6.63	.003	.19	2.49	.093	.09
Wellbeing	2.10 (0.79)	1.45 (1.05)	1.85 (0.59)	3.12	.052	.10	1.49	.235	.06
Spiritual health	0.95 (1.05)	0.90 (1.21)	2.00 (1.03)	6.40	.003	.18	3.07	.055	.11
Interdependent health	0.15 (0.49)	0.05 (0.22)	0.95 (0.89)	13.57	<.001	.32	8.53	.001	.26

Note. ANOVA = analysis of variance; ANCOVA = analysis of covariance.

none of the comparisons was significant. The three cultural groups were deemed homogenous with respect to the set of demographic variables. Therefore, these variables were not used as covariates in subsequent analyses.

Culture and Health Conceptions: Testing Hypothesis 1

A between-subjects multivariate analysis of variance (MANOVA) was performed to examine cultural differences in health definitions. Prior to conducting the analysis, grouped data were first examined according to MANOVA assumptions. The diagnostic tests revealed violation of normality. However, since MANOVA requires that the sampling distribution of scores be normal and not the distribution of individual scores, the results should remain robust as long as the violation of normality is not due to the presence of outliers, which was not the case, and as long as cell sizes are equal.

With the use of the Wilks's lambda criterion, it appeared that culture significantly affected the combined health definition dimensions, $F(18, 98) = 3.68$, $p < .001$, $\eta_p^2 = .40$. A series of one-way between-subjects ANOVAs were performed to investigate the effect of culture on each health definition dimension. The results are presented in Table 3. Significant cultural differences were found on physical health, developmental health, spiritual health, and interdependent health ($p < .05$). These differences remained significant even after adjusting the alpha level to .006, using the Šidak correction procedure for multiple comparisons. Post hoc Scheffé tests revealed that First Nations participants adhered to a developmental definition of health to a greater extent than Anglophones, but Francophones did not differ from either group. Francophones and Anglophones both placed more importance on physical health compared with First Nations participants, while the opposite trend was observed on spiritual health and interdependent health.

These results should be interpreted with caution as a series of ANOVAs does not take into consideration the intercorrelations among the dependent variables. Therefore, analyses of covariance (ANCOVAs) were also performed, using the Roy–Bergmann stepdown procedure. The variables were entered into the model according to the frequency with which they were discussed during the interviews and then served as covariates in subsequent analyses. The results are reported in the last column of Table 3. After taking into account the effect of culture on the other health definition dimensions, cultural differences with respect to physical and interdependent health remained significant. Thus, Hypothesis 1 was supported.

Table 4. Means (and Standard Deviations) for Scores on the Health Practice Dimensions as a Function of Culture.

Dimension	Francophones (n = 20)	Anglophones (n = 20)	First nations (n = 20)	ANOVA			ANCOVA		
				F	P	η_p^2	F	P	η_p^2
Lifestyle	2.50 (0.51)	2.65 (0.49)	2.00 (0.86)	5.61	.006	.16	5.61	.006	.16
Proactive	1.95 (0.76)	2.00 (1.03)	1.55 (0.60)	1.83	.170	.06	2.45	.095	.08
Maintain relations	1.30 (0.92)	1.30 (1.08)	1.35 (0.93)	0.02	.983	.00	0.27	.763	.01
Understand needs	1.85 (0.93)	2.00 (0.97)	2.00 (1.03)	0.16	.855	.01	0.42	.659	.02
Balanced life	1.60 (.88)	1.20 (1.01)	1.25 (0.91)	1.09	.344	.04	1.26	.292	.05
Medical care	0.65 (0.93)	0.95 (0.89)	0.95 (0.76)	0.81	.452	.03	1.78	.179	.06
Manage stress	1.10 (0.97)	0.60 (0.75)	0.45 (0.60)	3.71	.030	.12	3.14	.052	.11
Religious practices	0.95 (1.10)	0.50 (0.95)	1.45 (1.05)	4.23	.019	.13	3.03	.057	.11
Maintain traditions	0.25 (0.44)	0.00 (0.00)	1.65 (0.93)	44.41	<.001	.61	19.49	<.001	.44
Interdependent practices	0.10 (0.31)	0.10 (0.31)	1.40 (0.94)	31.48	<.001	.53	7.88	.001	.25

Note. ANOVA = analysis of variance; ANCOVA = analysis of covariance.

Culture and Health Practices: Testing Hypotheses 2 and 3

The results of a second MANOVA indicated that the effect of culture on the health practice dimensions taken together was statistically significant, $F(20, 96) = 5.37$, $p < .001$, $\eta_p^2 = .53$. The results of ANOVAs, which are presented in Table 4, revealed significant cultural differences with respect to five health practices: having a healthy lifestyle, managing stress, engaging in spiritual or religious practices, maintaining traditions and culture, and interdependent health practices ($p < .05$). However, after adjusting the alpha level, using the Šidak correction procedure for multiple comparisons, cultural differences on managing stress and engaging in religious practices were no longer significant. Post hoc comparisons using Scheffé tests revealed that Anglophones relied more on lifestyle as a means of promoting their health compared with First Nations participants, while Francophones did not significantly differ from either group. Maintaining traditions and culture was rated as more important by First Nations participants compared with Francophones and Anglophones. Finally, more First Nations participants reported engaging in practices aiming at promoting the health of others and the environment compared with Francophones and Anglophones. The results of ANCOVAs revealed that when controlling for other health practices, the effect of culture on these three health practices remained significant. Thus, Hypothesis 2 was supported and Hypothesis 3 was partially supported.

Relationship Between Health Definitions and Health Practices: Testing Hypothesis 4

Regression analyses were performed to examine the predictive power of health definitions on health practices. A logarithm transformation was applied to maintaining traditions and to interdependent practices because they were positively skewed. The results were interpreted using a Šidak alpha correction of .005 and showed that the health definitions taken together could significantly predict the following health practices: understanding health needs, $R^2 = .45$, $F(9, 50) = 4.51$, $p < .001$; lifestyle, $R^2 = .42$, $F(9, 50) = 4.01$, $p = .001$; maintaining good relationships, $R^2 = .37$, $F(9, 50) = 3.29$, $p = .003$; religious practices, $R^2 = .68$, $F(9, 50) = 11.74$, $p < .001$; maintaining traditions, $R^2 = .56$, $F(9, 50) = 6.98$, $p < .001$; and interdependent practices, $R^2 = .49$, $F(9, 50) = 5.25$, $p < .001$.

More specifically, it appears that those who defined health as a general sense of wellbeing were more likely to report tailoring their health practices in accordance with their health needs, *b* = 0.47, 95% CI = [0.21, 0.73]. Participants who defined health in terms of a developmental process, *b = 0.35*, 95% CI = [0.14, 0.57], and spiritual wellbeing, *b* = 0.59, 95% CI = [0.38, 0.80], were more likely to engage in religious practices to promote their health. Those who defined health in terms of spiritual wellbeing were also more likely to report maintaining their traditions and culture as a health-promoting strategy, *b* = 0.08, 95% CI = [0.03, 0.13]. Finally, an interdependent view of health was related to two health practices: maintaining traditions and culture, *b* = 0.13, 95% CI = [0.07, 0.20], and interdependent practices, *b* = 0.15, 95% CI = [0.08, 0.22]. Thus, Hypothesis 4 was partially supported.

Discussion

Cultural Variations in Health Conceptions and Practices

We found that First Nations participants, in comparison with Francophones and Anglophones of European ancestry, were more likely to hold an interdependent view of health. When defining health, First Nations individuals took into consideration not only themselves, but also their family, community, and the environment. In contrast, Anglophones and Francophones held an independent view of health; their health conception mainly included the individual. First Nations participants were also more interdependent in their health practices, that is, they were more likely to report engaging in practices aiming at promoting the health of their family, their community, and the environment, while Anglophones and Francophones reported practices aiming at promoting their individual health. These findings lend support for Hypotheses 1 and 2 and are consistent with an independent self-construal among Francophones and Anglophones and with an interdependent self-construal (Markus & Kitayama, 1991) or ecological self (Bragg, 1996) among First Nations participants.

Consistent with past research that investigated health conceptions and practices among members of cultural minorities (Hjelm et al., 2005; Jan & Smith, 1998; Jovchelovitch & Gervais, 1999; McMullin, 2005), Francophones and First Nations participants discussed the importance of maintaining their traditions and culture as a health-promoting strategy, which was not apparent in the Anglophones' narratives. However, the statistical analyses revealed that this practice was deemed more important for First Nations participants compared with Francophones, lending partial support for the third hypothesis. It is possible that the cultural distance between First Nations individuals and the dominant culture of the majority group being relatively large represents a greater threat to their cultural identity, which in turn could affect their health. As discussed previously, efforts to promote health among members of cultural minorities are often related to an effort to maintain or regain cultural integrity (Jovchelovitch & Gervais, 1999; McMullin, 2005).

We also found that First Nations participants placed more importance on spiritual health compared with Anglophones and Francophones, while Anglophones and Francophones placed paramount importance on physical health. Thus, it is apparent that for First Nations individuals, spiritual health comes before physical health, whereas the opposite is true with Anglophones and Francophones. Greater adherence to physical health among Francophones and Anglophones of European ancestry reflects the body-centered perspective of the biomedical model, which is the dominant health model in Western societies.

In comparison with Anglophones, First Nations participants placed more importance on a developmental definition of health, while Francophones did not differ from either group on this dimension. While Anglophones see health as an achievable end state, First Nations individuals view health as a continuous process toward becoming healthier.

Finally, in comparison with First Nations individuals, Anglophones were more likely to report promoting their health by engaging in a healthy lifestyle, which involves eating well, exercising, and getting enough sleep. Other researchers have suggested that the emphasis placed on lifestyle as a health-promoting strategy by individuals of European ancestry is a reflection of individualistic values, such as self-control, self-reliance, and independence (Bermejo et al., 2012; Chalmers, 1996; Hjelm et al., 2005; McCarthy et al., 2004; McMullin, 2005; O'Connor, 1998). However, Francophones did not significantly differ from either group in terms of the importance they ascribed to lifestyle.

Despite these differences, the three cultural groups also shared a number of health definitions and practices. They ascribed similar importance to health definitions described in terms of negative health, functionality, wellbeing, mental health, and social health. They also reported similar health practices: being proactive, tailoring their health practices in accordance with their particular health needs, maintaining healthy relationships with others, having a balanced life, and seeking medical care. These similarities may be the result of other social factors shared by the participants in all three cultural groups as they were recruited in the same urban setting and were relatively homogenous with respect to income, education, and health status.

Overall the findings provide support for the notion that culture influences the way people conceptualize health and the practices they use to promote their health (Jobanputra & Furnham, 2005; Kleinman, 1978; Torsch & Ma, 2000). These cultural differences bear important implications for the health-care system. To effectively address the health-care needs of a multicultural society, there is a need to increase awareness among health providers about the role culture plays in the way health is conceptualized, not only by patients, but within the biomedical health tradition (McCarthy et al., 2004; Winkelman, 2009). Pachter (1994) described medical consultations as interactions between two cultures: the biomedical culture of health professionals and the patients' culture. These cultural factors probably lead them to conceptualize health differently. These differences need to be negotiated in a respectful manner if health professionals wish to overcome conceptual barriers that can impair therapeutic processes (Hufford, 1992; Kleinman, 1978; McCarthy et al., 2004; Pachter, 1994). At the same time, they should be aware that variations in health conceptions within cultural groups are often as important as differences between cultures. Therefore, instead of relying on assumptions about the health concepts of their patients, health professionals should be trained to elicit and share health views, especially when working with members of cultural minority groups (Hufford, 1992). By gaining a better understanding of their patients' health conceptions, health-care providers could more effectively adapt their practices to reflect the views of their patients (Hakim & Wegmann, 2002; Jobanputra & Furnham, 2005; Torsch & Ma, 2000; Winkelman, 2009). Patients would be more likely to be satisfied with the quality of care, to trust their doctors, and to adhere to their recommendations (Armstrong & Swartzman, 1999; Kleinman et al., 1978; Landrine & Klonoff, 1992; Pachter, 1994).

Furthermore, policy makers and program planners need to take into account the role culture plays in the way people conceptualize health to ensure that health policies and programs reflect the particular views and needs of their target populations (Ailinger & Causey, 1995).

The Relationship Between Health Conceptions and Health Practices

We hypothesized that the health definitions held by the participants would significantly predict the practices they use to promote their health. The research results lend partial support for this hypothesis. Of the nine health definitions measured, four were significantly related to the health practices reported by the participants. Three of the four health definitions appeared to be influenced by culture.

These findings show how culture, health conceptions, and health practices are interrelated and may be part of the same rational system of thought (Hufford, 1992; Kleinman, 1978; O'Connor,

1998). For instance, spiritual and religious practices can be seen as effective strategies to promote health when notions of health and wellness are defined in terms of a spiritual connection with nature or a higher being. Moreover, promoting the health of one's family and the natural environment makes sense when their wellbeing is viewed as intricately linked to one's own health. These health practices could be deemed irrelevant or ineffective by health professionals who strictly adhere to the biomedical model (McMullin, 2005). However, a cultural analysis of health systems reminds us that health behaviors cannot be considered outside their sociocultural context (Kleinman, 1978).

The intricate relationship between health conceptions and health practices found in this study can have practical implications for health-care providers. Indeed, with the increasing prevalence of chronic ailments, which, to a great extent, may be attributable to health behavior and lifestyle choices, it is essential to pay attention to the health-promoting strategies used by patients. By gaining a better understanding of the health conceptions of their patients, health professionals would be better equipped to understand, make sense, and even predict the health behavior choices of their patients (Edman & Kameoka, 1997).

Limitations

This research has certain limitations that should be taken into consideration. First, because a convenience sampling strategy was used, the sample may not be representative of the general First Nations, Anglophone, and Francophone populations. The participants in this study were fairly well educated and were in good health. Second, the size of the sample was relatively small, which could have affected the statistical power of the analyses, thus increasing the probability of committing a Type II error. Finally, one should be cautious when interpreting the results of inferential analyses as they do not take into account the interdependence among the dependent or the predicted variables. For instance, after taking into account the effect of culture on other health definition dimensions, cultural differences with respect to developmental and spiritual health were no longer significant. In a similar vein, the effect of health definitions on certain health practices may be due to these practices being interrelated.

Conclusion

This study advances knowledge in a number of ways. First, we investigated health conceptions among members of three cultural groups. Second, by controlling for other health conception determinants, the research findings provide support for the influence of culture on health conceptions. Third, the combination of qualitative and quantitative approach was beneficial. While the qualitative data provided depth, the quantitative analyses made it possible to compare the magnitude of cultural differences. Finally, by investigating health definitions and health practices simultaneously, we were able to uncover the predictive power of health definitions in the practices used by individuals to promote their health.

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