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Cultural influences on seeking quality health information: An exploratory study of the Korean community

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Abstract

The study explored consumer health information seeking behavior of members of a local Korean community in Tallahassee, Florida; how they assessed the quality of health information; and what cultural values influenced their understanding of its quality. The study employed semi-structured interviews. The study identified accuracy and reliability as the two most valuable quality characteristics. Commercial type of a webpage was considered as a negative indicator for reliability, while the same information found on more than one website as an indicator of the information's reliability. In addition to functional quality criteria, the study found non-functional characteristics such as empathy. Most of all findings highlighted that cultural differences limited the use of health information. Quality based selection of information is an important part of a health information seeking process. This study can help the designers of consumer health information systems on the Web with important insights into how to support the evaluation of quality of health information by consumers, and to reduce barriers to information-seeking and use caused by cultural differences

1. Introduction

Consumer health information accessed through both the Internet and libraries is becoming important for public health care (Shepperd, Charnock, D., & Gann, 1999; Cline & Haynes, 2001; Kouame, Harris, & Murray, 2005; Smith, Logsden, & Clark, 2005; Marshall & Williams, 2006). Healthy People 2010 (Dept of Health and Human Services, 2001) and Pew Internet and American Life Project (Fox, 2006; 2008) found that the use of consumer health information, particularly through the Internet, was a widespread trend by lay people. Koreans living in the U.S. commonly seek consumer health information through the Internet. Previous studies (Pourat, Lubben, Yu, and Wallace, 2000; Asian Pacific Islander American Health Forum (APIAHF), 2006) found that the high use of online consumer health information by ethnic minority consumers could be caused by several factors: low income, low language proficiency, vast cultural differences, and low rates of insurance coverage, since they are not eligible for public health insurance (e.g., Medicaid, Medicare).

Korean immigrants are the fifth largest Asian-American community as well as one of the fastest-growing minority groups in the U.S., constituting about 1,609,980 people (U.S. Census Bureau, 2008). Many of the Korean immigrants' education levels are relatively high when compared to other ethnicities in the U.S., but many immigrants have difficulty in speaking English. Among Korean immigrants in the U.S., 47% are reported as possessing limited English proficiency and 75% speak only Korean at home (APIAHF, 2006). Levels of English proficiency are closely associated with access to health information and healthcare services. People who have low English proficiency are more likely to be uninsured, and thereby less likely to seek healthcare services (APIAHF, 2006). According to the UCLA Center for Health Policy Research (Brown, Lavarreda, Rice, Kincheloe, & Gatchee, 2005), 34% of Korean immigrants were uninsured, which was one of the highest rates among all ethnic groups. Therefore, key barriers such as the difficulties of communication and cultural understanding and lack of health insurance may affect the health information–seeking of Koreans in the U.S; many Korean immigrants prefer to use Korean-speaking doctors or home remedies incorporating consumer health information (APIAHF, 2006).

2. Problem statement

Previous research focused mostly on assessment of consumer health information or quality criteria from the perspective of quality evaluation experts or information providers, rather than consumers, the actual users of health information. Furthermore, there is a lack of research on the interaction between consumers' cultural characteristics and their understanding of health information quality and health information-seeking behavior in general. Despite the size and growth of ethnic minority communities, few studies have discussed how ethnic minority consumers judge health information quality and what kind of quality criteria they consider in seeking such information. In order to bridge aforementioned gap, this study addresses the following research questions:

- What are the health information needs of members of the Korean community?
- What are quality criteria that community members consider important when seeking and selecting health information?
- What are some of the cultural values and characteristics that may influence members' understanding of health information quality?

The study is unique in that it focuses on a specific ethnic community of Koreans. The study contributes to a better understanding of health information quality concerns from actual information users; particularly, cultural factors which may influence an ethnic minority health care consumer in seeking and evaluating quality health information. The findings of the study will identify the criteria, indicators, heuristics, cultural values and characteristics that ethnic minorities may use in judging the quality and credibility of health information, and suggest how to signal quality health information for them. Quality based selection of information is an important part of a health information seeking process. This study can help the designers of consumer health information systems on the Web with important insights into how to support the evaluation of quality of health information by consumers, and to reduce barriers to information-seeking and use caused by cultural differences.

3. Literature review

3.1. Consumer health information-seeking

Consumer health information is defined as information on health care choices and medical topics provided to lay people, who are referred to as health information consumers (Medical Library Association and the Consumer and Patient Health Information Section (CAPHIS/MLA), 2003). Consumer health information encompasses wide aspects of information including preventive medicine, health promotion, wellness, and access to the health care systems as well as disease-related issues such as symptoms and treatments (CAPHIS, 2003). Deering and Harris (1996) divided consumer health information into three categories according to the specific purposes of each category: 1) personal health, 2) medical treatment, and 3) public health. Whereas the objective of personal health is wellness or self-care, the objective of medical treatment is treating a health problem, and the objective of public health is "[modifying] individual or institutional behaviors in order to mitigate disease or to promote healthy practices." (p. 210).

According to Lambert and Loiselle (2007), consumer health information-seeking is understood within the contexts of "(a) coping with a health-threatening situation, (b) participation and involvement in medical decision-making, and (c) behavior change and preventive behavior" (p. 1009). Previous studies (Pennbridge, Moya, & Rodrigues , 1999; Cline & Haynes, 2001; Fox & Rainie, 2002) indicated that financial constraints, dissatisfaction with doctor visits due to time limits, and more interest in self-care have propelled demand for consumer health information. To meet demands for consumer health information, numerous organizations, ranging from government and non-profit organizations to libraries and support groups, have expanded their roles by delivering the provision of consumer health information (Sieving, 1999).

3.2. Quality evaluation of consumer health information

This trend of disintermediation of health information provision has brought to the forefront the importance of understanding differences and similarities in the perception of the quality of health information by consumers and the factors that may cause those differences. Quality is generally defined as ‘fitness for use’ (Juran, 1992). Specific definitions of quality, however, are context-oriented (Stvilia, Gasser, Twidale, & Smith, 2007). Indeed, the analysis of the consumer health information literature shows that specific perceptions of consumer health information quality by members of Asian minority communities can be affected by the communities’ beliefs, norms, and conventions.

It has been reported that consumers make inconsistent evaluations when judging trust or credibility of consumer health information sources. While Hesse et al. (2005) found that physicians were the source most trusted by consumers, Dervin (2005) conversely argued that many consumers distrusted health information from doctors, because doctors sometimes provided conflicting or fallible information. Some studies (Deering & Harris, 1996; Dervin, 2005) supported the decreasing trust in health information sources (e.g., government, health professionals) which were regarded as highly credible in the past. Nettleton, Burrows, and O’Malley (2005) stated the problem was consumers’ increasing uncertainty and confusion with regard to “trust” in the age of information anarchy – as represented by information out-of-control, misinformation, and information overload (p. 975).

There have been many attempts to overcome the uncertainty of the quality of consumer health information; Eysenhach (2000) asserted that the quality control of consumer health information on the Internet could be effective by relying on consumer education, the self-regulation of information providers, third parties’ quality evaluations, and restraint of inaccurate information. A number of studies (Cline & Haynes, 2001; Eysenbach, Powell, Kuss, & Sa, 2002; Marshall & Williams, 2006, Lia, Finn, & Lu, 2007) have discussed the criteria and strategies consumers used to make quality judgments. For example, Marshall and Williams (2006) found that consumers judged the quality of health information through “comparison with other sources” (p. 152). Similarly, Stvilia, Mon, and Yi (2009) suggested that consumer health information providers and aggregators signal the quality of their information. Government agencies (e.g., the Office of Management and Budget (OMB), 2002; U.S. Department of Health and Human Services (DHHS), 2006), professional associations (e.g., MedlinePlus, 2007) and third party evaluators (e.g., the Health On the Net Foundation (HON), 2010) have developed models for consumer health information quality evaluation. In addition, easy access and availability of consumer health information on the Web may encourage more proactive health information behavior by the consumer. According to Hesse et al. (2005), people actually looked for consumer health information more than they visited their physicians for their health problems, even though they were likely to trust the physicians' opinions more than online consumer health information. Furthermore, the literature indicates a considerable need of consumer health information within minority communities for self-treatment, and self-care in general. To make consumer health information services more usable and effective for minority groups, it is essential to gain a better understanding of the signals, attributes and indicators (also known as 'virtues and markers') they consider important when making judgments on information quality.

3.3. Cognitive authority

Judging the quality and reliability of health information can be more critical than judging general information, since health information is usually sensitive enough to affect human life and health (Stvilia et al., 2009). When people cannot assess information quality independently, according to Wilson (1983), they rely on others' knowledge or experience, referred to as second-hand knowledge. Suppose you cannot judge the quality of certain health information, what would you do? Most often, people would go along, guided by the reputations of others who they believe are well informed on the health topic; people only pay attention to second-hand knowledge that they believe is 'credible', or 'worthy of belief' (Wilson, 1983). People who develop reputations for credibility have cognitive authority; they influence users' judgments of the quality of health information.

Wilson (1983) defines several key characteristics of cognitive authority. First, cognitive authority is different from administrative authority. While administrative authority is an authority needed to command one to perform something, cognitive authority is an authority that others endow you on something, based on the recognition of your expertise. That is, administrative authority comes from hierarchical order, whereas cognitive authority comes from credibility. Second, cognitive authority is understood in relation to "social perception and recognition" (Wilson, 1991, p. 260). Obtaining cognitive authority does not depend on what people actually know, but on how they are recognized. Family, friends or colleagues, although they are not experts for particular topics, can have cognitive authority. Thus, whatever is considered to be credible may have cognitive authority such as people or authors, texts including genres and contents of documents, organizations such as publishers and healthcare providers, and other instruments serving as quality markers or trusted indicators.. Third, the scope of cognitive authority depends on the extent of credibility. People may rely on some sources of information more or less heavily than on others. For instance, you may have minimal authority if you slightly affect people's health care information choices, but considerable authority if you influenced others to make a final decision. The concept of cognitive authority can be a helpful framework in understanding the behavior of ethnic minorities who have difficulty in independently judging health information quality due to critical constraints such as language barriers and cultural differences.

3.4. Cultural barriers of consumer health information seeking

Earlier research (Thomas & Znaniecki, 1918; Swidler, 1986) observed that ethnic minority groups had a strong interest in health information seeking for self-healthcare, where they were apt to behave in their traditional cultural ways in U.S. Only a few studies (Buller et al., 2001; Kakai, Maskarinec, Shumay, Tatsumura, & Tasaki, 2003; Hong, 2006) have discussed consumer health information seeking behavior by Asians in the U.S. In focusing on cultural backgrounds, these studies suggested the need for culturally sensitive consumer health information for different ethnic populations (Buller et al., 2001; Fogel, 2003; Kakai et al., 2003). After examining differences in health information-seeking behavior among Japanese, Caucasian and non-Japanese Asians (including Koreans) cancer patients, Kakai et al. (2003) found that cultural beliefs and norms influenced how Japanese patients sought, used and communicated health-related information. The study also highlighted the importance of strong ties between family, friends, and peers as supporting mechanisms in overcoming health-related challenges (Kakai et al., 2003). Furthermore, most of the existing studies discussing Asian minorities' consumer health information-seeking behaviors indicated that the language barrier represented the biggest obstacle for ethnic minorities. Juon, Lee, and Klassen (2003) found that for Korean female consumers, the extent of English-speaking proficiency was the most significant factor affecting regularly scheduling Pap smears. In particular, elder Korean immigrants would not be familiar with American style healthcare treatments, and thus often would only use traditional Korean medicine. These studies suggest that cultural barriers should be considered in understanding health information–seeking behavior of ethnic minority groups.

4. Procedures

This study was conducted as a follow-up to a quantitative study employing self-administered surveys. The study used semi-structured interviews, since interviews are well-proven qualitative methods for an exploratory study (Babbie, 2002). The study selected 20 participants who each provided considerable responses to previous surveys. A stratified sampling procedure was used to compare health information-seeking behaviors between age groups. The study divided the sample into five homogeneous groups based on its ages: 1) 18-29 years old (20's), 2) 30-39 years old (30's), 3) 40-49 years old (40's) and, 4) 50 and older (50's). Each of the five age groups consisted of four participants. In the interviews, the critical incident technique was used (Flanagan, 1954). This technique fit nicely for qualitative study to collect special instances observed or experienced by the study participants and to obtain insight into why and how the participants were engage in the incidents. Participants were asked to recall a specific incident in which they had sought health information, and to describe their judgments of the information found. Among the interviewees were both patients (12 participants) and caregivers (4 participants) who were currently and actively involved in consumer health information quality evaluation in everyday practice. The interviewees were asked about recent information-seeking events that possessed special significance. As a result, during the interviews they did not show difficulties in remembering their experiences.

Interviews for the IRB-approved study occurred at December 2008 - January 2009. The 20 participants were recruited in the Korean community in Tallahassee, Florida, and consisted of 8 males and 12 females who were ethnically Asian, and primarily from South Korea. Among them were patients (8 people) and caregivers (4 people). One of the notable characteristics of the interviewees was their education level. All of the participants were college graduates, and a half of the sample had masters or doctoral degrees. The interview protocol included semi-structured, open-ended questions on the participant’s consumer health information needs, sources of consumer health information, and the criteria and markers used in assessing the quality of consumer health information. The interviews lasted approximately one hour and were recorded by a digital recorder. Interviews were conducted and transcribed in Korean, and then translated into English. The study employed content analysis using open-coding, axial-coding, and theory notes. The first author of the paper conducted the interviews and initially worked on the transcripts and coding. Later the transcripts and coding were cross-checked by the other two co-authors.

5. Findings

5.1. Overview

Most of the interviewees reported that they most frequently first visited Google or Naver (a popular search portal in South Korea) in searching for health information. Other Web sites consumers mentioned using were Yahoo! and Wikipedia. Study participants reported that they rarely used online databases to search for health information due to unfamiliarity with databases. In general, they selected health Web sites linked within the first one to two pages of search engine results when a title or a summary of a Web site appeared to be relevant. Their first filtering of search results involved sifting through irrelevant titles or summaries of the Web sites.

Most of the participants sought consumer health information either for personal health problems, or on behalf of another person, such as a friend or family member. Some participants reported that they relied more on non-Internet sources; among these, three people (15%) looked for printed material (e.g., periodicals, newspapers), and four people preferred consumer health information obtained from strong social ties such as family and friends (20%). Interestingly, only one participant in the 50's age group said she distrusted consumer health information on the Internet, and only trusted healthcare professionals.

5.2. Information needs

The interviewees' needs mainly related to self-healthcare (e.g., nutrition/ diet, and self-treatment of diseases). The study categorized the participants' needs for consumer health information into four categories: (1) problems, (2) questions, (3) treatments, and (4) tasks. The health problems were divided into two categories: acute care and chronic care[1]. Five participants (25%) reported on acute care problems (e.g., eye infection, bee sting), and nine consumers (45%) reported on chronic care problems such as cancer and cardiovascular diseases (e.g., high cholesterol, high blood pressure, diabetes), and.

[Figure 1. goes here]

With regard to health-related questions, 12 participants (60%) looked for consumer health information for specific diseases (see Figure 1). One participant revealed that he trusted consumer health information on the Internet more than a local health professional:

> "*I have got strange eye infection that has never seen. At first, I asked friends about it, but I could not get any clear answer, and I didn't believe that a local physician could handle it, so I tried the Internet search to look for information about it.*"

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[1] *Acute care* involves interfacing with a doctor, hospital, or clinic (e.g. having to inform self on the health issue in order to ask questions, attempting to understand a diagnosis). It could be thought of as relating to in-patient, pre-operative concerns. *Chronic care* involves living with a continuing health issue rather than dealing with a health provider short-term event such as a surgery or in-patient event. It could be thought of as relating to outpatient, post-operative or post-discharge situations.

Particularly for chronic disease care, half of participants showed interests in diet. Six participants (30%) spoke about the needs for information on healthy lifestyles and sexuality (e.g., birth control):

> *"In searching for the information about birth control, I usually get the information from friends; and in order to confirm the information, I search the Internet."*

Five participants (25%) reported the need for information for self-diagnosis:

> *"I found health information about symptom for cancer and treatment with diet such as fruits and vegetables, nutrition, and physical activity for digestion problem and cancer."*

Three participants (15%) needed information about health or medicine related concepts or terms and the relationships among those:

> *"I have high blood pressure, so I searched for information about diet for high blood pressure and terminologies related to that problem."*

The participants also looked for information on health insurance, drugs, health service providers, (e.g., hospitals, medical doctors (MDs)), and disease prevention and safety:

> *"I looked for information about health insurance for my school. I searched for information about coverage and price through the Internet."*

The treatment for health problems are divided into two categories: one is self-therapy and the other is surgery-related. Half of the sample, 10 participants, reported consumer health information needs related to self-therapy. Specifically, they spoke about self-therapy using diet/nutrition and exercise:

> *"Because of aging, I have been suffering from arthritis and osteoporosis. A physician recommended Internet search and I became interested in it… I found information about diet, physical activity such as swimming and medicine for arthritis and osteoporosis."*

Three members (15%) spoke about searching consumer health information related to surgery. For example:

> *"I looked for about the complication problem after kidney surgery. Particularly, it is the information that I could not obtain from MDs who had limited surgery or medical case experiences."*

Interviewees were asked about what kinds of tasks they were engaged in when seeking health information. Tasks of consumer health information-seeking were divided into four categories: (1) self, (2) intermediary, (3) curiosity, and (4) academic. Since three-quarters of the participants were patients or caregivers, they mostly looked for consumer health information for self (60%) – or intermediary tasks (35%). Only two participants (10%) used Internet consumer health information for curiosity. None of them searched for health information for academic work (e.g., school projects). Searching for consumer health information was often triggered by the need to supplement information received from a physician:

> *"Since I have been diagnosed diabetes by a MD, I began to search the Internet."*

Overall, information needs were mostly for immediate help with health care issues, and thus information needs not driven by health problems- such as for curiosity or academic work were few, as were reported information needs for disease prevention.

5.3. Information quality criteria

When asked about the attributes or virtues they considered important in distinguishing high quality health information from that of lesser quality, half of the participants placed greater value on more detailed information (see Figure 2).

> *"I prefer Korean hospital websites, because they provide health information in detail."*

[Figure 2. goes here]

Interestingly, nine participants (45%) reported that they were more likely to trust the information which is *consistently presented* or *duplicated* on multiple Web sites:

> *"After I found common information from at least two sites, I looked at the information seriously."*

Eight participants considered *authority* of authors or information providers as important criteria in determining high quality consumer health information.

> *"In order to simply purchase medicines, I usually visit commercial websites or medicine company websites, whereas for serious diseases, I use non-profit organization sites."*

The participants perceived that non-profit organizations were more likely to be authoritative and less-biased than for profit/*commercial* organizations. With regard to *authority*, Korean members of the community demonstrated divergent perspectives. For instance, some interviewees reported strong trust in health professionals such as physicians, whereas some showed distrust.

"Because it is provided by a MD, it is reliable and objective."

"I do not believe the limited information that a MD provides…Especially, I can get fairly good information provided by excellent and trustworthy big hospitals' Websites."

The interviewees who did not trust in physicians believed that individual health professionals had limited medical knowledge and experience; therefore the physicians would be less likely to provide authoritative consumer health information than the Internet, where many high quality consumer health information resources were available.

In addition to functional quality criteria, participants identified *sympathy* or *empathy* to the consumer's health problem as one of the important virtues of high quality consumer health information.

> *"I believe health websites should understand my health problem. It is hard to trust the information which doesn't provide sympathy to my problem. If I feel sympathy in the information, I become more interested in it."*

The quality criteria, *sympathy*, highlights the interaction between health information Web sites and consumers.

As ethnic minorities, the participants indicated that they placed special value on consumer health information obtained from family or friends' *experiences* – for instance, Korean-style diets, therapies, and treatments. Even, the interviewees who were patients or care-givers dealing with chronic diseases reported skepticism towards American physicians. One interviewee, who suffered from high blood pressure and diabetes which were genetically linked to the family history, clearly illustrated this issue:

> "*American physicians do not have any idea to advise my Korean style diet, and they suggest me special diet menu which is absurd. I usually get health information from my mom and uncle. I've learned from my uncle that salted mackerel was effective in controlling high cholesterol, based on his experience."*

Since the information was verified by family members' direct experience, the participant reported strong trust of it – family tacit knowledge. This example also indicates that the lack of *expertise* on Korean diet is an important quality issue. The participants counted *cultural expertise* as an essence that high quality information should have; they trusted health information provided by experts of certain fields. One interviewee, a breast cancer survivor, reported that;

> *"I often visit support groups such as Pink Ribbon Organization. I also visit blogs run by experts or research centers"*

The participants were concerned about possible negative effects of different styles of diets on their health. They believed that a Western diet was not a healthy choice for Koreans.

> *"I really don't like American style of diet, since we have lived in different lifestyle and environment before immigration to U.S. My family has Korean style meal in here. If the information is applicable- easy to try - to Korean diet, it is good, otherwise it is useless".*

In particular, Koreans who had immigrated to the U.S. as adults were not accustomed to the American style of diet. Thus, applicability of consumer health information was an essential component of quality to those participants. One participant in the 20's age group pointed to the need of tailored health information for different ethnic groups:

> *"I believe evidence-based health information which takes into account different characteristics of the consumer such as race and body weight is good, since body sizes are significantly different between Americans and Koreans."*

Overall, findings indicated that the participants were concerned with general quality criteria (e.g., *detailed, duplicated, authority*) as well as criteria relating to areas emerging from ethnic-specific concerns (e.g., *experience, applicability, expertise*). The study showed salient ethnic-specific information behavior. Interviewees who had been suffered from chronic diseases such as diabetes and hypertension focused more on healthy lifestyle, particularly eating habits. They relied heavily on word-of- mouth from Koreans who had been through same diseases. They believed if a certain diet worked for a friend, it would work for them as well, because they were Koreans who had similar genetic physical background, and because usually the recipe for the Korean style diet was familiar to and easily applicable for them. Likewise, interviewees trusted more the efficacy of Korean traditional therapies/treatments than conventional medicine, and Korean practitioners than American. For instance, to get acupuncture, Koreans preferred Korean practitioners to Chiropractic run by American practitioners. Koreans firmly believed that Korean practitioners had *cultural expertise* for acupuncture.

6. Discussion

Findings indicated that interviewees relied on cognitive authority when discerning the quality of health information. Among the quality indicators frequently mentioned were *duplication, authority, expertise,* and *experience*. The quality indicators *duplication*, *authority*, and *experience* illustrated that the interviewees put much weight on reputations of others. The more duplicated a source was meant the more agreement among others that the source was reputable. Health information provided by authoritative big hospitals had (cognitive) *authority* which was given basically by their performance. Interviewees paid more attention to health information delivered by experts (e.g., healthcare professionals, researchers) who were knowledgeable about a certain healthcare area. Some criteria such as *experience* – also referred to as experiential knowledge (Nettleton et al., 2005) – and *applicability* are likely to be considered by ethnic minorities. When Korean members of the community could not get satisfactory information due to a language barrier or cultural difference (e.g., diet), they would put more weight on other Koreans' *experience* than on any other indicators, for they believed that it was safe and effective to use the same treatments which had been already applied into the other Koreans. Generally speaking, members of the Korean community shared similar physical characteristics (e.g., body size/condition, skin type) and lifestyle. This behavior highlights the importance of the lay referral network based on cognitive authority, which is consistent with findings of previous studies (Morey, 2007; Kakai et al., 2003; Deering & Harris, 1996). According to Deering and Harris (1996), obtaining health information from strong tie is a common pattern among African-Americans, Native-Americans, Hispanics, and Asian-Americans.

One of the characteristics of ethnic minority groups was performing bilingual searches in their health information-seeking; this is mainly a technique for coping with limited English proficiency, although all interviewees were college graduates. Likewise, many studies (Pourat, et al., 1999; Juon et al., 2003; Courtright, 2005; Ponce, Hays, & Cunningham, 2006) have noted that language barriers offset education levels of ethnic minorities in seeking consumer health information. That is, Korean consumers relied heavily on Korean-specific health information, regardless of education levels. In the current study, participants examined consumer health information both in Korean and in English to compare if the results from these searches matched or complemented each other. When they found consistent or repeated information, they were more likely to trust it. Therefore, consumers considered *duplication* as a heuristic in assessing the objectivity or reliability of consumer health information on the Web.

It is intriguing that health information providers (e.g., MedlinePlus) and third party evaluators (e.g., HON) have not considered the quality criteria/indicators such as level of *detail*, *expertise*, and *sympathy* identified by the consumers in this study. Conversely, Korean community members missed critical quality criteria/indicators such as the *editorial review process* and *confidentiality* that health information providers and third party evaluators recommend. In addition, participants used heuristics such as 'voting' or 'duplication' – when the same information is found on more than one website – as an indicator of the information's trustworthiness. A similar heuristics was used by subjects in a controlled experiment to evaluate the credibility of news in the Google News (Sundar, Knobloch-Westerwick, & Hastall, 2007). This suggests that while consumers need to be aware of quality criteria they have not previously considered, health information providers and third party evaluators need to pay attention as well to consumers' perception of quality, and document markers and heuristics they rely on when making quality and trust judgments. By providing interfaces that are aligned with the consumer's perception of quality and the heuristics used to evaluate content trustworthiness and cognitive authority, healthcare information providers and intermediaries could motivate the consumer to actually use the healthcare and wellness information they serve.

This study suggests that for Korean community members, a physician's authority is undermined by his/her lack of understanding of Korean–specific health information needs. The finding is consistent with previous studies (Thomas and Znaniecki, 1918; Swidler, 1986; Buller et al., 2001; Fogel, 2003; Kakai et al., 2003) in that ethnic minorities tend to adhere to their traditional lifestyles, even after immigration; traditional Korean healthcare principles address the same idea, "the body and the soil cannot be separate," meaning that Korean food produced in domestic farms are the best for Koreans' health. Pourat et al. (1999) found that Korean consumers believed that health problems are closely associated with "lifestyle and living situation as well as physical health" (p.717). This kind of holistic healthcare approach was not provided by Western doctor visits, thus Korean consumers tended to look for such approaches through other sources such as the Internet, family, and friends. Due to a lack of Korean-style resources, Korean consumers were likely to rely on social networks through word-of- mouth; the same findings were shown in general information-seeking as well (Rho, 2002).

Among Koreans, it is common to share information about the treatments of health problems with others. Members of the Korean community reveal to others the diseases from which they are suffering, which is at contrast with Japanese culture. Japanese have a fear of speaking out loud about disease or sharing the news with others, whereas Koreans have a saying to "spread word of the disease." Koreans, traditionally, in order to find a treatment for diseases have relied on social networks or serendipity, which is similar to Latinos' health information-seeking in U.S (Courtright, 2005). These findings suggest that the key to consumer health information services for ethnic minorities is an understanding of their “culture, language, and needs” (Pourat et al., 2000, p.131).

7. Conclusion

Korean members of the community reported diverse consumer health information needs. Their consumer health information needs were mainly about self-healthcare such as diseases, nutrition/diet, and self-treatment. The study found ethnic-specific, as well as general health information-seeking behaviors - especially as to how cultural relevance affects an ethnic community on consumer health information quality evaluations. Quality indicators that Korean members of the community reported could be classified into two main quality criteria: a*ccuracy* and *reliability*. In general, culture-related quality indicators were highly rated.

Due to language barrier and lack of ethnicity-specific resources, Korean consumers in the study heavily relied on informal social networks rather than the Web. Language barriers and cultural differences were the main health information-seeking barriers, due to which the Korean consumers would trust health information having cognitive authority given by other Koreans’ reputations. In seeking quality health information, the Korean consumers used quality evaluation heuristics indicators such as *duplication, authority, expertise,* and *experience*, all of which were based on cognitive authority often deriving from cultural considerations. Therefore, this study suggests that ethnic minority’s health information-seeking behaviors and perceptions of quality criteria should be viewed and understood within cultural context.

It is notable that this study attempted to understand health information quality concerns of ethnic users who would confront distinct cultural challenges when looking for consumer health information in the U.S. Identifying the cultural factors that ethnic minorities consider as their quality criteria may provide practical insights to information professionals who engage in the venue of consumer health information services of how to better serve those users.

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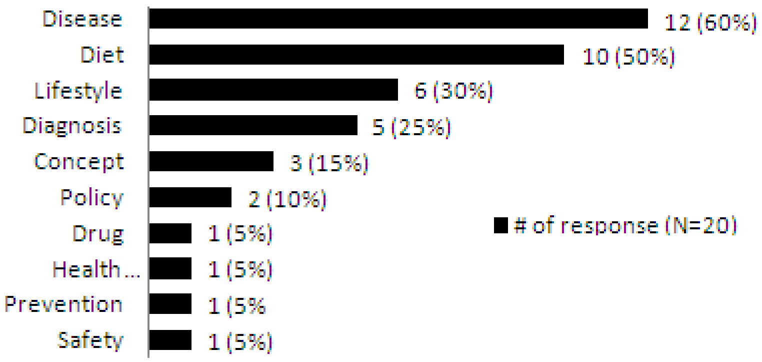

Figure 1. Consumer health information needs: Questions

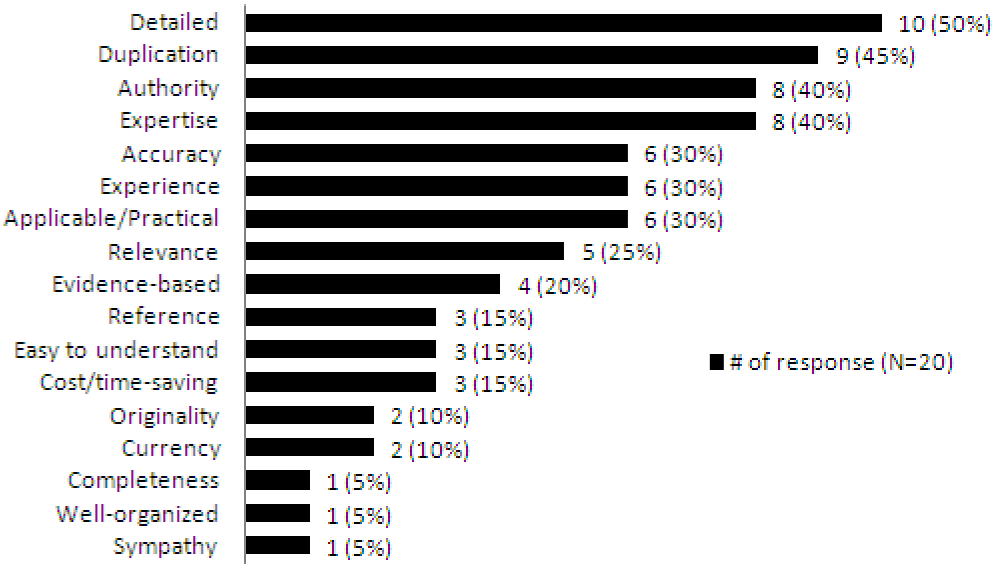

Figure 2. High quality criteria of consumer health information