CONSUMER HEALTH INFORMATION SEEKING BEHAVIORS IN THE LIBRARY: AN ANALYSIS OF THE HEALTH INFORMATION NATIONAL TRENDS SURVEY 2007 (HINTS)

Yiu Ming Chan

David C. Anchin Center University of South Florida, Tampa, FL, USA.

ychan2@mail.usf.edu

ABSTRACT

Health information seeking has become increasingly important for people around the nation. Finding well-organized, high quality and well-referenced information is a key to understand diverse health topics. This study investigates demographic characteristics, health information, perceptions of health information seeking, and quality of information associated with characteristics of Americans who chose the library as their primary health information source over the health care providers and the Internet. Data from the 2007 Health Information National Trends Survey (HINTS) was used and the results reveal that individuals in the library group had better health, always wear a hat, believed some cigarettes are less harmful than others, had more confident getting health information, and less level of trust in doctors, radio, and internet compared with the internet group. On the other hand, Individuals in the library group had better health, believed some cigarettes are less harmful than others, and had less level of trust in doctors compared with the health care providers group. These findings suggest libraries can be a role of providing knowledgeable and understandable health information to the general public. Also, libraries should develop a strategy to increase the level of trust in consumers.

Keywords: Library, health care providers, Internet, health information seeking

INTRODUCTION

Health plays an important role in the lives of individuals in today's society. Most people make a lot of efforts to seek various medical topics such as cancer, obesity, complementary and alternative medicine in order to improve their health [Rutten and Stevenson, 2012; Chan et al., 2012; Chan and Huang, 2012]. As a result, finding high quality, affordable, and accessible information addressing diverse health topics and issues is a priority for many people around the nation. Previous research showed that there is a huge amount of media sources (e.g., internet and library) people can easily access [Cotton and Gupta, 2004; Kannampallil et al., 2013; Chan, 2012; Kwon and Kim, 2009]. Due to diverse health information flows into general public, individuals are suffered from information overload [Kim et al., 2007; Huang et al., 2012; Chan and Huang, 2013]. Consequently, obtaining trustworthy information becomes everyday challenges.

A considerable amount of research revealed that there are tremendous amount of health information available online [AlGhamdi and Moussa, 2012; Ybarra and Suman, 2006]. The most popular method consumers seeking for healthcare information online [Rideout, 2001], a keyword search on "health" at Google search engine recently generated approximately 2,070,000,000 results (Google.com; March, 2013). Consumers might easily get frustrated by this overwhelming amount of information. Furthermore, there has been criticism of the quality of health-related information on the internet [Risk and Dzenowagis, 2001; Risk and Petersen, 2002; Eysenbach et al., 2002]. Some websites provide precise and well-referenced

ISSN-L: 2223-9553, ISSN: 2223-9944
Vol. 4 No. 4 July 2013

information on medical topics, while others might provide inaccurate and misleading information so that patients might result in poor decision-making. Numerous studies have investigated the health seeking behaviors among internet users. However, little is known about the health information behaviors between the library group and the health care providers group.

Health care providers are the other key sources of health-related information. Doctors and nurses are usually the first person consulted with health issues [Ackard and Neumark-Sztainer, 2001]. However, it might receive low quality of information with higher costs because the insurance system fails to provide high-value services to the consumers [Buntin et al., 2006]. Furthermore, there exist racial/ethnic disparities on health care system, which includes access to health care, quality of health care provided, and health outcomes [Albano et al., 2007; Lawlor et al., 2006]. Previous research has shown that lower level of quality and trust in health care providers are happened to African Americans compared with whites [Doescher et al., 2000; Boulware et al., 2003].

Facing these challenges, health professional experts claimed that libraries are the major institutes that connect patrons with health information in delivering to the general public [Duhon and Jameson, 2013; Linnan et al., 2004; Parker and Kreps, 2005]. As a result, libraries become one of the most important community information centers throughout the world.

In general, libraries are often treated as community outreach centers that provide healthcare professional on relevant information to support research and practice [Bethesda, 1989], and deliver health information resources effectively to the readers [Parker and Kreps, 2005]. Thus, numerous studies suggest that libraries could reduce the significant issues on healthcare disparities in the United States [Borman and McKenzie, 2005; Chobot, 2004].

The other benefits using libraries as health information reference are: cognitive value, quality of the information, contribution to quality patient care, and time saved [Marshall et al., 2013]. Using less time seeking accurate and trustworthy information is a key for consumers, who seek dependable health information, to reduce information overload. Choosing relevant and trustworthy information has become everyday challenge. Libraries are expected to deliver high quality of health information to the public [Chobot, 2004].

This study is to examine the characteristics of individuals seeking health information behaviors among library, internet, and health care providers. The following research questions are investigated for the purpose of this study: What are the significant factors of individuals who choose the library as their primary health information source over the internet? What are the significant factors of individuals who choose the library as their primary health information source over the health care providers? Comparing to the library, what are the significant factors differences between the internet and health care providers? These findings will help identify the behaviors of individuals who choose libraries as their primary sources. By understanding these behaviors, policy makers could improve the health information systems and help libraries passing health information to the public more effectively.

METHODS

Data Collection

The Health Information National Trends Survey 2007 (HINTS) is a telephone and survey conducted by the National Cancer Institute to study health information seeking behavior. 5,625 individuals reported that they looked for health information or medical topics from any

sources. Out of that, there were 4,139 participants looking for the health information from internet, library, or (doctor or health care provider). After excluding the missing data, there were 722 looked for health information from doctor or health care provider, 2,939 for internet, and 53 for library with the total of 3,714 participants.

Socio-demographic characteristics

The following socio-demographic variables were included in the analysis: age (18-34, 35-49, 50-64, 65+); gender; education levels (high school graduated or less, some college or higher); race/ethnicity (Hispanic, non-Hispanic white, non-Hispanic black); annual family income (<$20,000, $20000-$34,999, $35000-$49,999, $50,000-$74,999, ≥$75,000; "Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?" Participants were asked to respond "yes" (= 1) and "no" (= 0).

Health Information

The examined health information questions including in the analysis are: "In general, would you say your health is?" Participants were asked to respond from excellent (= 1) to poor (= 5). This variable is collapsed into three groups: those who reported "excellent" or "very good" as "very healthy" (= 1), those who reported "good" and "fair" as "healthy" (= 2), and poor (= 3). "How often do you wear a hat?" Participants were asked to response from "always" (= 1) to "never" (= 5). "Do you believe that some cigarettes are less harmful than others?" Participants were asked to response "yes" (= 1) and "no" (=2).

The conceptual framework of this paper is shown in Figure 1.

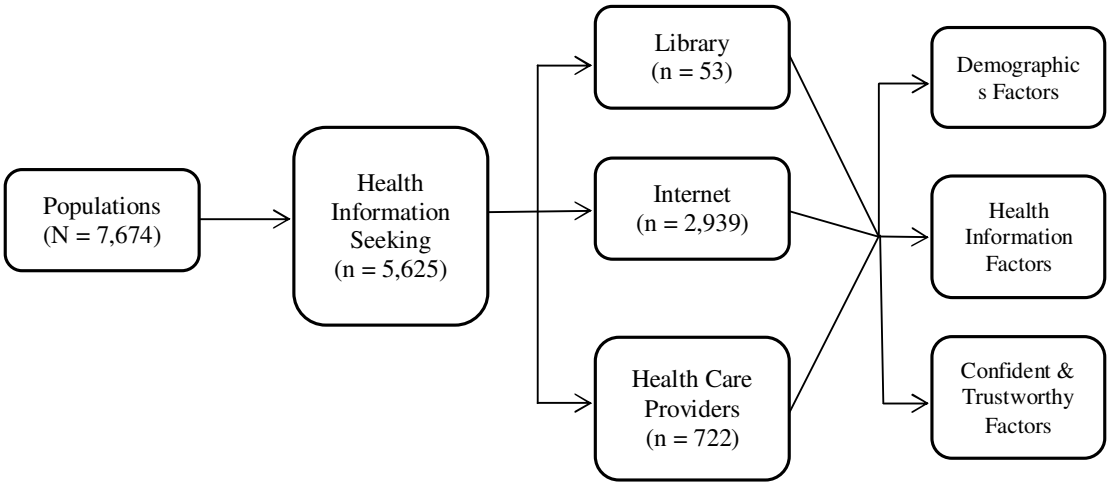

Figure 1. Conceptual framework of health seeking behaviors

Confident and Trustworthy Information

The confident information questions including in the analysis are: "Overall, how confident are you that you could get health-related advice or information you needed it?" Participants were asked to response from "completely confident" (= 1) to "not confident at all" (= 5). The variable is collapsed into three groups: those who reported "completely confident" and "very confident" as "confident" (= 1), those who reported "somewhat confident" and "a little confident" as "somewhat confident" (= 2), and those reported "not confident at all" (= 3). "In general, how easy or hard do you find it to understand medical statistics?" The participants

ISSN-L: 2223-9553, ISSN: 2223-9944
Vol. 4 No. 4 July 2013

were asked to response from "very easy" (= 1) to "very hard" (= 4). The trustworthy variables include: "In general, how much would you trust information about health or medical topics from doctor?" The participants were asked to response from "a lot" (= 1) to "not at all" (= 4). "In general, how much would you trust information about health or medical topics from radio?" The participants were asked to response from "a lot" (= 1) to "not at all" (= 4). "In general, how much would you trust information about health or medical topics from internet?" The participants were asked to response from "a lot" (= 1) to "not at all" (= 4).

Statistical Methods

Data analysis was conducted by STATA 11 software (College Station, Texas, USA). A descriptive statistics was performed to evaluate the health seeking behaviors among library, internet, and health care providers. The statistical analyses conducted in this study were a series of Chi-squared tests to determine the significant differences between the library group and the internet group, and the library group and health care providers group.

RESULTS

Most of the sample populations is between 35-49 years of age (28%) and 50-64 years of age (35%). The majority of responders reported non-Hispanic white (84%). About 78% of the respondents reported some college or higher while 22% reported high school graduate or less. Annual house income status shows that 36% have $75,000 or more and 16% reported less than $20,000. Almost 91% of respondents have health care insurance. The descriptive summary of health seeking behaviors associated with socio-demographic characteristics is shown in Table 1.

Table 1. Percentages of health seeking behaviors associated with demographic characteristics by dependent sources

Variables	*Library (n=53) (%)*	*Health care providers (n=722) (%)*	*Internet (n=2,939) (%)*
Gender			
Male	41.51	35.73	36.2
Female	58.49	64.27	63.8
Race			
Hispanic	9.43	9.97	6.29
White	86.79	77.84	86.02
Black	3.77	12.19	7.69
Education			
High school or less	30.19	38.92	18.2
College	69.81	61.08	81.8
Age			
18-34	13.21	7.2	18.14
35-49	9.43	17.45	31.44
50-64	43.4	29.09	36.61
65+	33.96	46.46	13.81

Variables	*Library (n=53) (%)*	*Health care providers (n=722) (%)*	*Internet (n=2,939) (%)*
Income			
less than $20,000	34.62	27.77	14.23
$20,000 to <$35,000	11.54	20.49	10.52
$35,000 to < $50,000	15.38	10.77	13.11
$50,000 to < $75,000	21.15	17	20.33
$75,000 or more	17.31	23.98	41.82
Health Insurance			
Yes	83.02	93.22	91.1
No	16.98	6.78	8.9

In general, individuals with younger age, higher education, and higher income are more likely to search health information from the internet. Being males and white are more likely to search health information from library. Also, being females with health insurance were more likely to seek health information from the health care providers. A series of chi-square analysis between the factors and the dependent sources are shown in Table 2.

Table 2. Chi Square analysis among library, health care providers, and Internet groups

Variables	*Library (n=53) (%)*	*Health care providers (n=722) (%)*	*p value*	*Library (n=53) (%)*	*Internet (n=2,939) (%)*	*p value*
Gender			0.398			0.426
Male	41.51	35.73		41.51	36.2	
Female	58.49	64.27		58.49	63.8	
Race			0.171			0.395
Hispanic	9.43	9.97		9.43	6.29	
White	86.79	77.84		86.79	86.02	
Black	3.77	12.19		3.77	7.69	
Education			0.207			0.036
High school or less	30.19	38.92		30.19	18.2	
College	69.81	61.08		69.81	81.8	
Age			0.026			< 0.0001
18-34	13.21	7.2		13.21	18.14	
35-49	9.43	17.45		9.43	31.44	
50-64	43.4	29.09		43.4	36.61	
65+	33.96	46.46		33.96	13.81	

ISSN-L: 2223-9553, ISSN: 2223-9944
Vol. 4 No. 4 July 2013

Income			0.281		< 0.0001
less than $20,000	34.62	27.77	34.62	14.23	
$20,000 to <$35,000	11.54	20.49	11.54	10.52	
$35,000 to < $50,000	15.38	10.77	15.38	13.11	
$50,000 to < $75,000	21.15	17	21.15	20.33	
$75,000 or more	17.31	23.98	17.31	41.82	
Health Insurance			0.007		0.042
Yes	83.02	93.22	83.02	91.1	
No	16.98	6.78	16.98	8.9	
General Health			0.019		0.004
Good	15.09	7.22	15.09	12.98	
Fair	18.87	34.17	18.87	41.01	
Poor	66.04	58.61	66.04	46.01	
How often do you wear a hat			0.352		0.008
Always	26.42	18.54	26.42	12.58	
Often	13.21	19.1	13.21	18.66	
Sometimes	18.87	23.46	18.87	25.97	
Rarely	9.43	13.48	9.43	19.31	
Never	32.08	25.42	32.08	23.48	
Believe some cigarettes are less harmful than others			0.001		0.001
Yes	35.85	16.93	35.85	17.62	
No	64.15	83.07	64.15	82.38	
Overall, how confident getting health-related advice or information			0.139		0.037
Confident	28.3	26.22	28.3	23.41	
Somewhat confident	22.64	35.56	22.64	39.91	
Not confident	49.06	38.21	49.06	36.68	
In general, how much would you trust health information from doctors			0.034		0.026
a lot	62.26	74.27	62.26	72.49	

some	28.3	22.53	28.3	24.41	
a little	9.43	2.78	9.43	2.76	
not at all	0	0.42	0	0.34	
In general, how much would you trust health information from radio		0.203			0.009
a lot	1.92	1.64	1.92	2.51	
some	25	27.12	25	32.43	
a little	65.38	68.7	65.38	63.41	
not at all	7.69	2.53	7.69	1.65	
In general, how much would you trust health information from internet		0.061			< 0.0001
a lot	11.76	13.5	11.76	27.55	
some	45.1	44.79	45.1	60.66	
a little	25.49	34.36	25.49	11.41	
not at all	17.65	7.36	17.65	0.38	
In general, how easy or hard do you find it to understand medical statistics		0.714			0.321
Very easy	13.21	9.82	13.21	14.82	
Easy	50.94	49.79	50.94	53.33	
Hard	26.42	32.68	26.42	27.65	
Very hard	9.43	7.71	9.43	4.2	

First, a series of chi-square tests for the difference in various socioeconomic characteristics between library and health care providers revealed that the two groups are significantly different in their age ($p = 0.026$) and health insurance coverage ($p = 0.007$). Individuals, who chose the library as a primary source, tend to be younger age and have less health insurance coverage. On the other hand, the tests for the difference in various socioeconomic characteristics between library and internet showed that the two groups are significantly different in their age ($p < 0.0001$), education ($p = 0.036$), annual household income ($p < 0.0001$), and health insurance coverage ($p = 0.042$). People in the library group tend to be older, have less education, have less annual income, and having less health insurance coverage.

The chi-square tests for the difference in various health information factors between library and health care providers revealed that two groups are statistically significant different in general health ($p = 0.019$) and cigarettes belief ($p = 0.001$). Individuals in the library group tend to be better health and believe some cigarettes are less harmful than others. Comparing to the internet groups, it is found significantly different in general health ($p = 0.004$), frequent

ISSN-L: 2223-9553, ISSN: 2223-9944
Vol. 4 No. 4 July 2013

wear a hat (p =0.008), and cigarettes belief (p =0.001). People in the library groups tend to be better health, always wear a hat, and believe some cigarettes are less harmful than others.

Finally, the chi square tests for the difference in various confident and trustworthy information factors between library and health care providers showed that two groups are statistically significant different in trust health information from doctors (p =0.034). Individuals in the library group have less level of trust in doctors. On the other hand, it is found to be significant in confident getting health information (p =0.037), trust health information from doctors (p =0.026), radio (p =0.009), and internet (p <0.0001) between library and internet groups. People in the library group are more confident getting health information, less level of trust in doctors, radio, and internet.

DISCUSSION

Health information seeking behaviors play a major role in today's modern societies. This study included two bivariate data analysis showing differences between Library group and the Internet group and between Library groups and the health care providers groups in some potential factors. Prior research discovered that individuals in the library group were older, had fewer years of education, had less annual income and held less health insurance coverage compared to the Internet group [Kwon and Kim, 2009]. This is consistent to our findings. On the other hand, people in the library group were younger and had less health insurance coverage compared to the health care providers group. One explanation is that older adults with health insurance coverage usually consulted with their private medical doctors and another healthcare professional [Weigel et al., 2012].

As for the health information variables, the findings showed people in the library group had better health, always wear a hat, and believe some cigarettes are less harmful than others compared to the Internet group. One reason for this could be that library considers as a well-referenced resource. Guo and Sha (2012) reported that library had well established knowledge system to organize, deliver, and analyze knowledgeable information effectively [Guo and Sha, 2012]. While individuals in the library group had better health and believe some cigarettes are less harmful than others compared with the health care providers group. One possible explanation for this could be that individuals may experience high cost and long time waiting with health care providers; as a result, less people are willing to consult with their health professional about some particular health issues. Schoen et al. (2004) revealed that about 20-25% of U.S. adults were waiting at least six days to get an appointment when needed. They also experienced two hours or more waiting time and received out-to-date health information from the doctors [Schoen et al., 2004]. Furthermore, research showed that older adults are major consumers of medical services and they have out-of-pocket cost more than $5,000 compared with others [Dunlop et al., 2003]. These findings not only suggest that libraries are assisting to provide relevant health information but also function as a health education materials resource center for health professionals.

When it comes to trust, this study is not in favor of the library group. Individuals in the library group had low level of trust in health information from online, doctors, and radio compared with the Internet group. One possible explanation is because of the communication between patients and doctors electronically. Several studies have consistently shown that people are more likely to use email communicating with doctors about their health [Couchman et al., 2001; Kleiner et al., 2002]. Also, 56% of individuals reported that they could make a better decision to the choice of doctor when communicating with doctors electronically [Car and Sheikh, 2004]. This finding is also consistent with the previous research regarding to the low level of trust in online cancer information sources within the

library group [Kwon and Kim, 2009]. However, the relationship between the library group and the internet group of trust health information from radios still needs further exploration.

Lower level of trust in health information from doctors is also found in the library group compared with health care providers group. One possible reason is that the majority of individuals in this analysis had health insurance coverage. It also showed that people with health insurance coverage were more likely to visit their health care providers for health information. Thus, they might develop a good relationship to trust with information from the health care providers. Kelton et al. (2008) reported that in order to trust with information, one has to have enough experience using a particular source [Kelton et al., 2008].

As for the confident variables, this study supports high confidence of getting health information from the library group. Individuals in the library group are more confident getting health information over the Internet group. One of the reasons could be that people asked librarians for assistance effectively. Prior research showed that librarians play an important role in preparing, organizing and managing electronic information resources to users and administrators [Marshall et al, 2013]. As the likelihood of getting helps from librarians increase, individuals build their confidence to locate the necessary information when needed [Marshall et al, 2013]. Furthermore, there is no significant difference in understanding medical statistics in the Internet group and health care providers group compared with the library group. This suggests that library not only is well-organized information institute but also provide knowledgeable and understandable information to the general public.

CONCLUSIONS

This study examined socio-demographic, health information, and confident and trustworthy information associated with health information seeking behaviors among the library group, Internet group, and health-care providers group. Our findings revealed that individuals in the library group were older, had less education, had less annual income, and held less health insurance coverage compared with the Internet group. In addition, people in the library group had better health, always wear a hat, believed some cigarettes are less harmful than others, had more confident getting health information, and less level of trust in doctors, radio, and internet compared with the internet group. On the other hand, Individuals in the library group were younger, held less health insurance coverage, had better health, believed some cigarettes are less harmful than others, and had less level of trust in doctors compared with the health care providers group. The results suggest that libraries have a potential ability to serve as major information centers that provide knowledgeable and understandable health information for consumers. However, libraries should invest in developing a strategy in a way that attracts people spending more time to experience library's facilities. The more experiences consumers acquire form the library, the higher level of trust with information consumers build. The other important findings in this analysis are recognizing the characteristics of health seeking behaviors among the library group, Internet group, and health care providers group. These will help libraries provide an effective way to deliver high quality health information to the general public in order to reduce information overload and eliminate racial/ethnic disparities in the health care systems.

ISSN-L: 2223-9553, ISSN: 2223-9944
Vol. 4 No. 4 July 2013

REFERENCES

Rutten, L. & Stevenson, S. (2012). P04.20. Health information seeking, trust in information sources and use of complementary and alternative medicine. *BMC Complementary and Alternative Medicine, 12*(Suppl 1), P290

Chan, Y. M., Huang, H. & Mei, H. (2012). Socioeconomic Status, Attitudes on Use of Health Information, Preventive Behaviors, and Complementary and Alternative Medical Therapies: Using a U.S. National Representative Sample. *Academic Research International, 3*(2), 15-23.

Chan, Y. M. & Huang, H. (2012). Risk for Hypertension between Whites and African Americans Associated with Food Items. *Journal of Community Nutrition & Health 1*(2), 1-7.

Cotton, S. R. & Gupta, S. S. (2004). Characteristics of online and offline health information seekers and factors that discriminate between them. *Social Science & Medicine, 59*, 1795-1806.

Kannampallil, T. et al., (2013). Understanding the nature of information seeking behavior in critical care: Implications for the design of health information technology. *Artificial Intelligence in Medicine, 57*, 21-29.

Chan, Y. M. (2012). Trust and Health Information Seeking Behavior: Results from the 2012 Health Information National Trends Survey. *International Journal of Health Sciences and Research, 2*(7), 70-78.

Kwon, N. & Kim, K. (2009). Who goes to a library for cancer information in the e-health era? A secondary data analysis of the Health Information National Trends survey (HINTS). *Library & Information Science Research, 31*, 192-200.

Kim, K., Lustria, M. L A. & Burke, D. (2007). Predictors of Cancer Information Overload: Findings from a National Survey. *Information Research, 12*(4). http://informationr.net/ir/12-4/paper326

Huang, H., Chan, Y. M. & Dong, F. (2012). Health Numeracy Confidence among Racial Ethnic Minorities in HINTS 2007: Sociodemographic, Attitudinal, and Knowledge Correlates. *Literacy and Numeracy Studies, 20*(2), 3-16.

Chan, Y. M. & Huang, H. (2013). Weight Management Information Overload Challenges in 2007 HINTS: Socioeconomic, Health Status and Behaviors Correlates. *Journal of Consumer Health on the Internet*, *17*(2), 151-167.

AlGhamdi, K. M. & Moussa, N. A. (2012). Internet use by the public to search for health-related information. *International Journal of Medical Informatics, 81*, 363-373.

Ybarra, M. L. & Suman, M. (2006). Help seeking behavior and the Internet: A national survey. *International Journal of Medical Informatics, 75*, 29-41.

Rideout, V. (2001). Generation Rx.com: How young people use the Internet for health information, Kaiser Family Foundation. Available on the World Wide Web at: http://www.kff.org/entmedia/20011211a-index.cfm

Risk, A. & Dzenowagis, J. (2001). Review of Internet health information quality initiatives. *Journal of Medical Internet Research, 3*, E28.

Risk, A. & Petersen, C. (2002). Health information on the internet: quality issues and international initiatives. *Journal of the American Medical Association, 287*(2), 713-715.

Eysenbach, G. et al., (2002). Empirical studies assessing the quality of health information for consumers on the World Wide Web: a systematic review. *Journal of the American Medical Association, 287*(2), 691-700.

Ackard, D. M. & Neumark-Sztainer, D. (2001). Health Care Information Sources for Adolescents: Age and Gender Differences on Use, Concerns, and Needs. *Journal of Adolescent Health, 29*, 170-176.

Buntin, M. B. et al., (2006). Consumer-Directed Health Care: Early Evidence about Effects on Cost and Quality. *Health Affairs, 25*(6), 516-530.

Albano, J. D. et al., (2007). Cancer mortality in the United States by education level and race. *Journal of the National Cancer Institute, 99*(18), 1384–94.

Lawlor, D. A. et al., (2006). Association of childhood socioeconomic position with cause-specific mortality in a prospective record linkage study of 1,839,384 individuals. *American Journal of Epidemiology, 164*(9), 907–15.

Doescher, M. P. et al., (2000). Racial and ethnic disparities in perceptions of physician style and trust. *Archives of Family Medicine, 9*, 1156-1163.

Boulware, L. E. et al., (2003). Race and trust in the health care system. *Public Health Report, 118*, 358-365.

Duhon, L. & Jameson, J. (2013). Health information outreach: a survey of U.S. academic libraries, highlighting a Midwestern university's experience. *Health Information and Libraries Journal*

Linnan, L. A. et al., (2004). Public librarians as a resource for promoting health: Results from the Health for Everyone in Libraries Project (HELP) Librarian Survey. *Health Promotion Practice, 5*, 182–190.

Parker, R. & Kreps, G. L. (2005). Library outreach: Overcoming health literacy challenges. *Journal of the Medical Library Association, 93*(4), 81–85.

Bethesda (1989). Improving Health Professionals' Access to Information. *U.S. National Library of Medicine*.

Borman, C. B. & McKenzie, P. J. (2005). Trying to help without getting in their faces: Public library staff descriptions of providing consumer health information. *Reference and User Services Quarterly, 45*, 133–146.

Chobot, M. (2004). The challenge of providing consumer health information services in public libraries. *Washington, D.C.: American Association for the Advancement of Science* Retrieved on March 9, 2009, from http://www.healthlit.org/pdfs/AAASFINAL.pdf

Marshall, J. G. et al., (2013). The value of library and information services in patient care: results of a multisite study. *Journal of Medical Library Association* 101(1): 38-46.

Weigel, P. A. et al., (2012). Chiropracticepisodes and the co-occurrence of chiropractic and health services use among older Medicare beneficiaries. *Journal of Manipulative and Physiological Therapeutics, 35*, 168–175.

Guo, Y. Q. & Sha, Z. Y. (2012). Research on Information Resource Integration of University Libraries under the Mode of Knowledge Management. *Intelligent Information Management, 4*, 207-211.

ISSN-L: 2223-9553, ISSN: 2223-9944
Vol. 4 No. 4 July 2013

Schoen, C. et al., (2004). Primary Care and Health System Performance: Adults' Experiences in Five Countries. *Health Affairs,* 487-503.

Dunlop, D. D. et al., (2003). Health care Utilization among Older Adults with Arthritis. *Arthritis & Rheumatism* 49(2): 164-171.

Couchman, G. R. et al., (2001). E-mail communications infamily practice: what do patients expect? *The Journal of Family Practice, 50*, 414-8.

Kleiner, K. D. et al., (2002). Parent and physician attitudes regarding electronic communication in pediatric practices. *Pediatrics, 109*, 740-4.

Car, J. & Sheikh, A. (2004). Email consultations in health care: 2-acceptability and safe application. *BMJ, 329*, 439-442.

Kelton, K. et al., (2008). Trust in digital information. J*ournal of the American Society for Information Science, 59*(3), 363–374.