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Sharon D. Smith

University of Tennessee Health Science Center

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Sharon D. Smith

University of Tennessee Health Science Center

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Abstract

As the U.S. elderly population grows, advances and improvements in: healthcare, technology, nutrition and lifestyle has increased the life span of this population. In general, older adults have an increased need for health information. The Internet is a tool providing timely access to this information. This study explored use of the Internet by older African American adults in seeking health care information. Ninety-three African American adults participated in this study. Eleven survey questions gathered data on demographics, use of computers, access to the Internet and use of the Internet in seeking health care information. Twenty-nine percent (25 out of 86) of African American adults over 55 reported using the Internet to seek health care information. This research concludes that opportunity exists to educate older African American adults on the informational resources available on the Internet that will help them in playing a part in maintaining their own physical well being.

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Internet Usage Among African American Adults in Seeking Health Care Information

The current healthcare environment has changed from paternalistic to a consumer centric approach. Traditionally patients relied on medical doctors (MD) to tell them what they needed to know, but times have changed. Consumers are encouraged to be informed about their health and healthcare. Television has gone beyond entertainment as commercials and programs on health conditions, medications, treatment options and treatment facilities have brought health care information into our homes in this new informational age. Patients need information about a wide variety of topics to stay informed; medication usage and effects, disease signs and symptoms, treatment options, diet and exercise or healthcare provider-facility information. The advent of information technology has brought a plethora of health information to consumers via the Internet. According to Gibbons (2005), the average person in the United States (U.S.) has come to rely on electronic media and internet based resources to access information on disease and general health topics.

Use of the Internet among racial minorities has been investigated and shows that digital disparities exist related to: economical and educational differences and concerns about Internet privacy/security (Brodie et al, 2000). Disparities also exist among varied age groups in regards to internet use: access to computers, familiarity with using computers and concerns regarding internet privacy/security are sources of disparities among varied age groups (Brodie et al, 2000; Zickuhr & Madden, 2012; Baker, Wagner, Singer & Bundorf, 2003).

A digital divide is said to exist when there is unequal access to computer technology and the vast amount of information available via the World Wide Web. According to Kreps (2005) and Chang et al (2004), a digital divide exists among vulnerable segments of the American population. Racial and ethnic minorities, persons with low socioeconomic status, those living in rural communities, persons with literacy issues and the elderly are particularly vulnerable to the digital divide that currently exists. The Internet holds much promise to change the way people seek, use and disseminate information to hopefully close the digital divide that exists.

Background

Older adults are the largest growing segment of the U.S. population. According to the Administration on Aging (2013), the elderly population (persons 65 years old or older) numbered 41.4 million in 2011 and represented 13.9% of the U.S. population. Per estimations, by 2030 there will be 72.1 million older persons making up 19% of the population. The older population has increased by 6.3 million or 18% since 2000, compared to an increase of 9.4% for those less than 65 years of age. With this growth comes an increase in health issues and medical expenditures. Providing resources to older adults seeking health information may help them to ask questions of their health care providers and be partners in improving and maintaining their health and healthcare. A segment of this elderly population, African Americans may be affected even more by disparities that affect health care based on morbidity and mortality rates.

The Administration on Aging (2013) reports that most African American older adults have at least one chronic condition and many have multiple conditions. The most frequently occurring conditions among African American elderly in 2005-2007 were: hypertension (84%), diagnosed arthritis (53%), all types of heart disease (27%), sinusitis (15%), diabetes (29%), and cancer (13%). The comparable figures for all older persons were: hypertension (71%), diagnosed arthritis (49%), all types of heart disease (31%), sinusitis (14%), diabetes (18%), and cancer (22%).

According to the Centers for Disease Control and Prevention (CDC, 2013) African Americans constitute 12.5% of the U.S. population and are the second largest minority group in the U.S. at 43.9 million per 2011 statistics. Four of the ten leading causes of death for African Americans in 2010 were: heart disease, cancer, stroke and diabetes (CDC, 2013). These conditions are preventable or have controllable contributing factors which can be affected by diet, physical activity and weight control.

Providing older African American adults with health information is a way to encourage active participation in their own healthcare. Timely access to healthcare information is crucial when making decisions about one's health and healthcare. The Internet can be a tool to change the way older African American adults seek, use and communicate information regarding their health.

Purpose

The purpose of this study is to explore the use of the Internet by older African American adults in seeking health care information.

Significance

This study is important, in that it examines two groups (older adults and African Americans) who may be lagging in the use of the Internet in seeking healthcare information. This information can be important in maintaining a healthy lifestyle or in dealing with health issues. To address the challenges posed by an aging minority population, research is needed to first identify what behaviors and activities exist among this population in regards to seeking health care information. Health care quality and access are important issues, as increasing numbers of individuals have access to health and medical care. Health care professionals will need to identify resources to educate and inform patients regarding their health care as older adults live longer, productive lives.

Research Questions

This study will examine the following questions:

- 1) Do older African American adults have access to the Internet
- 2) Are older African American adults using the Internet to seek health care information
- 3) What type of health care information do older African American adults seek
- 4) What Internet sites do older African American adults use, if they have sought health care information online

- 5) For those who seek health care information online, do they share this information with their health care provider

Definition of Terms

The following terms will be defined as used throughout this research paper:

Older/elderly is defined as an individual over the age of 55.

African Americans are individuals who self identify as black or African American with descendants from Africa.

Digital divide is unequal access to information via the Internet.

Limitations

Limitations include the generalizability of the data in relation to the size of the convenience sample; limited time collecting data and self reporting by subjects.

Review of Literature

This chapter reviews the literature on the subject of older African Americans seeking health care information. This review is in four sections: digital divide, use of the Internet in seeking health care information, older adults' use of the Internet in seeking health care information and minorities' use of the Internet in seeking health care information.

A search of the literature from January 1977 until January 2014 was performed using the Cumulative Index to Nursing & Allied Health (CINAHL) and PubMed. A search was also conducted using a manual search of the citations from the final selections. When using CINAHL, the major search terms used were: aged, internet and health information. This search yielded 269 articles. PubMed was searched with the medical subject headings (MeSH) and major terms: aged, consumer health information and internet. This search yielded 55 articles. Many of the articles identified were repeated among the databases. A second search was performed using the terms: aged, internet, African American and health information in CINAHL, which yielded 7 articles. A second search via Pub Med using the MeSH terms aged, internet, African American and consumer health information yielded 12 articles. Twenty-four articles were included in this literature review. A number of the articles were excluded based on information in the abstract, i.e. study performed outside of the U.S., studies dealt with teaching the elderly how to use the Internet, or the articles did not speak to research questions addressed by this study.

Digital divide

Cresci (2010) defines the digital divide as “the social, economic, and demographic factors that exist between individuals who use computers and those who do not”. Despite the digital divide, use of computers and the Internet are wide spread among our society. Computers are commonly used for communication, banking and entertainment. As advanced technology is used more in healthcare, it is becoming imperative that consumers keep up with the knowledge that affects their day to day lives. Individuals seeking health or medical information have varied sources to choose from: healthcare professionals/providers, family/friends/coworkers, television, radio and print media: books, magazines and newspapers. The information superhighway or Internet is a fast way to deliver large quantities of health information to large groups of individuals (Cutilli, 2010). Research has shown that eight-two percent of all U.S. adults use the Internet or email (Zickuhr & Madden, 2012). According to the 2012 Pew Research report authored by Zickuhr & Madden, fifty-three percent of American adults 65 and older use the Internet or email.

A study by Brodie et al (2000) examined computer, internet and email usage and use of computers to seek health care information. The study identified gaps in usage by income, education and race among adults sixty years old or younger. Brodie et al (2000) found that a “substantial digital divide continues to characterize computer and Internet use”.

Disparities regarding the use of technology can be linked to income, education and ethnicity. Studies have been conducted which identify the characteristics of the digitally underserved population. Generally these studies reported that people in higher age groups, lower socioeconomic status and who are ethnic minorities are less likely to connect to the Internet and search for relevant health information (Brodie et al, 2000; Baker, Wagner, Singer & Bundorf, 2003). A study by Lorence & Park (2006) concludes that low income groups are still underserved in their use of computers and access to the Internet. The unequal access to information via the Internet or digital divide may be narrowing for some Americans, but for certain segments of the population, that divide remains open.

Use of the Internet in seeking health care information

Surveys by the Pew Internet and American Life Project demonstrate that the Internet is a valued source of health care information (Fox & Rainue, 2000). Fox & Rainue (2000) report that “fifty-two million adult Americans, 55% of the Internet user population have turned to Internet sources to seek health information”.

Consumers are now encouraged to take more responsibility in their healthcare as the issues of access and quality are brought to the forefront. As access to health/medical care is increasing for millions of Americans, resources may be limited and stretched. A typical doctor’s office visit may not last more than twenty minutes, this may not be enough time for the consumer to get answers to their questions or discuss health issues.

Turning to the Internet for information can help to answer questions and increase consumers knowledge and participation in their healthcare.

Several studies have shown that consumers are using the Internet to seek health care information, with percentages ranging between thirty-three and seventy-four percent (Diaz et al, 2002; Fox, 2005; Dickerson et al, 2004; Baker, Wagner, Singer & Bundorf, 2003). The type of health information they seek ranges from nutrition or diet, drug side effects, complications of medical therapy, complementary or alternative medicine, second opinions about medical conditions (Diaz et al, 2002), specific disease or medical problems, vitamins or nutritional supplements and health insurance (Fox, 2005). Weaver et al's (2009) study profiled adults using internet medical information (IMI). They found low prevalence of IMI seeking behavior, by 13.2% of all respondents (n=6, 119) and 21.1% of respondents with internet access (n=3,829). Twenty- four percent of IMI users were 55 years old plus and 14.6% were African Americans in their study. Weaver et al's (2009) data concluded that African Americans are less likely than their white counterparts to seek IMI.

The characteristics of online users seeking health care information are generally non-Hispanic white adults between 18-64 years old (Fox, 2005). The users are usually better educated, female and earn a higher income (Dickerson et al, 2004). Miller, West & Wasserman (2007) had no African American or Hispanic respondents aged 65 years old older who reported going online to use health websites in their survey of adults usage of health websites.

They did report that 31% of respondents self-identifying as African American reported going online to seek health information. This is an increase as compared to Brodie et al's (2000) study that reported 19% of African Americans used the Internet to search for health information. This increase is encouraging as it promises to diminish the existing digital divide that exists for a substantial number of Americans.

Older adult use of the Internet

The adoption of technology has become essential to function in modern day society, as it crosses so many facets of life. The adoption of technology can aid older adults in remaining independent longer. Technology has the potential to assist in monitoring and maintaining health and managing health conditions and diseases (Mitzner et al, 2010). The potential of having a disability or health condition increases with age, making it imperative that older adults familiarize themselves with technologies that can facilitate independence in everyday life and empower them to become knowledgeable consumers. Having access to health information can have a positive impact on the health of older adults.

The stereotype that older adults do not or will not use the Internet is slowly changing. Wagner & Wagner's (2003) study of adults in Idaho from 1996-1998 surveyed if they had used a medical reference book, a telephone advice nurse or computers for health information. Their primary focus was the relationship between age and the use of health information. They found evidence to counter the stereotype that older adults are resistant to try new health information technologies.

The researchers found increases in the use of health information by older adults. When using an advice nurse or a computer, older adults demonstrated equal increases compared with younger and middle- aged adults. Wagner & Wagner (2003) also reported that for older adults with a computer and Internet access, computer use for health information was the second most frequently used information source at thirty-four percent.

Research studies have shown varied use of the Internet by older adults (Campbell, 2005; Zickuhr & Madden, 2012). According to the 2012 Pew Research Center's Internet & American Life Project, fifty-three percent of American adults aged 65 and older use the internet or email. Internet usage for adults 75 years old plus drops down to thirty-four percent (Zickuhr & Madden, 2012).

Older adults who use the internet are generally looking for information on nutrition; illness/medical conditions; information about a doctor, hospital, a nursing home, a home health agency or other health care providers and Medicare (Taha, Sharit & Czaja, 2009).

The Wisconsin Longitudinal Study of 2004 reports that thirty-four percent of respondents' age 63-66 years old had used the internet to search for health information (Flynn, Smith & Freese, 2006). The study participants were mainly non-Hispanic white women and men with a high school education, which is not representative of most of America. Older adults' usage of the internet is increasing, but may still be lagging among elderly minorities and those who are vulnerable to the digital divide. Computers and the Internet offer older adults opportunities and resources for improving health.

Cresci, Yarandi & Morrell (2010) examined computer and Internet use by urban older adults. The investigators target population was persons 60 years or older living in Detroit, Michigan. Eighty-three percent of their sample was African American. In this study, twenty-seven percent of the sample reported computer usage mainly consisting of conducting searches on the Internet, playing games, writing letters or other documents and communicating via email. Their data suggests about a quarter of urban older adults are using computers. Their findings support the notion that a digital divide does effect this population, by correlating demographic data (age, race, sex, income, education) with employment status, reported activity level and health status amongst computer users and nonusers. This study did not examine use of the internet in seeking health information.

Minorities' use of the Internet

Limited literature was located on African American usage of the Internet in seeking health care information. Gollop (1997) studied health information seeking behaviors of forty-five older African American women between October 1992 and March 1993. The researcher concluded that respondents received health information from their physicians, the mass media and members of their social networks. This research did not address use of the Internet. Gollop (1997) related that there was little research dedicated to the health information needs of the population she investigated and more extensive research was needed on larger samples, due to the predicted population increase of older persons and the estimated rise in the need for health care among the elderly.

Health information is integral to health promotion and disease prevention. There are numerous health websites on the Internet which provide information on a variety of health topics. Warren et al (2010) examined the use of the Internet as a resource among lower income African American women in seeking health information. Their qualitative research demonstrated that participants perceived the Internet as a tool for seeking health information. The researchers found that African American women believe in the benefits of computers and the Internet; such as the ability to access vast amounts of health information; facilitation of personal empowerment; facilitation of communication with health care professionals and the ability to seek a second opinion.

Detlefesen (2004) reviewed literature that examines the information seeking behaviors of two special populations that the author identified as vulnerable and at risk; the elderly and African Americans. The author concludes that both groups prefer information from their health care providers, but that “both groups do seek consumer health information and are increasingly using the Internet for information searches” (Detlefesen, 2004).

The literature on use of the Internet in seeking health care information is increasing and indicates that Americans are using the power of the Internet to assist them in answering questions and gaining knowledge about their health. The resources that are available can have an influence on how people take care of themselves; interact with their health care provider and/or when they seek medical/health care.

Limited literature was identified on the use of the Internet in seeking healthcare information by a portion of the population that may be vulnerable, underserved and susceptible to the digital divide.

Methodology

This chapter describes the research design used to conduct this research; population/sample design; data collection procedures; data collection instrument; along with how collected data will be analyzed. Approval for this study was granted by the University of Tennessee Health Science Center's (UTHSC) Institutional review board (IRB) after submission of an application, consent disclosure statement and data collection instrument to the IRB.

A descriptive research design was used to conduct this research study. The population used was a purposive sample of older African American adults. Adults living within the 63136 zip code of Saint Louis, Missouri were selected to participate in this study. The target population for the study consisted of African American adults over the age of 55 living within the 63136 zip code. According to the U.S. Census Bureau (2010), the total population in the 63136 zip code is 48,560 of which African Americans make up 90% of the population and adults between 55-84 are 20.7% of the population.

The author developed a survey entitled "Internet usage among older African American adults in seeking health care information".

This study utilized a convenience sample of African American adults within the 63136 zip code. The researcher canvassed within the 63136 zip code. As part of data collection efforts, the researcher went door to door in neighborhoods within the 63136 zip code, visited one beauty salon, one barber shop and one nail salon in the 63136 zip code from March 4, 2014 until March 16, 2014.

African American adults were approached by the researcher and invited to participate in a descriptive study to analyze African Americans' use of the Internet in seeking health care information. The consent disclosure statement was discussed with the participants and once they agreed to participate, the survey was administered. Participants were given the opportunity to complete the survey at that time or have the questions read to them by the researcher. The data collection instrument was designed to collect demographic data (age, sex and race) and questions that address use of computers, smart phones, portable devices and the Internet. One example of a question was: "Do you have access to the Internet on the above device (s)". Once usage of the Internet was established, the survey consisted of structured questions regarding use of the Internet in seeking health care information, where they access the Internet, what type of device is used to access the information, what type of health care information they have searched for, which sites they use to gather information and if the information is shared with healthcare providers. Another example of a question in this section was: "Where do you usually access the Internet." One open ended question was asked in regards to other sites visited that were not listed on the survey.

Data Analysis

This section will discuss how the data will be analyzed; the response rate; statistics which will be used to analyze each of the research questions and describe the population sample used.

A convenience, purposive sample of 93 African American adults within the 63136 zip code was recruited to participate in this research.

Statistical analysis of the survey data included frequencies and percentages of study participants (age ranges, sex and race); descriptive statistics in analyzing use of devices; access to the Internet; use of the Internet in seeking health or medical information; where the Internet is accessed when seeking this information; what type of health/medical information is sought; which sites are used to gather information and if the information is shared with a health care provider. The statistical package for the social sciences (IBM Corp, 2011) version 20 (SPSS) was used to analyze the data.

Results

This chapter describes the response rate from the recruited sample, statistical description of the sample population and presents statistical analyses for each research question. Statistical tables are also included which represent this data.

Ninety-three African American adults were surveyed for this research study with 100% participation. Forty-one out of ninety-three study subjects (44%) were male and 52 out of 93 (56%) were female. Participants' ages are shown in Table 1.

Sixty-two out of ninety-three (67%) of the sample population was over the age of 55.

Table 1

<u>Age of study participants</u>		
<u>Age</u>	<u>Frequency</u>	<u>Percent</u>
Under 55	31	33.3
55-59	14	15.1
60-64	11	11.8
65-69	10	10.8
70-74	11	11.8
75-79	11	11.8
Over 80	5	5.4
<u>Total</u>	<u>93</u>	<u>100.0</u>

Age and sex of participants is shown in Table 2.

Table 2

Age and sex of study participants

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
Under 55	21	10	31
55-59	5	9	14
60-64	4	7	11
65-69	1	9	10
70-74	4	7	11
75-79	5	6	11
Over 80	1	4	5
<u>Total</u>	<u>41</u>	<u>52</u>	<u>93</u>

The use of computers, smart phones and/or portable devices was also addressed.

Seventy-eight percent of the sample population who answered this question indicated that they owned a computer, 45% own a smart phone and 28% own a portable device. Access to the Internet was asked next; 84% have access to the Internet on the above mentioned devices. Fifty-nine percent of adults over the age of 55 have access to the Internet.

Table 3 shows the ages of study participants who have access to the Internet.

Table 3

Access to the Internet by age

<u>Age</u>	<u>Access</u>		<u>Total</u>
	Yes	No	
Under 55	31	0	31
55-59	14	0	14
60-64	8	3	11
65-69	10	0	10
70-74	8	3	11
75-79	4	5	9
Over 80	1	4	5
<u>Total</u>	<u>76</u>	<u>15</u>	<u>91</u>

Table 4 presents data regarding the question: ‘Do you use the Internet to get health/medical information’. Fifty-four percent of the population answering this question indicated that they use the Internet to get health/medical information. Table 5 shows data regarding use of the Internet in seeking health/medical information by age and sex.

Twenty-nine percent (25 out of 86) of African American adults over 55 in the study reported seeking health and medical information on the Internet. Twenty four percent (18 out of 86) of African American females over 55 sought health care information via the Internet and eight percent (7 out of 86) of African American males over 55 sought health care information via the Internet.

Table 4

Use the Internet for health care information

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
Yes	50	53.8
No	36	38.7
Total	86	92.5
Missing	7	7.5
<u>Total</u>	<u>93</u>	<u>100.0</u>

Table 5

Use of the Internet in seeking health care information by sex and age

<u>Response</u>	<u>Sex</u>	<u>Age</u>						
		Under 55	55-59	60-64	65-69	70-74	75-79	Over 80
Yes	Male	16	3	0	0	3	1	0
	Female	9	5	4	5	2	1	1
No	Male	5	2	4	1	0	1	0
	Female	1	4	3	4	5	5	1

Eighty-three percent of the sampled participants, who answered the question regarding what type of device they use when seeking health/medical information, use a computer when seeking health care information, 19% use a smart phone and 8% use a portable device. A question regarding where they access the Internet when seeking health care information was asked. The results are as follows for the entire sample population: 94% usually access the Internet at home, 8% at the library, 10% at school, 8% at a family or friends home and 14% access the Internet at ‘other’ places.

The results of type of information sought by the sample population who answered this question are shown in Table 6.

Table 6

Type of health/medical information sought

Information Sought	Frequency			Percentage
	Yes	No	Total	
Medication	28	21	49	57%
Vitamins	15	34	49	31%
Nutrition	17	32	49	35%
Diet	26	23	49	53%
Exercise	18	31	49	37%
Health issue	18	31	49	37%
Treatment for health issue	18	31	49	37%
Health care provider	15	34	49	31%
Hospital, Doctors office or Clinic	9	40	49	18%

The breakdown of health/medical information sought by African American adults over the age of 55 who answered the question is shown in Table 7.

Table 7

Type of health/medical information sought by older adults

Information Sought	Frequency			Percentage
	Yes	No	Total	
Medication	15	24	49	31%
Diet	12	37	49	24%
Health issue	12	37	49	24%
Treatment for health issue	9	40	49	18%
Exercise	8	41	49	16%
Health care provider	7	42	49	14%
Vitamins	6	43	49	12%
Nutrition	6	43	49	12%
Hospital, Doctors office or Clinic	4	45	49	8%

Participants were surveyed on which Internet sites they have used to seek information and the results follow. Table 8 provides data on the sample population and Table 9 provides data on African American adults over the age of 55 who answered the question.

Table 8

Websites used to gather information

Websites	Frequency			Percentage
	Yes	No	Total	
Web MD	33	17	50	66%
Wikipedia	18	32	50	36%
Yahoo Health	18	32	50	36%
Medicare.gov	6	44	50	12%
FamilyDoctor.org	2	48	50	4%
MedlinePlusSeniors' Health	2	48	50	4%
Netwellness	2	48	50	4%
PDR Health	1	49	50	2%
eMedicine	1	49	50	2%

Table 9

Websites used by older adults to gather information

Websites	Frequency			Percentage
	Yes	No	Total	
Web MD	16	34	50	32%
Wikipedia	6	44	50	12%
Medicare.gov	5	45	50	10%
Yahoo Health	3	47	50	6%
MedlinePlusSeniors' Health	2	48	50	4%
Netwellness	1	49	50	2%
PDR Health	0	50	50	0%
eMedicine	0	50	50	0%
FamilyDoctor.org	0	50	50	0%

Other sites that participants indicated that they used to gather health/medical information which were not listed on the survey are as follows: Google search, National Institute of Health (NIH), Medline, Centers for Disease Control and Prevention (CDC) and Department of Health and Human Services (DHHS).

The final question addresses if participants have shared the information they have sought online with a health care provider. Fifty-three percent of the entire sampled population who answered the question (25 out of 47) have shared the information with their physician, 6 % (3 out of 47) have shared information with a registered nurse (RN) and 11% (5 out of 47) have shared information with a nurse practitioner (NP).

As compared with the entire sampled population, older African American adults share information less often with health care professionals: 12 out of 47 (26%) have shared with their physician, 2 out of 47 (4%) have shared with a RN and 1 out of 47 (2%) have shared with a NP.

Conclusions and Recommendations

This chapter will summarize the study results, provide a conclusion of the study, discuss implications of the study and finally discuss recommendations. The purpose of this study was to explore the use of the Internet by older African American adults in seeking health care information. A convenience sample of African American adults was surveyed and data was collected on access to the Internet, type of device used to access the Internet, where the participant accesses the Internet, type of health information sought, websites used and if the information is shared with health care providers.

In this study 84% of the entire sample reported having access to the Internet. Forty-nine percent of sampled adults over 55 reported having access to the Internet. Fifty-eight percent of the entire sample reported using the Internet to seek health and medical information. Twenty-nine percent (25 out of 86) of African American adults over 55 in the study reported seeking health and medical information on the Internet.

The most frequently sought health information reported by African American adults over the age of 55 was information on medications at 31%, diet and health issues at 24% each. Thirty-two percent of sampled older African American adults used Web MD to gather health information, 12% used Wikipedia and 10% used Medicare.gov.

The final question regarding whether African American adults over 55 share information gained from the Internet with health care providers shows the following results: 26% share information with a medical doctor (MD), 4% share with a registered nurse (RN) and 2% share with a nurse practitioner (NP).

Zickuhr & Maddens' (2012) findings regarding access to the Internet by 53% of sampled adults 65 years old and older is similar to this study's findings of 49% of African American adults over 55 report having access to the Internet. Using the Internet to seek health care information was reported by 29% of African American adults over 55 in this study. Previous research (Diaz et al, 2002; Fox, 2005; Dickerson et al, 2004; Baker, Wagner, Singer & Bundorf, 2003) reports that between 39-74% of consumers report using the Internet to seek health care information. This study's results were lower as compared to the above. Weaver et al (2009) reported that 24% of adults over 55 sought Internet medical information. This result is similar to the results obtained by this study, although Weaver's African American study sample was 14.6% of their study population.

The top three types of health information sought by African American adults over 55 in this study were: medication 15 out of 49 (31%), diet 12 out of 49 (24%) and health issues 12 out of 49 (24%). Research by Diaz et al (2002) reported that 68% of their respondents sought information about nutrition or diet, 58% searched for information on drug side effects and 41% searched for information on complementary or alternative medicine. The majority of Diaz et al's participants who indicated that they used the Internet to seek health information were white (91%).

Diaz et al (2002) also reported that 59% of those using the Internet reported that they did not discuss this information with their MD. This is higher than this study's result of 43% of sampled African American adults who report not sharing information with a MD. The reviewed literature was limited on studies involving African American adults and use of the Internet in seeking health care information.

The implications of this study are significant in that it shows that over half of the sampled population uses the Internet to seek health/medical information, but that African American adults over 55 may not be using the Internet at the same rate to seek health and medical information. This group may have the most to gain from accessing the Internet to seek health and medical information. The dissemination of information regarding health promotion and disease prevention would assist this population in playing a larger part in the maintenance of their own physical well being. This study suggests that a digital divide continues to exist for older African American adults. As the older population continues to increase and potential health care needs rise, consumers will need timely access to information. If the existing digital divide is not closed, a segment of the population will lack much needed information on health care.

This study serves as foundational research regarding the use of the Internet by older African American adults in seeking health care information. Recommendations for future study would involve research on use of health internet information among older African American adults and whether it affects decisions regarding health care;

more extensive research investigating older African American adults use of the Internet should also be undertaken on a larger sample; and research should also be conducted on what barriers exist for older African American adults in using the Internet in seeking health/medical information.

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Appendices

A. IRB Approval Letter

THE UNIVERSITY OF TENNESSEE Health Science Center Institutional Review
Board 910 Madison Avenue, Suite 600 Memphis, TN 38163 Tel: (901) 448-4824

March 03, 2014

Sharon Davis Smith UTHSC - COAHS - Health Informatics & Info Mgmt

Re: 14-03010-XM Study Title: Internet usage among older African American adults in
seeking health care information.

Dear Ms. Smith:

The Administrative Section of the UTHSC Institutional Review Board (IRB) reviewed your application for the above referenced project. The IRB determined that your application is eligible for exempt review under 45CFR46.101 (b) (2) in that the study/project involves eligible research using educational tests, surveys, interview procedures, or observation of public behavior. In accord with 45 CFR 46.116(d), informed consent may be altered with a cover statement used in lieu of an informed consent interview. The requirement to secure a signed consent form is waived under 45 CFR 46.117(c) (2). Willingness of the subject to participate will constitute adequate documentation of consent.

Your application has been determined to comply with proper consideration for the rights and welfare of human subjects and the regulatory requirements for the protection of human subjects. This letter constitutes full approval of your application (version 1.0), consent cover statement and survey [stamped approved by the IRB on March 3, 2014] for the above referenced study.

In the event that volunteers are to be recruited using solicitation materials, such as brochures, posters, web- based advertisements, etc., these materials must receive prior approval of the IRB.

Any alterations (revisions) in the protocol must be promptly submitted to and approved by the UTHSC Institutional Review Board prior to implementation of these revisions. In addition, you are responsible for reporting any unanticipated serious adverse events or other problems involving risks to subjects or others in the manner required by the local IRB policy.

Sincerely,

Signature applied by Donna L Stallings on 03/03/2014 08:35:47 AM CST

Signature applied by Terrence F Ackerman on 03/03/2014 08:36:34 AM CST

Donna Stallings, CIM Terrence F. Ackerman, Ph.D. IRB Administrator Chairman
UTHSC IRB UTHSC IRB

B. Consent Disclosure Statement

Prepared February 12, 2014

Consent Disclosure Statement

You are being invited to participate in a research study about older African American adults' use of the Internet in seeking health care information. This study is being conducted by Sharon Smith as part of a graduate applied research project at the University of Tennessee Health Science Center.

There are no known risks if you decide to participate in this research study. The information you provide will help me understand internet usage by older African American adults in seeking health care information. The survey consists of 11 questions and will take approximately 5 minutes to complete. The information collected may not benefit you directly, but the information learned in this study should provide more general benefits.

This survey is anonymous. Do not write your name on the survey. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study. For confidentiality, place your survey in the envelope provided and seal. If you will be mailing the survey back to me, please place in the provided stamped envelope, please do not put your name or return address on the envelope.

Your participation is voluntary. By completing the survey, you are voluntarily agreeing to participate. You are free to decline to answer any particular question you do not wish to answer for any reason

IRB NUMBER: 14-03010-XM IRB APPROVAL DATE: 03/03/2014

D. Survey Instrument

Survey

Internet usage among older African American adults in seeking

Health care information

1) Please circle your age range:

a: Under the age of 55

b: 55-59

c: 60-64

d: 65-69

e: 70-74

f: 75-79

g: 80 and above

2) Do you identify yourself as (please circle)

a: American Indian or Alaska Native

b: Asian

c: Black or African American

d: Hispanic or Latino

e: Native Hawaiian or other Pacific Islander

f: White

3) Are you (please circle answer)

a: Male

b: Female

4) Do you have a: please circle answer

a: computer

b: smartphone

c: portable device (Ipad, Kindle Fire, Samsung Galaxy, etc) that you use?

5) Do you have access to the internet on the above device(s) : (please circle answer).

a: Yes b: No

6) Do you use the internet to get health or medical information

a: Yes

If YES, which device do you use to get most of your healthcare information:

please circle 1-computer 2- smart phone 3- portable device (I pad, Kindle Fire,

Samsung Galaxy, etc) Please continue to next question

b: No Thank you for completing the survey

7) Where do you usually access the internet: please circle answer

a : Home

b: Library

c: School

d: Family/Friends home

e: Other

8) Please indicate what type of information you have searched for: please circle all that apply

a: Medications

b: Vitamins

c: Nutrition

d: Diet

e: Exercise

f: Health Issue

g: Treatment for a health issue

h: Information on Healthcare provider (Doctor or Nurse Practitioner)

i: Information on hospital, Doctors office, or Clinic

9) Based on the list below, which sites have you used to gather information

a: Web MD

b: Wikipedia

c: FamilyDoctor.org

d: Netwellness

e: Medicare.gov

f: MedlinePlusSeniors' Health

g: PDR Health

h: eMedicine

i: Yahoo health

10) Are there other sites you have used to get health/medical information; please write it below:

11) Have you shared health care information from the internet with your: please circle answer(s).

a: Doctor

b: Nurse

c: Nurse practitioner

IRB NUMBER: 14-03010-XM IRB APPROVAL DATE: 03/03/2014