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Race and Health Online: A Public Health Exploration of the Digital Landscape

Tanisha Kelley
Georgia State University

RACE AND HEALTH ONLINE: A PUBLIC HEALTH EXPLORATION OF THE DIGITAL
LANDSCAPE

by

TANISHA KELLEY

B.A. YALE UNIVERSITY

A Thesis Submitted to the Graduate Faculty
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RACE AND HEALTH ONLINE: A PUBLIC HEALTH EXPLORATION OF THE DIGITAL
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TANISHA KELLEY

Approved:

Sheryl Strasser, PhD.

_____
Committee Chair

Bethany Stevens, J.D.

_____
Committee Member

April 10, 2012

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Date

ABSTRACT

TANISHA KELLEY

Race and Health Online: A Public Health Exploration of the Digital Landscape

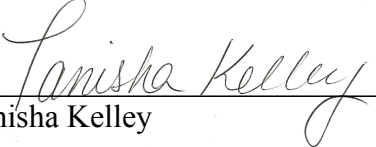(Under the direction of Sheryl Strasser, Ph.D. and Bethany Stevens, J.D.)

The Internet has continued to reach new audience members and is an integral part of United States society. Social Cognitive Theory addresses the impact of the environment on health behavior, providing justification for surveillance of the digital environment in health behavior research. Health information headlines from two highly trafficked news sites were analyzed using content analysis. Search terms used were *health*, *Blacks*, *African American*, *ethnicity* and *2011*. The headlines were coded by independent graduate level individuals and assessed for nine indices of interest.

There were 209 headlines analyzed for the study. Headlines contained health information that correlated with social predictors and indicators for moral exclusion and social injustice. This study indicates that racial assumptions continue to be evident in the reporting of news and the conveyance of health information, assumptions that shape attitudes for research, policy and practice.

KEYWORDS: Content Analysis, Race, Health, Internet and Social Cognitive Theory

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Professor's Name: Sheryl Strasser, Ph.D.

Department: Health Behavior and Promotion

College: Institute of Public Health

Georgia State University
P.O. Box 3995
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If there is one thing that I have learned, it is that none of us are doing it alone.

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Background

      Populations are the focus of public health practitioners, and public health research.

To do this, populations are divided into groups and subgroups, providing an opportunity

to address specific health problems in specific populations. These groups are generally

demographic divided based on markers such as gender, race/ethnicity, education, income,

and sexual orientation (Brondolo, Gallo, & Myers, 2008; Williams & Jackson, 2005;

Stratton, 2007). A category that has been the subject of much controversy and discussion

in public health is race, and in the United States, those identified as African

American/Black. In the U.S., race is often used to identify African American/Black.

Laws were written to specifically include or exclude individuals based on racial

classification (Krieger, 2002). It is often used as a comparison between those identified as

Black and those identified as White.

      Race has no evidentiary biological basis. To date, there is no study that proves the

existence of human subspecies, or that the superficial differences between skin color,

facial features are anything more than genetic variations based on geography (Cooper,

2002; Takeuchi & Sue-Je Lee Gage, 2003). Yet, rather than backing away from the

inclusion of race in health, research seeks the development of more sophisticated

measurement tools to capture the possible biological differences between races (Mays,

Ponce, Washington, & Cochran, 2003; Kawachi, Norman, & Robinson, 2005). The result is continued attempts of scientific justification of a variable that, considering the subjectivity of its usage, has virtually no legitimacy.

Biology aside, racial identity exists, socially and politically. The social environment, including images and messages produced and disseminated by popular culture via the Internet, television, radio, magazines, newspapers, reinforce differences between individuals based on superficial variances. Despite this knowledge that the physical differences are superficial, there is a weight and meaning attached to these visual cues, which continually inform individuals cognitively and shape behavior. Awareness of the effects of information associated with race is a component of public health as this information contributes to the social environment that constructs social identities.

Purpose

The purpose of this study is to explore race and health headlines published on Internet news sites in the U.S. The Internet has continued to reach new audience members and is becoming an integral part of modern U.S. society. Many people use the Internet a resource for news, health information, entertainment and socializing. Social Cognitive Theory addresses the impact of the environment on health behavior, providing justification for surveillance of the digital environment as an aspect of health behavior research, especially websites considered popular. This exploration will be performed using content analysis of the health information headlines reported on highly trafficked Internet news sites and determining whether the headlines reported are racialized and discuss how this contributes to the Internet information environment. The holistic definition of health, endorsed by the World Health Organization and the Centers for

Disease Control and Prevention, include an analysis of social environment, which is impacted by mass media. The Internet is a form of mass media, rendering it and the health messages presented a contributor to both the social and health environments in the U.S. Considering the history of race in the U.S., and the possible health effects of the social environment on those categorized as African American/Black, part of public health includes examining the media landscape for contributions to previously morally excluded identities. Examination of these contributions includes research and reporting practices regularly conducted in public health. Content analysis provides a method by which to accomplish this goal (Habel, Liddon, & Stryker, 2009; Jenssen, Klein, Salazar, Daluga, & DiClemente, 2009; Manganello & Blake, 2010). Jordan, Kunkel, Manganello and Fishbein (2009) described content analysis as "a research method used to analyze content in a variety of formats (e.g. books, newspapers, television, internet) to understand patterns of messages" (pg. 3). While content analysis does not require the use of theory, it is encouraged as theory can guide research questions, assist in the development of variables of interest, and develop survey questions. Performing a qualitative content analysis of health messages on the Internet serves two purposes: it will explore the health messages published by popular Internet news sources and it will investigate the potential creation of specific health identities for individuals categorized as African American/Black when messages are race/ethnicity targeted.

Research Questions

The primary research question is what information was published on the Internet related to race, specifically those identified as African American/Black and health in 2011. To assess this, headlines will be compiled from two popular Internet news sites. A

team composed of graduate students and those with graduate degrees assessed perception

by rating the headlines. In addition, the distribution of the published headlines between

the two websites will be evaluated and discussed.

Chapter II
Literature Review

Race in the U.S.

The concept of race in the U.S. is a source of much debate. Race is a contentious concept, fraught with ambiguity yet accepted and legitimized in U.S. culture. This contention is most evident racial discussions surrounding those identified as African American/Black and those identified as White. Those identified as African American/Black have routinely been subjected to moral exclusion, a phenomenon which allows individuals or groups to have their basic human rights violated and often results in not being seen as human (Opotow, 1990). The severity of the moral exclusion has lessened dramatically, although the effects continue to impact policy, research and practice both in the categorization of individuals and how information is communicated about the varying categories (*LaVeist*, 2002; *Unequal treatment: confronting racial and ethnic disparities in health care*, 2003; Institute of Medicine, 2009).

Race defined. The IOM, in their report on health disparities and in their recommendations, utilized the revised definitions of race (Appendix A) provided by the Office of Management and Budget (OMB) in 1997 (IOM, 2003). The OMB's guidelines state, "the racial and ethnic categories set forth in the standards should not be interpreted as being primarily biological or genetic in reference. Race and ethnicity may be thought of in terms of social and cultural characteristics as well as ancestry" (IOM, 2009, pg. 16). The National Institutes of Health and the U.S. Census Bureau utilize this standard, where it is acknowledged that race is not biological in origin, yet is condoned in research despite

the lack of cohesion and precision (IOM, 2009). In fact, the IOM communicates this lack

of precision and acknowledges that this would be unacceptable as a variable in any other

scientific venue making the continued use of race in health research problematic.

How race has been used in the U.S. and in public health. In the U.S., race has

been used to perpetuate social inequities (Gravlee, 2009; Kawachi et al., 2005). These

social inequalities manifested as racial segregation, lower socioeconomic status (SES)

and substandard housing (Coreil, 2010; *Race, ethnicity, and health : a public health

reader*, 2002), inequities that have been associated with poor health outcomes for those

experiencing the inequities (Brondolo et al., 2008; Zierler & Krieger, 1997; Krieger,

2000). Research has demonstrated that the use of race has subverted many of the social

issues that are now thought to contribute significantly to these health outcomes (IOM,

2003; Cooper, 2002). For example, instead of addressing poverty, the question becomes

why are so many African American/Blacks poor. Rather than discuss the increased

incidence of HIV, the question is what are African American/Black individuals doing that

is increasing incidence of HIV in their population. The focus on disparity research has

expanded how race is discussed in health, focusing on some of the social conditions that

result in health inequities. It is through this research that the impact of SES is addressed.

Interestingly, SES, while controlled for in many studies, has been found to be

multidimensional, thereby complicating its impact on populations (Braveman et al.,

2005). Braveman and colleagues found that when analyzing the impact of income and

education level on disparities in prenatal care among varying race and/or ethnic

categories that the significance of the disparities changed depending on how SES was

controlled. When adjusting for education alone, there were significant disparities but

when controlling for income alone or income and education together, the significance was lost. This finding raises questions about how the variables used to measure SES are used, what context are they used and how that context affects reported outcomes. In addition, Braveman et.al. (2005) acknowledged that these measures may not account for social factors that may contribute to SES, such as the impact of occupations categorized as Managerial that include Chief Executive Officers, town clerks and tenant farmers, positions that hold divergent levels of status, skill and income. The perspective of health has become nuanced, as research continues to reveal that differences in health outcomes are not easily predictable.

These questions also apply to public health's research, interventions, and policy inclusion of the construct of race. The categorization is assumed legitimate and continues to inform epidemiological studies, which then inform health promotion activities and public policy. The continued use of race promotes the assumption of biological determinism, which is the belief that there are race specific differences, and that individuals who are categorized as black or white share have: 1) specific genetic differences that exclude them from the other racial categories and 2) specific genetic homogeneity within the designated racial category that may result in similar health outcomes. This assumption perpetuates implications of causality attributed to race designation in addition to inferences of race as an adequate predictor of health (Muntaner, Nieto, & O'Campo, 2002; Mays et al., 2003).

Why researchers continue to use race. The question of using race in research has been addressed repeatedly, with fellow researchers and institutions requiring some explanation of how and why race is used in research studies (Kaplan & Bennet, 2003;

Race, ethnicity, and health : a public health reader, 2002). Rather than address this issue, research uses the variable without identifying or discussing the limitations of this variable, or provide explanations of its legitimacy despite its limitation and continue to use race as a viable research criterion (Mays et al., 2003; IOM, 2009). In various cases, race is deemed a pathway to specific social determinants, deeming it a useful variable in health research. In this explanation, the assumption requires the racial group to share multiple environmental factors, such as SES and geographical location in addition to the racial self-identity. While there can be no denying that removing race would create a noticeable difference in how health is discussed and applied (Mays et al., 2003), the question that remains is whether this would erode the quality of data amassed and evaluated. Would removing race negatively affect much of the current evidence base for policy, research and interventions?

Research and social influence. There is the question of how much the research environment influences the social environment. Mass communications scholars Tsung-Jen, Wijaya, & Brossard (2008), performed a content analysis on stories published in the New York Times over a 10-year time frame and found that news coverage surrounding epidemics followed a pattern of media attention. This pattern was influenced by events such as policy announcements, new scientific evidence or incidence.

Wei, Lo, & Lu (2008) performed a study examining third-person effects of the media. Third person effect is the perception that mass media has a stronger effect on others than on themselves (Wei, Lo, & Lu, 2008). This effect is increased if the respondent perceives the message as negative, and decreases if the result is socially desirable. Using health information to examine this theory, their findings were consistent

with third person effect research. The researchers also found that self-interest was a motivator, and that people did respond to media coverage.

Research by Oliver, Yang, Ramasubramanian, Kim, & Lee (2008) examined third-person perceptions and found that the media tends to reinforce an individual's beliefs, a finding consistent with current research. Singh, Kaur, Junid, & Self (2011) found that in reacting to news headlines, individuals tended to make causal inferences, particularly when the news was negative and that they were more concerned with implications when the news related to social order. These findings stemmed from a study conducted in Singapore where cultural differences may spur different results, as Western researchers conducted this study within an Eastern population. The researchers addressed the concern that study participants in Eastern cultures may react differently (i.e. more conservatively) to news coverage than studies conducted with participants from Western cultures.

Taken together, these studies demonstrate a landscape where an event such as an increase in HIV incidence would generate news interest, which would then increase the amount of information available in the news and could potentially influence perceptions (e.g. increase fear regarding certain demographics) based on what information is reported.

Social Cognitive Theory

Bandura's (2001) Social Cognitive Theory (SCT) states that people operate in a transactional way with the environment through what he called reciprocal triadic causation (Figure 1). Reciprocal triadic causation frames psychosocial functioning as bidirectional pathways of influence between the individual determinants, behavioral

determinants and environmental determinants (Bandura, 2001). Bandura described

human self-development as something that is rooted in social systems, meaning that an

individual's behavior and self identity is shaped by his/her environment and that this

shape influences the environment.

Figure 1. Reciprocal Triadic Causation as Theorized by Bandura
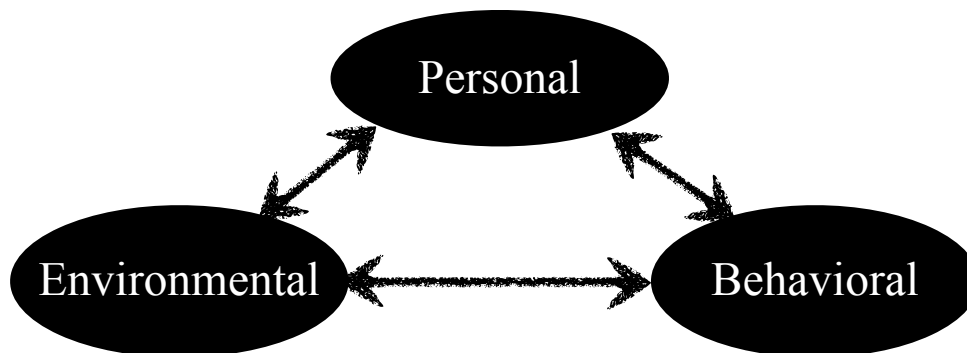
In this way, SCT provides a lens through which one can attempt to assess the role

of social functions on cognition. Bandura asserts that most affects on behavior are not

direct; rather it is influenced through cognitive processes. He also asserts that pathways to

learning and understanding are through symbolic operationalization of information

gleaned from experiences, both personally and vicariously. It is also understood that self-

regulation is an aspect of SCT, where individuals modify behavior according to self-

defined standards and that adherence to these standards is constantly evaluated and

modified based on feedback received for adhering to these standards. That is to say,

should one receive negative reactions to a behavior, the individual may change that

behavior in an attempt to receive a less negative reaction (Bandura, 2001).

According to Bandura's SCT, self-reflection results in the assessment of the

validity of one's thought and actions. Subjective validity may be internal, based on one's

experiences, or external, based in the social norms. According to this idea, when an

individual lacks the referential information to validate a thought or action, the individual

will look for social verification. Bandura (2001) stated that this type of verification can

be erroneous if the social comparison is flawed or misrepresentative (pg. 269)

Bandura (2004) stated that, "human health is a social matter, not just an individual

one" (Bandura, 2004, pg. 143). This statement informs SCT in that this theory takes into

account the varying factors that affect behavior in the immediate environment. People are

shaped by the environment, be it the physical environment through access to clean water

or polluted land, the political environment and the rights and laws that shape the physical

environment and access to resources, and/or the social environment which informs

cognitive functions and affects individual and group decisions. Bandura's theory posits

that behavior change is influenced by five main constructs: knowledge, perceived self-

efficacy, outcome expectations, goal formulation and sociostructural factors.

SCT and pathways of influence. With the spread of mass media, the landscape

of social learning changed; the information individuals received became subject to the

messages being conveyed in television, radio, newspaper and the Internet. Because the

media is diffusing information quickly, the image of reality is changing (Bandura, 2001).

In fact, there is growing evidence of the role media plays in constructing reality and in

how misconceptions have been conveyed through this medium.

Bandura explicates that behavior change is influenced both directly and through

the media's connections to social systems and through those pathways the five constructs

are enacted (Figure 2). Using the Internet as an example, one can see how the behavior

both influences and is influenced by the Internet. Knowledge is a conveyer and source of

information, self-efficacy of protective and harmful behaviors are modeled online and

can inform outcome expectations, goals and sociostructural factors, which all can impact

behavior (Bandura, 2004).

Figure 2. Structural Paths of Influence as Theorized by Bandura
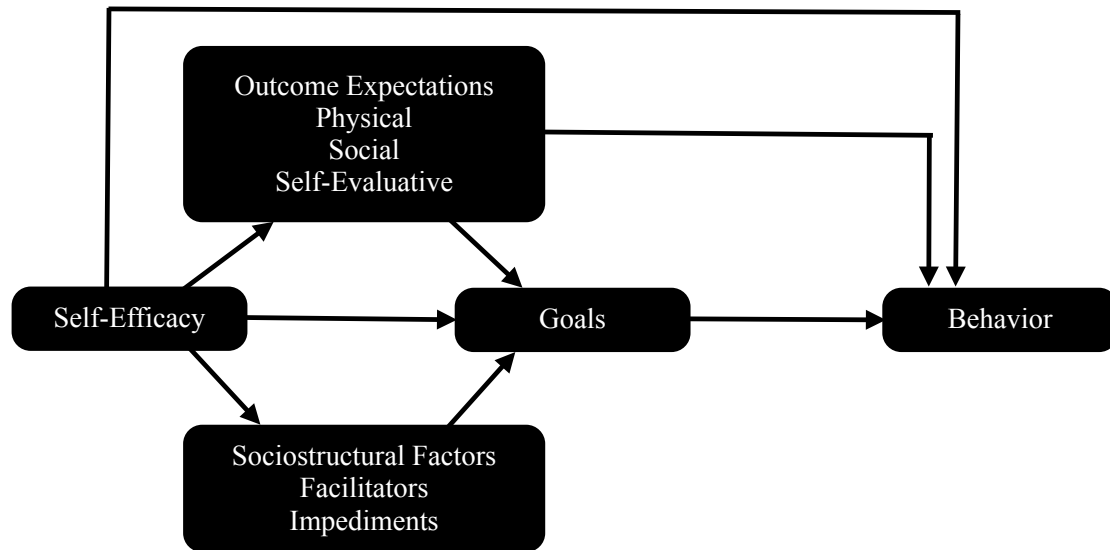
The Internet as a Type of Mass Media

The Pew Research Center, a nonpartisan, nonprofit think tank, conducted a

tracking survey in 2011 as part of the Pew Internet and American Life project. This

survey contained 2,260 respondents detailing Internet usage. Of the adults who

participated in the survey, 78% use the Internet. Of this group, 80% use the Internet to

search for health/medical information, 76% look for news and 74% use the Internet for

entertainment and to alleviate boredom (Appendix B). In August 2011, the Pew Institute

reported that on a typical day 10% of adult users use the Internet to seek health

information, 45% go online for news information and 44% use the Internet to pass the

time (Pew Research Center, 2012). The introduction of the smartphone and mobile

applications allowing cellular telephone uses to access the Internet further provides

access to online information. Pew has estimated that 38% of adults access the Internet

using cell phones. While still not as accessible as television, the Internet is a viable source of information for much of the American population Pew Research Center, 2012; Park, Chung, & Yoo, 2009; Sillence, Briggs, Harris, & Fishwick, 2007).

    Health communication on the Internet. According to the Pew Research Center's State of the Media report ("The State of News Media 2011: An Annual Report on American Journalism," 2011) 41% of Americans state they received most national and international news from the Internet. According to this same report, the Internet was the only news source to see any increase in audience from 2009-2010 when compared to local television, network television, newspapers, audio, magazines and cable television. The Internet continues to grow in audience as a source of news and information. Conducting research on the social environment provided by the Internet is a logical component of health research (Habel et al., 2009). Baker, Wagner, Singer and Bundorf (2003) conducted a survey of 60,000 households in 2001 and found that 40% of Internet users looked for health or healthcare information online. In 2012, The Pew Internet Research Center reported that approximately 80% of Internet users, which accounts for 59% of adults in the U.S., use the Internet to find health information. The majority of health information seekers being White adults and women between the ages of 18-49 with some degree of post high school education and who live in households earning more than $30,000/year ("Pew Internet & American Life Project Tracking surveys (March 2000 – August 2011)," 2012) (Appendix C). Taking into account the continued growth of this social environment, as well as the potential impact of information communicated through this medium, monitoring, analyzing and evaluating online health messages is a growing component of public health promotion.

Zhang, Jansen and Spink (2008) conducted an analysis on web search transaction logs which found that people tend to limit their Internet searches to the first page of results generated and that they rarely go past the second page of results generated. For this study, due to the specificity of the search terms, the results used were expanded to the first five pages generated. This study also found that 40% of the time, people searching the Internet did not select any links generated by the search engine, implying that headlines are perused for relevance prior to article selection or reinitiating the search. (Zhang, Jansen, & Spink, 2009).

Chapter III
Methods

Search Terms

 This article seeks to examine the health messages presented in Internet news headlines, therefore the search terms used in this study were *health*, *Blacks*, *African American*, *ethnicity* and *2011*. Specifically, the searches conducted were *health and African American and 2011*, *health and blacks and 2011*, and *health and ethnicity and 2011*. These words were chosen based on several factors. The *American Journal of Epidemiology* published an article in 2004 reviewing the use of race and ethnicity in epidemiologic and public health research (Comstock, Castillo, & Lindsay, 2004); "Black" was used in seven of the 16 listed terms used to describe Black race or ethnicity. The Pew Internet and American Life Project used the descriptor "Black" in the demographic information presented in their tracking surveys (Pew Research Center, 2012). The OMB includes Blacks as one of the five racial classification groups, resulting in its inclusion of the search terms. The search term "race" generated an abundance of results specific to the Obama presidential election. Given the scope of the research, it was appropriate to exclude that term from the search criteria.

 The terms African American and African-American yielded different results contingent upon the website searched. Using the Cable News Network (CNN) search tool, African-American and African American were treated identically, as two separate words. MSNBC's search engine removed the hyphen from African-American, making it one

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word, "Africanamerican," which negatively affected the search results; therefore, the search term used for both website searches was "African American."

Search Engines

In 2010, Nielson Media Research, comScore and Hitwise reported that the most visited websites were Yahoo! News Websites with 40,459 unique visitors, CNN Digital Network with 35,658 unique visitors and MSNBC Digital Network with 31,951 unique visitors ("The State of News Media 2011: An Annual Report on American Journalism," 2011). The State of News Media 2011 defines unique visitors as "unique individuals that view a webpage in a given time frame (normally a month)." This is generally accomplished using tracking cookies. This is also referred to as unique audience. It should be noted that in 2007, comScore.com issued a press release stating that tracking cookies are not the most accurate tracking tools for Internet usage. ComScore.com conducted an analysis of 400,000 computers and found that 31% of Internet users deleted their first-party cookies at some point during the month, indicating that some visits that are traces as unique are actually repeat visits ("Cookie-Based Counting Overstates Size of Web Site Audiences," 2007). Despite this finding, these news sites are still highly trafficked and for this study, CNN.com and MSNBC.com were used. Yahoo.com was eliminated as this search engine yielded too few results to the search inquires and the criteria required the articles to have been published on the host website (Appendix D).

Three separate searches were conducted using cnn.com and msnbc.com using the following search combinations: "health and blacks and 2011", "health and African Americans and 2011" and "health and ethnicity and 2011". A search was not conducted using the term "race" as the ambiguity of the term would likely produce articles specific

to the presidential election. This search was conducted on one day, within the same hour to minimize any differences that may result from searches conducted over and extended time frame.

Data

The data is compromised of the article titles produced by the different web searches conducted on cnn.com and msnbc.com within a two hour period as previous research has shown that search results may be temporal thereby producing different results if conducted at differing time periods. Based on the results from an analysis conducted using web search transaction logs that found that people tend to limit their Internet searching to the first page of results generated by the keywords used, the search was limited to the first five pages of results generated. This search result has been expanded to the five pages due to the specificity of the search terms, allowing a greater amount of data to be captured (Zhang et al., 2009).

The search results were compiled into an Excel spreadsheet and sorted by year. Only articles published in 2011 were included in this study. Articles published outside 2011 were omitted from analysis. Commercially sponsored links were also omitted from the analysis. Information identifying the website where the headline was published was removed. This resulted in 209 headlines for analysis.

Coding. A rating guide was created that identified public health messaging and risk factor criteria (Figure 3). Health has been defined in terms of physical conditions and race is also "considered in terms of social and cultural characteristics" (IOM, 2009, pg. 16). Because of the incorporation of physical and social conditions into the definitions of health and race, physical and social conditions in the environment were included in the

risk factors incorporated into the codebook. Physical characteristics may include issues regarding access to care (i.e. availability of health services). These coding variables were primarily left to the rater's perception, although clarification was provided if asked. For the purposes of this study, the headlines containing the words "African American" or "Black" were combined as both terms have been used interchangeably (Comstock et al., 2004; "Pew Internet & American Life Project Tracking surveys (March 2000 – August 2011)," 2012). For analysis purposes, "Race" was used as a coding variable. As previously stated, "Race" is a category used by the OMB and IOM. It was eliminated as an Internet search variable due to its dual usage regarding presidential elections coverage as well as its demographic/categorical usage.

Figure 3. Coding Variables Used by Independent Raters

Coding:
- Race - Does the headline include any information regarding race/ethnicity?
- Af Am - Does the headline include any information regarding African Americans/Blacks?
- Health Info - Does the headline include any health information?
- Biology/Genetics - Does the headline include any information regarding biology/genetics?
- Individual Behavior - Does the headline include any information regarding individual behavior?
- Social Environment - Does the headline include any information regarding any social environment?
- Physical Environment - Does the headline include any information regarding any physical environment?
- Health Services - Does the headline include any information regarding health services?
- Political Environment - Does the headline include any information regarding any political environment?

Reliability. Four independent raters (four master students in the fields of Public Health and/or Instructional Design), not including the Principal Investigator were recruited and trained in the instrument and the health indicators that would be assessed for each headline.

The four independent raters and the Principal Investigator assessed each headline and indicated by choosing either Yes or No if the abstract could be categorized by the following labels: *Race, African American/Blacks, Health Information, Individual Behavior*, *Social Environment, Physical Environment, Political Environment* and *Health Services*, with Yes being indicated as "1" and No indicated by "0."

Chapter IV
Results

The total number of headlines analyzed in this study was 209. The search terms used in this study were "health," "Blacks," "African American," "ethnicity" and "2011." Of the 209 headlines generated by search combinations, none contained the word "ethnicity," three contained "African American" (1.4%), 19 contained the term "health" (9.1%) and 42 (20.1%) contained the term "Black" (Figure 4).

Figure 4. Search Term Frequency in Headlines (N=209)
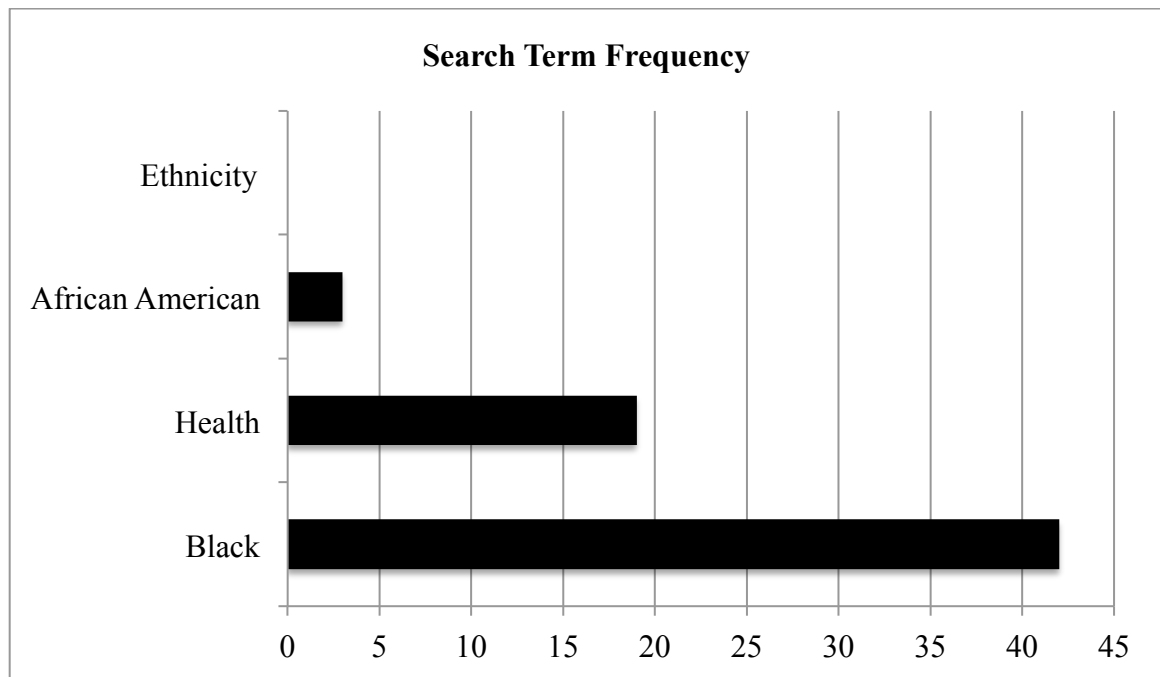
Using the coding variables described in the Methods section, frequency was measured based on 100% agreement of raters (i.e. all five raters agreed). For the variables

of *Health Information*, *African American/Black* and *Political Environment*, 19.6% of the

abstracts attained 100% agreement for each of these variables. The second highest

frequency was *Race*, which 7.7% of the abstracts attained 100% agreement, less than half

of the abstracts classified as *African American/Black*. None of the abstracts for

Biology/Genetics, Social Environment and *Physical Environment* variables reached 100%

agreement (Figure 5).

Figure 5. Frequency of Associated Variables in Headlines by All Five Raters (N=209)
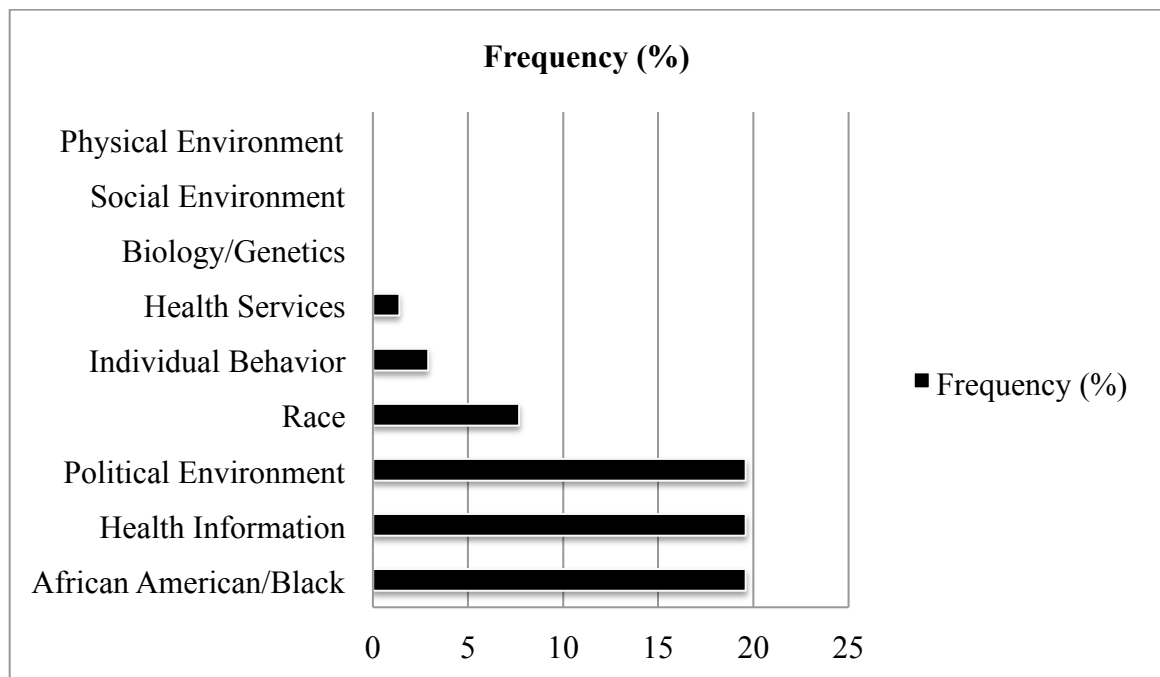
African American/Black Headlines

All of the raters agreed that 41 of the 209 headlines (19.6%) contained indicators

for *African American/Black*. Of the 41 headlines, one (2.4%) was perceived as containing

information regarding *Race* by all five raters (Figure 6). Two headlines (4.9%) were

perceived as containing *Race* information by four of the five raters. Eight headlines

(19.5%) were perceived as indicating *Race* by three of the five raters and the remaining thirty headlines were perceived at indicating race by two of the five raters.

Of these headlines, twelve were published on CNN.com and twenty-nine were published on MSNBC.com. The number of headlines that indicated *Race* was less than half of the headlines that indicated *African American/Black*.

Figure 6. Percent Agreement of *African American/Black* and *Race* Variables by Raters (n=41)

African American/Black and Race Agreement (%)

2 Rater Agreement	73.20%
3 Rater Agreement	19.50%
4 Rater Agreement	4.90%
5 Rater Agreement	2.40%
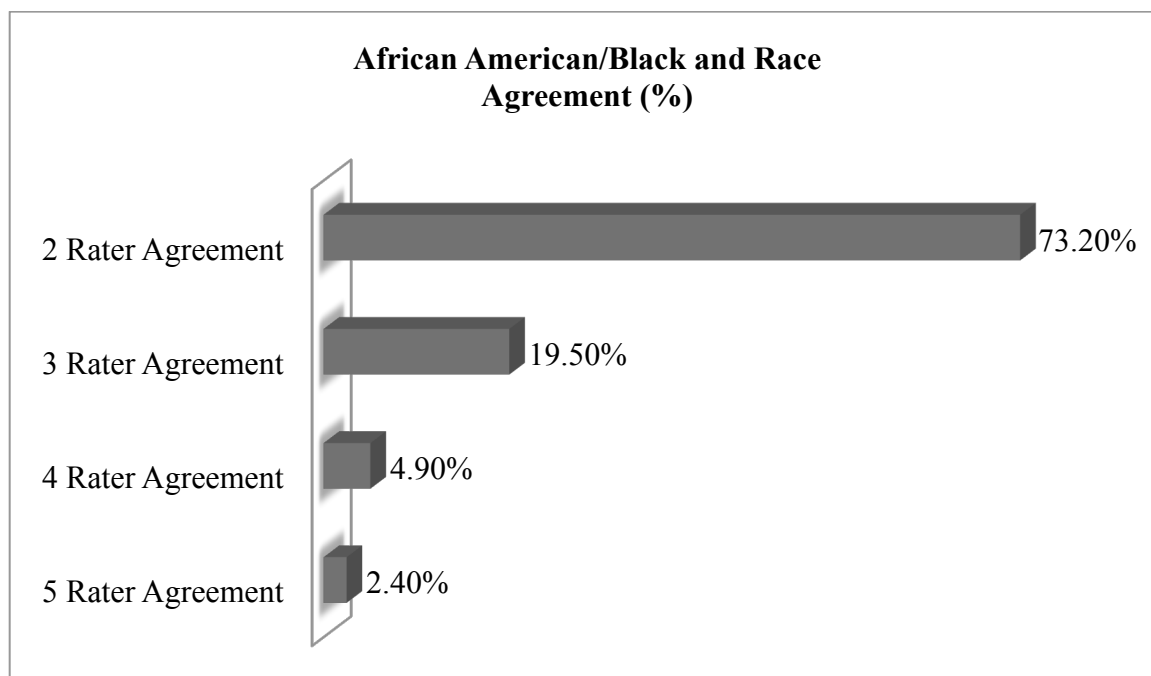
Health Information

All of the raters agreed that 41 of the 209 headlines (19.6%) contained health information. Of those headlines, seven were identified as *African American/Black* (17.1%). None of the headlines were said to contain race information by all the raters (Table 1). The headlines are listed in Table 2.

Table 1. Frequency of Race and African American/Black in Health Headlines by Five Raters (N=41) - 100% Agreement by Raters

Variable	Total Abstracts	Frequency
Race	0	0%
African American/Black	7	17.1%

Table 2. Perceived *Health Information* and *African American/Black* Indicators, 100% Agreement

Article Title	# Agreed		
	Race	AfAm	Health Info
AIDS, the silent killer of the black community	2	5	5
HIV infection rates mostly stable, increasing among young, gay black men	2	5	5
Blacks have higher stroke risk, better survival rates - Health ...	2	5	5
Blacks more willing to spend all on cancer care /Minorities more willing to spend all for cancer care	4	5	5
Blacks with diverticulitis have worse outcomes - Health	2	5	5
Rock Center with Brian Williams - Victims speak out about North …/Victims speak out about North Carolina sterilization program, which targeted women, young girls and blacks	2	5	5
Victims speak out about North Carolina sterilization program, which targeted women, young girls and blacks	2	5	5

Health Determinants

The World Health Organization defined health as "a state of complete physical,

mental, and social well-being and not merely the absence of disease or infirmity" (World

Health Organization, n.d.). According to the IOM, race and ethnicity are more expansive

than ancestry and should include cultural and social characteristics (IOM, 2009, pg. 16).

We assessed media content for ancestry using the *Biology/Genetics* variable. The media

content for the social environment was measured using the *Individual Behavior*, *Physical

Environment, Health Services* and *Political Environment* variables.

Biology/Genetics. There were no headlines attaining 100% agreement for the

Biology/Genetics variable. The maximum agreement attained for this variable was four

out of five raters (80.0%).

Individual behavior. All raters agreed that three of the 209 headlines (1.4%)

contained health information. All three headlines were perceived to contain health

information and none of the headlines were perceived to contain any indication of race of

African American/Black identifiers (Table 3). Of these headlines, two were published on

CNN and one was published on MSNBC.com.

Table 3. Perceived *Individual Behavior* and *Health Information* Indicators, 100%
Agreement

Article Title	# Agreed			
	Race	**AfAm**	**HealthInfo**	**IndBeh**
Long hours at work may boost heart-attack risk	0	0	5	5
Study: New moms may let their health slip	0	0	5	5
Half of Americans guzzling sugary drinks daily - Health - Diet and ...	0	0	5	5

Health services. All raters agreed that three of the 209 headlines (1.4%)

contained *Health Services* information (Table 4). Of the three headlines, one was

perceived to contain *Health Information* by all five raters, while two were perceived by

two of the raters (40% agreement) to contain *Health Information*. One of the headlines

was perceived to contain *Race* indicators (33.3%) while the remainder were unanimously

agreed to have no *Race* indicators. There was 100% agreement among the raters that

none of the *Health Services* headlines contained any *African American/Black* indicators.

Of these headlines, two were published on CNN.com and one was published on

MSNBC.com.

Table 4. Perceived Health Services Indicators, 100% Agreement

Article Title	# Agreed			
	Race	**AfAm**	**Health Info**	**Health Svc**
U.S. medical 'trash' saving lives abroad	0	0	2	5
Wanted: Fewer science nerds, more 'culturally competent' doctors	2	0	2	5
Device could teach docs to do better breast exams / New device aims to teach docs to do better brea**st exams**	0	0	5	5

Physical environment. There were no headlines where all of the raters agreed

contained *Physical Environment*. The maximum agreement attained for this variable was

two out of five raters (40.0%).

Social environment. There were no headlines where all of the raters agreed indicated *Social Environment*. The maximum agreement attained for this variable was four out of five rater agreement (80.0%).

Political environment. The raters reached unanimous agreement that 41 of the 209 headlines (19.6%) contained indicators for the *Political Environment*. Of the 41 headlines, three (7.3%) were perceived as containing information regarding *Race* (Table 5). Of these headlines, one was published on CNN.com and two were published on MSNBC.com.

Table 5. Perceived Political Environment indicators and Race, 100% Agreement

Article Title	# Agreed		
	Race	AfAm	Political Env
On jobs and safety net, lawmakers must focus on hard-hit minorities	5	1	5
First Read - Wealth gap widens, but minorities continue to support …/Wealth gap widens, but minorities continue to support President Obama	5	1	5
San Fran poised for first Asian-American mayor - US news - Life ...	5	0	5

Nine of the 41 headlines (22.0%) were perceived to contain *African American/Black* indicators by all five raters (Table 6). Of these headlines, the maximum agreement for *Race* was three out of five raters (60.0%), of which two of the nice headlines achieved. The remaining seven headlines each attained two out of five agreement (40.0%) that *Race* indicators were present in the headlines. Of these headlines, four were published on CNN.com and five were published on MSNBC.com.

Of the political headlines 77.8% of the headlines that attained 100% agreement among the raters for both the *Political Environment* and *African American/Black* did not attain majority agreement for Racial indicators and none attained 100% agreement among the raters that indicators of *African American/Black* also indicated *Race*.

Table 6. Perceived *Political Environment* indicators and *African American/Race*, 100% Agreement

Article Title	Race	AfAm	Pol Env
Blacks reject Cain for good reason	3	5	5
Cain: Planned Parenthood's mission is 'planned genocide' of black babies	3	5	5
Obama needs to focus more on black economic crisis	2	5	5
Obama's uneasy relationship with black voters	2	5	5
Black voters give Obama advantage in Virginia	2	5	5
Obama agenda: Standing with African Americans remains strong	2	5	5
Trump's risk with black voters, viewers	2	5	5
TODAY Show - Obama tells blacks to 'stop complainin'' and fight	2	5	5
Virginia Supreme Court swears in first African-American woman justice	2	5	5

Headlines by Website

CNN.com and MSNBC.com. Of the 209 headlines, 117 were published on CNN and 92 were published on MSNBC in 2011. The variables with the greatest number of articles were Health Information, African American/Black and Political Environment.

The breakdown for how these articles were distributed between CNN and MSNBC is as follows: 25.6% of the articles (n=30) on CNN were identified as *Health*

Information with 100% agreement (Figure 7). 12.0% (n=11) of MSNBC's articles were

identified as *Health Information*. 10.3% (n=12) of the articles on CNN were categorized

as *African American/Black*. 31.5% (n=29) of MSNBC's articles received the same

categorization. 17.1% (n=20) of the CNN headlines indicated the *Political Environment*

and 22.8% (n=21) of MSNBC's headlines indicated the *Political Environment*. *Race* was

indicated in 5.1% (n=6) of the CNN headlines and in 10.9% (n=10) of the MSNBC

headlines (Figure 8).

Figure 7. Perceived Variable Indicators, 100% Agreement

Perceived Variable Indicators
All Headlines (%)
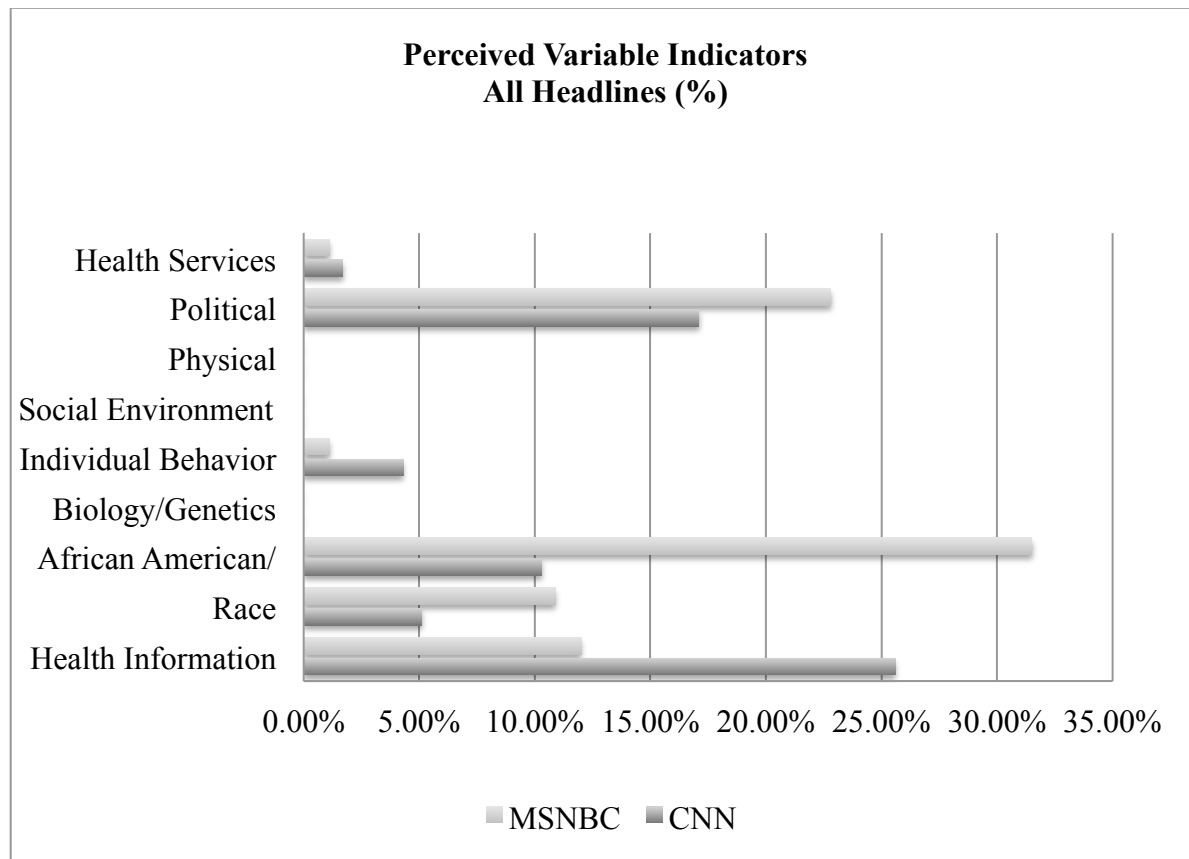
Figure 8. Distribution of Headlines by Website.
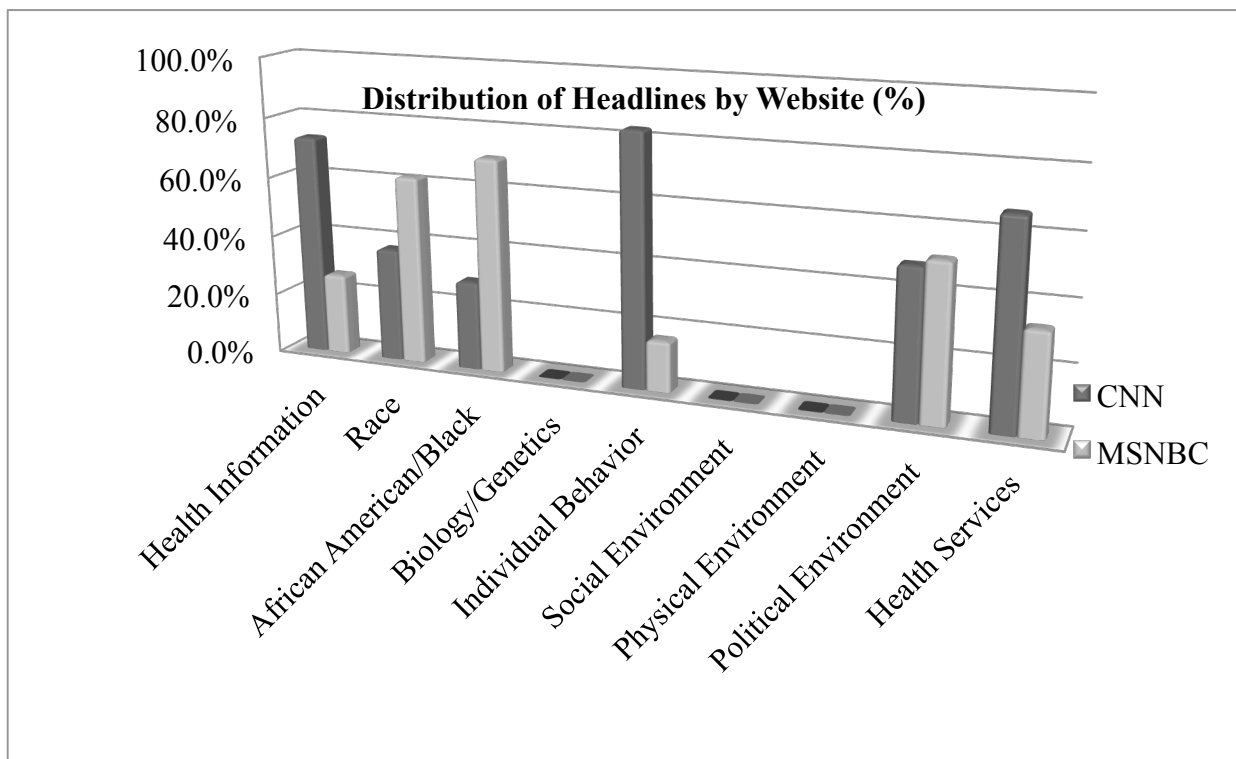
Chapter V
Discussion and Conclusion

This was an exploratory study to survey the health and race information available on Internet news websites as the presentation of health information has an impact on both the target population and those incidentally exposed to the information. As the Internet is a dynamic and complex environment, researching what information is presented and how it is presented is a necessary aspect of public health, especially as the volume of people interacting with the Internet continues to increase ("The State of News Media 2011: An Annual Report on American Journalism," 2011). This increased access and usage is a medium through which cognition can be affected, as stated in Bandura's Social Cognitive Theory. Through the Internet, personal, environmental and behavioral determinants can be affected through the information conveyed, which shape perceptions and actions. The selection of CNN.com and MSNBC.com were a result of popularity of the sites ("Pew Internet & American Life Project Tracking surveys (March 2000 – August 2011)," 2012). Both news sites are frequented by a large percentage of online news seekers ("The State of News Media 2011: An Annual Report on American Journalism," 2011). Using information published on these websites would demonstrate the type of information readily available for the population.

Word Counts

The choice to focus on headlines was a desire to review the information provided anecdotally when one would visit a news site. As both sites aggregate headlines onto a

homepage, individuals visiting these sites would have the opportunity to read all the headlines published at the time of his/her visit. The research demonstrated that the number of articles associated with the keywords of *health*, *African American*, *Black* and *ethnicity* is far greater than the number of headlines including the keywords. This finding implies that search criteria are not limited to headlines, that Internet information associated with these variables is nuanced in less obvious ways than publishing keywords in a headline. Further research could explore the nature of the search engines used and how these specific websites associated the headlines with the keywords used. It would also be of interest to evaluate the bodies of the articles to research how these search terms manifested, although that was beyond the scope of this study.

The keyword occurring with the greatest frequency was *Black* with 42 headlines (20.1%). Despite *Black* being a racial identifier, a racial category and a color, of the 41 headlines, only three used *Black* as anything other than a racial identifier. Two of the headlines discussed bubonic plague, also known as Black Death, and the last headline was about the "little black dress of fitness." The keyword with the second greatest frequency was *health* with 19 headlines (9.1%), followed by *African American* with three headlines (1.4%). *Ethnicity* did not appear in any off the headlines. As stated previously, the most likely explanation for this phenomenon is that the keywords could be found either in the body of the article or is listed as one of the tags for the article. As this search was conducted on news websites, the information presented may differ greatly from the same search conducted on a general search engine, such as Google or Bing.

Perceived Variable Indicators

A second aspect of this study was the presentation of the headlines to various raters to explore how the headlines were perceived. Assessing perception of the headlines addresses not only the environment but also how others interpret the environment, in this case Internet headlines. To qualify for analysis the headlines needed to reach 100% agreement on at least one variable. Of the 209 headlines, the maximum to reach 100% agreement on at least one variable was 41. This occurred for *Health Information*, *African American/Black* and *Political Environment*, with each variable having a frequency of 19.6%. Less than twenty percent of the headlines attained 100% agreement for two variables containing the specific search terms was unexpected. While assumptions regarding the location of the keywords in the results can be formulated, a larger question regarding the categorization of the articles and the information contained begins to surface. This finding supports the literature indicating that the interconnectedness of racial designations and politics. It also raises questions about the criteria used to code information presented online and how it affects search results.

African American/Black Headlines and Race

Race is continually used as a predictor for health outcomes (IOM, 2009); therefore, it becomes important to identify what information is conveyed. When asked to determine whether *African American/Black* and/or *Race* were indicated in the headline, it appeared as though *African American/Black* and *Race* were interpreted independently. The assumption was that headlines *indicating African American/Black* would also indicated *Race*, as *African American/Black* is a common racial category in the U.S. This was not the case. Of the 41 headlines with *African American/Black* indicators, only one

(2.4%) reached unanimous agreement that the headline also contained *Race* information and two articles (4.9%) had 80% agreement (four out of five rater agreement). While none of the headlines had less than 40% agreement among the raters, it is evident that *Race* and *African American/Black* are perceived as separate, so much so that less than half of the headlines identified by all five raters as indicating *African American/Black* also indicated *Race*. Despite the ability of the raters to select more than one variable for each headline, there appeared to be an unidentified distinction between *Race* and *African American/Black* variables among the raters. Further research would need to be conducted to isolate this distinction, although assumptions could be made regarding how *Race* and *African American/Black* may be conceptualized differently.

African American/Black Headlines and Biology/Genetics

The question arose that perhaps the raters perceived *African American/Black* as a biological or genetic construct, but the lack of agreement regarding the Biology/Genetic variable did not support that assumption. Upon evaluation of the *African American/Black* and the *Biology/Genetics* variables, it became apparent that unanimous agreement was not reached for any of the headlines. The majority of the headlines were perceived as having no *Biological/Genetic* indicators, raising the question of how *African America/Black* is perceived if it is not an indicator of *Race* or of *Biology/Genetics*.

Determinants of Health

To explore connections between the headlines and determinants of health, the raters were asked to indicate which categories applied to the headlines.

Health information and African American/Black variables. The Health Information and *African American/Black* variables reached unanimous agreement for

seven of the forty-one headlines (17.1%). While the research is not intended to assign a

value to the data, it is of interest that more that one-quarter of the headlines directly

associated with *African American/Black* are about HIV/AIDS, a highly stigmatized health

condition (Bunting, 1996) (Barnshaw & Letukas, 2010). The Centers for Disease Control

and Prevention (CDC) reports that *African Americans/Blacks* account for the most severe

burden of HIV and reports that "the fact that African Americans tend to have sex with

partners of the same race/ethnicity means that they face a greater risk of HIV infection

with each new sexual encounter" ("HIV among African Americans," 2012). That two of

the seven headlines report this information meets the criteria for Third Person Effect

theory, including greater affect as the information conveyed is about HIV, an illness that

is considered negative (Bunting, 1996). The Third Person Effect has demonstrated a

propensity for individuals to disassociate from the "Other." Categorizing people

according to contrived variables and reporting information as being associated with those

variables, particularly in the case of illness information or negative health information

encourages the idea that the superficial differences of skin color and physical features

indicate a greater difference than is actually true. An environment that publishes the

headline "AIDS, the silent killer of the black community" affects the individual

perceptions of those reading the headline; this can be an adolescent who identifies as

African American/Black or someone who views those identified as *African*

American/Black as the "Other." Of the remaining headlines, two spoke of a sterilization

program in North Carolina that targeted women, young girls and blacks, one spoke of

higher stroke risk, one stated that of those with diverticulitis *African American/Blacks*

have worse outcomes than some unmentioned group. The overall health picture among

the articles identified as *African American/Black* was bleak. *African American/Black* was consistently portrayed as the "Other" and as a vulnerable population with needs and activities that varied from the assumed "Norm."

Opotow (1990) discussed the role of moral exclusion as it applied to the psychology of justice, in that justice assumes a moral inclusion. When reviewing the health messages, the language of exclusion becomes evident. Each time African American/Black is mentioned, there is an implied difference from what may be considered normal. When those differences result in negative health outcomes such as illness, or when behaviors may be perceived as immoral such as promiscuity and non-heteronormative relationships and are then connected in headlines, it builds connections, and possibly causality in people's minds. These headlines, under the guise of reporting information, support the framework of "Otherness" as it applies to reported categories, and begins to redefine and reshape perceptions in a dangerous way, one that allows the disregard of select groups of people. It enhances activities such as victim blaming (e.g. "they brought it on themselves") and psychological distancing (e.g. "that has nothing to do with me"). The more these messages are promoted, the more people accept them as the norm. The more they are accepted as the norm, the more people promote the messaging, reshaping reality to fit this constructed image.

Political environment and African American/Black variables. Of the *Political Environment* headlines, the headlines that indicated *African American/Black* outnumbered the *Race* headlines 3:1. There was no overlap among these results; the headlines that obtained 100% agreement for *Race* were distinct from the headlines that obtained 100% agreement for *African American/Black.* Among these headlines, at least

two of the five raters agreed that race was indicated and this accounted for the majority

(78.8%) of the headlines.

When reading the headlines, the messaging for *Race* again emphasizes the

differences among the population, variations from the norm. One positions minorities as

needing to be helped and rescued, another distinguishes that regarding the wealth gap,

minorities are supporting a power (President Obama) despite the increasing distance from

wealth. The final *Race* headline mentions the first Asian American mayor, once again

positioning racial identification as the "Other." Regarding *African American/Black* and

Political Environment headlines, the implications are that those who identify as or are

identified as African American/Black have unified and separate interests, unified and

separate problems and are targeted for overt injustice, such as genocide. It is worth noting

that in the *Health Information* and *African American/Black* headlines, two reported a

sterilization program in North Carolina that targeted "women, young girls and blacks."

The publishing of headlines such as these supports Opotow's (1990) exploration of moral

exclusion and injustice in society where the "Other" remains powerless and victimized by

the "Norm."

Other variables and African American/Black variable. Unanimous agreement

was not obtained for any of the remaining variables of *Biology/Genetics*, *Individual

Behavior*, *Social Environment, Physical Environment* and *Health Services*.

Headlines Published on CNN.com and MSNBC.com

A third component of the study was an analysis of the distribution of racial

messages by website. The websites chosen were CNN.com and MSNBC.com, as these

websites were two of the top three visited news sites in 2010 according to the Pew

Research Center. Yahoo.com was listed as the most visited site, but yielded too few results to the search inquires, as one of the criteria be that the articles had to have been published to the host website.

When looking at the breakdown of the results published for each website, CNN's headlines contained approximately 25% *Health Information*, 17% Political *Environment* information, 10% *African American/Black* and 5% *Race*. Of MSNBC's results approximately 32% contained information regarding *African American/Black*, 23% contained *Political Environment* information, 12% contained *Health Information* and 11% contained information about *Race*. Based on this information, MSNBC demonstrated a greater likelihood of indicating *Race* or an *African American/Black* identity marker in published headlines than CNN.

Comparing the allocation of headlines for each variable, CNN headlines looking at the breakdown of the results published for each website, it is apparent that CNN published almost three times as many of the headlines perceived as *Health Information* and *Health Services* than MSNBC. MSNBC published more than half the headlines that indicated the *Race* and *African American/Black* variables. The websites were almost evenly divided for *Political Environment* headlines.

When examining *Health Information* and *African American/Black* variables together, MSNBC.com published almost three times as many headlines than CNN. From these results, MSNBC appears more likely than CNN to publish headlines associating those classified as *African American/Black* with health information, which is logical considering that MSNBC appears more likely to publish headlines with the identifier *of African American/Black*.

Overall, the findings suggest there is a link between the health information, those who identify as *African American/Black* and political information published on CNN and MSNBC. That these three variables produced an identical number of headlines demonstrates that link, especially as "health," "African American" and "Black" were specific search terms used. There were no terms used in the searches that were specific to politics. These findings indicate that the connection between perceptions of race and politics is strong in online publications. Additional research on how headlines are perceived by audiences regarding political and social constructs would provide valuable insight on the affects of Internet exposure.

The number of results directly associated with *Race*, *Health*, *African American, Black* and *ethnicity* was considerably less than expected. In a general sense, Internet searches look for the keywords specified; that the results presented low presence of the keywords indicates a more complex presentation of race and health in online media. How do the results shape the thinking of individuals exposed to these sites and do these results indicate that race has lost significance, or are the messages regarding race subtler? Alternatively, as these particular websites are profitable entities, are racial messages being manipulated to avoid public censure? How are messages being manipulated online? Questions such as these require further study.

Limitations

The Internet is a constantly shifting landscape that, while providing rich data, was fraught with logistical complications. Obtaining the headlines required that the search for both websites be conducted in as small a timeframe as possible, as search results continually change. The sample size for this research was very small, yet consistent with

typical Internet search patterns. The four raters participating in this study were chosen based on convenience; increasing the number and adding a component that captured the diversity of the raters may produce different results. In addition, the rating instrument used was not tested for reliability or validity.

Conclusion

The question that needs to continually be asked is "What is Race?" The answer that continually needs to be reiterated is that it is not biological. The assumption that race is biological needs to be refuted and reiterated at every opportunity, as its use in health research continues to present information that can be interpreted as biological differences. Once the assumption of biological differences is dismissed, perhaps research and funding will be directed to the social inequities, such as access, education and income, which result in health disparities.

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APPENDICIES

Appendix A

Office of Management and Budget Classification of Races

OMB Category	OMB Definition of Category	Census Definition of Category
American Indian or Alaska Native	A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment	People having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment, including, for example, Rosebud Sioux, Chippewa, or Navajo
Asian	A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam	People having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, people who have indicated their race as Asian Indian, Chinese, Filipino, Korean, Japanese, Vietnamese, Burmese, Hmong, Pakistani, or Thai
Black or African American	A person having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black or African American"	People having origins in any of the black racial groups of Africa, including, for example, Black, African American, Negro, Nigerian, or Haitian
Hispanic or Latino	A person of Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race. The term, "Spanish origin," can be used in addition to "Hispanic or Latino"	A person of Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race
Native Hawaiian or Other Pacific Islander	A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands	People having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands, including people who identify as Native Hawaiian, Chamorro, Tahitian, Mariana Islander, or Chuukese
White	A person having origins in any of the original peoples of Europe, the Middle East, or North Africa	People having origins in any of the original peoples of Europe, the Middle East, or North Africa, including Irish, German, Italian, Lebanese, Near Easterner, Arab, or Polish
Some Other Race		All other responses not classifiable in the White, Black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander race categories; respondents providing write-in entries such as multiracial, mixed, interracial, "American," or a Hispanic/Latino group (e.g., Mexican, Puerto Rican, Cuban)

NOTE: The Indian Health Service uses a narrower definition applicable to Alaska Natives and American Indians that have an affiliation with a tribal group of the United States to establish eligibility for their programs; thus, it does not include indigenous people of Latin America or Canada. "Any individual who (1), irrespective of whether he or she lives on or near a reservation, is a member of a tribe, band, or other organized group of Indians, including those tribes, bands, or groups terminated since 1940 and those recognized now or in the future by the State in which they reside, or who is a descendent, in the first or second degree, of any such member, or (2) is an Eskimo or Aleut or other Alaska Native, or (3) is considered by the Secretary of the Interior to be an Indian for any purpose, or (4) is determined to be an Indian under regulations promulgated by the Secretary" (*The Indian Healthcare Improvement Act,* Public Law 94-437, 25 U.S.C. 1603(c)-(d)).
SOURCES: OMB, 1997b; U.S. Census Bureau, 2000.

Unequal treatment : confronting racial and ethnic disparities in health care. (2003).
National Academy Press: Washington, D.C.

Appendix B

Online Activities

	% of adult internet users in the U.S. who do this online	Survey month/year
Use a search engine to find information	92	5/1/2011
Send or read e-mail	91	8/1/2011
Look for info on a hobby or interest	84	8/1/2011
Search for a map or driving directions	84	8/1/2011
Check the weather	81	5/1/2010
Look for health/medical info~	80	9/1/2010
Look for information online about a service or product you are thinking of buying*	78	9/1/2010
Get news	76	5/1/2011
Go online just for fun or to pass the time	74	8/1/2011
Buy a product	71	5/1/2011
Watch a video on a video-sharing site like YouTube or Vimeo	71	5/1/2011
Search for info about someone you know or might meet*	69	9/1/2009
Look for "how-to," "do-it-yourself" or repair information	68	8/1/2011
Visit a local, state or federal government website*	67	5/1/2011
Buy or make a reservation for travel	65	5/1/2011
Use an online social networking site like MySpace, Facebook or LinkedIn.com*	64	8/1/2011
Do any banking online	61	5/1/2011
Look online for news or information about politics*	61	8/1/2011
Look online for info about a job*	56	5/1/2011
Look for information on Wikipedia	53	5/1/2010
Use online classified ads or sites like Craigslist	53	5/1/2010

Get news or information about sports*	52	1/1/2010
Take a virtual tour of a location online	52	8/1/2011
Do any type of research for your job	51	3/1/2007
Upload photos to a website so you can share them with others online	46	11/1/2010
Send instant messages	46	12/1/2010
Pay to access or download digital content online*	43	8/1/2008
Look for info about a place to live*	39	8/1/2006
Download music files to your computer	37	12/1/2007
Get financial info online, such as stock quotes or mortgage interest rates	37	5/1/2010
Rate a product, service or person using an online rating system	37	5/1/2011
Play online games*	36	9/1/2010
Categorize or tag online content like a photo, news story or blog post	33	12/1/2008
Read someone else's online journal or blog^*	32	5/1/2010
Look for religious/spiritual info	32	9/1/2010
Post a comment or review online about a product you bought or a service you received	32	9/1/2009
Post comments to an online news group, website, blog or photo site	32	9/1/2010
Share something online that you created yourself	30	9/1/2010
Research your family's history or genealogy online*	27	9/1/2009
Download video files to your computer	27	12/1/2007
Participate in an online auction	26	9/1/2010
Make a donation to a charity online	25	5/1/2011
Make a phone call online, using a service such as Skype or Vonage	25	8/1/2011
Participate in an online discussion, a listserv, or other online group forum that helps people with personal issues or health problems*	22	12/1/2006
Download a podcast so you can listen to it or view it	21	9/1/2010

later*		
View live images online of a remote location or person, using a webcam	17	9/1/2009
Create or work on web pages or blogs for others, including friends, groups you belong to, or for work	15	9/1/2009
Take material you find online—like songs, text or images—and remix it into your own artistic creation	15	5/1/2008
Download or share files using peer-to-peer file-sharing networks, such as BitTorrent or LimeWire	15	8/1/2006
Sell something online	15	9/1/2009
Create or work on your own webpage	14	1/1/2010
Create or work on your own online journal or blog*	14	5/1/2011
Use Twitter	12	8/1/2011
Buy or sell stocks, bonds, or mutual funds	11	9/1/2009
Use an online dating website*	8	9/1/2009
Visit virtual worlds such as Second Life	4	9/1/2009

*Item wording has changed slightly over time for the items marked with a single asterisk. Please see questionnaires for question wording.
~ Based on a series of questions about specific health topics.

Appendix C

Demographics of Internet users

Below is the % of each group of American adults who use the Internet, according to our August 2011 survey. For instance, 76% of women use the Internet.

	% who use the Internet
All adults	**78**
Men	80
Women	76
Race/ethnicity	
White, Non-Hispanic	80
Black, non-Hispanic	71
Hispanic (English- and Spanish-speaking)	68
Age	
18-29	94
30-49	87
50-64	74
65+	41
Household income	
Less than $30,000/yr	62
$30,000-$49,999	83
$50,000-$74,999	90
$75,000+	97
Educational attainment	
No high school diploma	43
High school grad	71
Some College	88
College+	94

Sources: The Pew Research Center's Internet & American Life Project's August Tracking Survey conducted July 25-August 26, 2011. N=2,260 adults age 18 and older, including 916 interviews conducted by cell phone Interviews were conducted in both English and Spanish.

Pew Internet & American Life Project Tracking surveys (March 2000 – August 2011). (2012, February 2012). *The Pew Research Center's Internet & American Life Project*. Retrieved February 29, 2012, from http://www.pewinternet.org/Static-Pages/Trend-Data/Online-Activities-Daily.aspx

Appendix D

Table D1. Top Visited News Sites in 2010, Nielsen

Top Visited News Sites in 2010, Nielsen

Rank	Domain	Unique Visitors
1	Yahoo! News Websites	40,459
2	CNN Digital Network	35,658
3	MSNBC Digital Network	31,951
4	AOL News	20,821
5	NYTimes.com	15,948
6	Fox News Digital Network	15,502
7	ABCNEWS Digital Network	13,251
8	TheHuggingtonPost.com	11,510
9	Google News	11,382
10	Washingtonpost.com	10,095
11	CBS News Network	9,947
12	USATODAY.com	9,147
13	LA Times	8,314
14	Daily News Online Edition	7,247
15	BBC	6,519
16	Examiner.com	6,242
17	Bing News	4,855
18	The Slate Group Websites	4,526
19	Topix	4,409
20	Boston.com	4,336
21	New York Post Holdings	4,314
22	Telegraph	4,044
23	Guardian.co.uk	3,885
24	NPR	3,835
25	Chicago Tribune	3,785

Source: Nielsen

Note: MSNBC.com and MSNBC are different entities. The two companies have a separate board and editorial staff. MSNBC is owned by NBC Universal (Comcast is now the majority shareholder in NBC Universal) and based in New York City, while MSNBC.com is a joint venture between Microsoft and NBC Universal and is based in Redmond Washington. MSNBC Digital Network refers to the MSNBC.com family of sites.

The State of News Media 2011: An Annual Report on American Journalism. (2011) *The State of News Media*. Washington DC: Pew Research Center's Project for Excellence in Journalism.

Table D2. Top Visited News Sites in 2010, comScore

Top Visited News Sites in 2010, comScore

Rank	Domain	Unique Visitors
1	Yahoo! News Websites	94,509
2	CNN Digital Network	67,845
3	MSNBC Digital Network	48,721
4	AOL News	35,017
5	The New York Times Brand	32,386
6	Tribune Newspapers	24,666
7	Huffington Post	24,542
8	ABC NEWS Digital	19,343
9	USATODAY Sites	17,336
10	Washingtonpost.com	16,353
11	Advance Internet	16,000
12	CBS News	15,332
13	Wall Street Journal	13,673
14	Mail Online	13,596
15	McClatchy Corporation	13,447
16	Hearst Newspapers	13,241
17	Examiner.com Sites	12,693
18	MediaNews Group	12,086
19	NY Daily News.com	11,719
20	BBC News	10,267
21	Fox News.com	10,186
22	Guardian.co.uk	8,526
23	Topix.com	7,219
24	Belo	6,996
25	Boston.com	6,868

Source: comScore

Note: MSNBC.com and MSNBC are different entities. The two companies have a separate board and editorial staff. MSNBC is owned by NBC Universal (Comcast is now the majority shareholder in NBC Universal) and based in New York City, while MSNBC.com is a joint venture between Microsoft and NBC Universal and is based in Redmond Washington. MSNBC Digital Network refers to the MSNBC.com family of sites.

The State of News Media 2011: An Annual Report on American Journalism. (2011) *The State of News Media*. Washington DC: Pew Research Center's Project for Excellence in Journalism.

Table D3. Top Visited News Sites in 2010, Hitwise

Top Visited News, Hitwise

Rank	Domain	Share
1	news.yahoo.com	8.53%
2	www.msnbc.msn.com	3,50%
3	www.cnn.com	2.64%
4	news.google.com	2.04%
5	www.foxnews.com	1.72%
6	www.nytimes.com	1.41%
7	news.aol.com	1.29%
8	www.drudgereport.com	1.19%
9	www.huffingtonpost.com	0.99%
10	www.usatoday.com	0.95%
11	local.yahoo.com	0.90%
12	www.topix.com	0.74%
13	today.msnbc.msn.com	0.60%
14	www.washingtonpost.com	0.59%
15	www.associatedcontent.com	0.53%
16	abcnews.go.com	0.53%
17	www.dailyfinance.com	0.47%
18	www.bing.com/news	0.44%
19	www.bbc.co.uk.com	0.44%
20	www.wsj.com	0.41%
21	www.nydailynews.com	0.39%
22	www.cbsnews.com	0.39%
23	www.foxnews.com/politics	0.36%
24	www.buzzle.com	0.34%
25	www.examiner.com	0.34%

Source: Hitwise

Note: MSNBC.com and MSNBC are different entities. The two companies have a separate board and editorial staff. MSNBC is owned by NBC Universal (Comcast is now the majority shareholder in NBC Universal) and based in New York City, while MSNBC.com is a joint venture between Microsoft and NBC Universal and is based in Redmond Washington. MSNBC Digital Network refers to the MSNBC.com family of sites.

The State of News Media 2011: An Annual Report on American Journalism. (2011) *The State of News Media*. Washington DC: Pew Research Center's Project for Excellence in Journalism.

Appendix E – Data Tables

Table E1. Frequency of Search Terms Contained in Headlines
(N=209)

Search Terms	n	%
Black	42	20.1%
Health	19	9.1%
African American	3	1.4%
Ethnicity	0	0.0%

Table E2. Frequency of Associated Variables in Headlines by All Five Raters
(N=209) (100% Agreement by Raters)

Variable	Total Abstracts	Frequency
Health Information	41	19.6%
Race	16	7.7%
African American/Black	41	19.6%
Biology/Genetics	0	0.0%
Individual Behavior	6	2.9%
Social Environment	0	0.0%
Physical Environment	0	0.0%
Political Environment	41	19.6%
Health Services	3	1.4%

Table E3. Frequency of Race and African American/Black in Health Headlines by Five Raters
(N=41) - 100% Agreement by Raters

Variable	Total Abstracts	Frequency
Race	0	0%
African American/Black	7	17.1%

Table E4. Perceived Individual Behavior and Health Information Indicators
100% Agreement

Article Title	Race	AfAm	Health Info	Ind Beh
Long hours at work may boost heart-attack risk	0	0	5	5
Study: New moms may let their health slip	0	0	5	5
Half of Americans guzzling sugary drinks daily - Health - Diet and ...	0	0	5	5

Table E5. Perceived Health Services Indicators
100% Agreement

Article Title	Race	AfAm	Health Info	Health Svc
U.S. medical 'trash' saving lives abroad	0	0	2	5
Wanted: Fewer science nerds, more 'culturally competent' doctors Updated	2	0	2	5
Device could teach docs to do better breast exams / New device aims to teach docs to do better breast exams	0	0	5	5

Table E6. Perceived Political Environment Indicators and Race
100% agreement

Article Title	Race	AfAm	PolEnv
On jobs and safety net, lawmakers must focus on hard-hit minorities	5	1	5
First Read - Wealth gap widens, but minorities continue to support …/Wealth gap widens, but minorities continue to support President Obama	5	1	5
San Fran poised for first Asian-American mayor - US news - Life ...	5	0	5

Table E7. Perceived Political Environment Indicators and African American/Race
100% agreement

Article Title	Race	AfAm	PolEnv
Blacks reject Cain for good reason	3	5	5
Cain: Planned Parenthood's mission is 'planned genocide' of black babies	3	5	5
Obama needs to focus more on black economic crisis	2	5	5
Obama's uneasy relationship with black voters	2	5	5
First Read - Black voters give Obama advantage in Virginia	2	5	5
First Read - Obama agenda: Standing with African Americans remains strong	2	5	5
First Read - Trump's risk with black voters, viewers	2	5	5
TODAY Show - Obama tells blacks to 'stop complainin'' and fight	2	5	5
Virginia Supreme Court swears in first African-American woman justice	2	5	5