

RURAL WOMEN, HEART DISEASE, AND MASS MEDIA: *THE HEART TRUTH*
ABOUT MASS MEDIA'S ROLE IN PREVENTING HEART DISEASE IN RURAL
AMERICA

By

TRACY ELIZABETH LOOPE

A THESIS PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS IN MASS COMMUNICATION

UNIVERSITY OF FLORIDA

2010

© 2010 Tracy Elizabeth Loope

To my mom and dad who inspire me to be better every day

ACKNOWLEDGMENTS

I thank my chair, Dr. Walsh-Childers for her constant guidance, encouragement, and patience. Without her, this thesis would not be possible. She is not only my chair and professor, but also my mentor and friend. I thank committee member Dr. Armstrong for her expertise in content analysis and her willingness to explain complicated concepts. Also, I thank committee member Dr. Martin-Kratzer for her insight and flexibility as well as her faith in this thesis and me. She gave birth to twins this spring and stayed on my committee. And, I thank Jody Hedge for making the graduate school process as simple as possible.

I thank my loving boyfriend, Brian, for his constant support and encouragement. When it seemed like this thesis had gotten the best of me, he was always there with a huge hug and smile.

I thank my mother for her kindness and love. Our conversations encouraged me every day. I thank her for teaching me patience and perseverance. I thank my father, Thomas, for his ability to make me laugh at even the most miniscule things and his constant belief in me. He pushes me to be better person everyday of my life. This thesis would not be done, and I would not be the person I am today without my parent's love, encouragement, and unyielding support.

TABLE OF CONTENTS

	<u>page</u>
ACKNOWLEDGMENTS.....	4
LIST OF TABLES.....	7
LIST OF FIGURES.....	8
ABSTRACT.....	9
CHAPTER	
1 INTRODUCTION.....	10
Rural Health Disparities.....	12
Progress in Rural Health Disparities.....	15
The Heart Truth.....	16
2 LITERATURE REVIEW.....	19
Mass Media as a Tool of Health Communication.....	19
Newspapers in Rural Areas.....	21
The Portrayal of Heart Disease in Mass Media.....	23
Portrayal of Women and Heart Disease in Mass Media.....	25
Current Level of Awareness, Perceptions and Likelihood to Change Health Behaviors Among Women.....	26
The Health Belief Model as a Theoretical Framework.....	27
Research Questions.....	31
3 METHODOLOGY.....	34
Content Analysis.....	34
Universe.....	35
Sample.....	35
Unit of Analysis.....	38
Content Categories.....	38
Quantification System.....	41
Coding.....	41
Pretest.....	42
Final Coding.....	43
Intercoder Reliability.....	43
Statistical Analysis.....	44
4 RESULTS.....	45
Overview of the Coverage of Heart Disease in Rural Community Newspapers.....	45

Research Question 1	45
Research Question 2	46
The Health Belief Model	46
Research Question 3	47
Research Question 3a	47
Research Question 3b	48
Research Question 3c	48
Research Question 3d	49
Research Question 3e	50
Research Question 3f	51
Research Question 3g	51
Research Question 3h	51
Research Question 4	52
5 DISCUSSION	56
The Health Belief Model	57
Heart Disease Risk	60
Implications	62
Limitations	62
Future Research	63
Summary and Conclusion	64
APPENDIX	
A ADDITIONAL FIGURES AND TABLES	66
B CODING GUIDEBOOK	74
C CODING SHEET	82
D EXAMPLE STORIES	88
E NEWSPAPER LIST	94
REFERENCES	96
BIOGRAPHICAL SKETCH	101

LIST OF TABLES

<u>Table</u>	<u>page</u>
4-1 Type of Story	53
4-2 Frequency of Heart Disease Mortality Rate in Newspapers' Circulation Area (v4) and Newspapers' Presentation of Heart Disease Risk (v54)	55
4-3 Percentage of Heart Disease Mortality Rate in Newspapers' Circulation Area (v4) and Newspapers' Presentation of Heart Disease Risk (v54)	55
A-1 List of content categories	69
A-2 Intercoder Reliability Scores per Variable	72
E-1 Sample Newspapers by State	94

LIST OF FIGURES

<u>Figure</u>	<u>page</u>
2-1 Adapted Health Belief Model	33
4-1 Focus of Story	53
4-2 Risk Factors.....	54
4-3 Preventative Action	54
A-1 Example of U.S. Census map.....	66
A-2 Example of Office of Management and Budget (OMB) map	67
A-3 Example of CDC map	68

Abstract of Thesis Presented to the Graduate School
of the University of Florida in Partial Fulfillment of the
Requirements for the Degree of Master of Arts in Mass Communication

RURAL WOMEN, HEART DISEASE, AND MASS MEDIA: *THE HEART TRUTH*
ABOUT MASS MEDIA'S ROLE IN PREVENTING HEART DISEASE IN RURAL
AMERICA

By

Tracy Elizabeth Loope

May 2010

Chair: Kim Walsh-Childers
Major: Mass Communication

This quantitative content analysis explored the coverage of women's heart disease in rural community newspapers in the southeastern United States because these newspapers remain critical information sources among residents of rural areas. Using the Health Belief Model (HBM) to develop the newspaper analysis, this study illustrates the importance of community newspapers' presentation of heart disease information. Results show that newspapers located in areas with high heart disease mortality rates were more likely to present heart disease as a severe threat to readers, showing these newspapers' strong ties to their communities. Further research is required to better evaluate this relationship and to find ways to use mass media, specifically community newspapers, to improve heart health among rural women in the South.

CHAPTER 1 INTRODUCTION

Many women are unaware that heart disease is the No. 1 killer of men *and* women in the United States. Women remain especially vulnerable because the public largely perceives heart disease as a “man’s disease.” However, more than half of all cardiovascular disease deaths occur in women (Zuniga, Anderson, & Alexander, n.d.). In 2004, cardiovascular disease caused about one death per minute among women (“WISEWOMAN – Well-Integrated Screening and Evaluation for Women Across the Nation,” n.d.). Compounding the problem is the staggering percentage of the population with high cholesterol, hypertension, and obesity – three of the top risk factors for heart disease and stroke (Zuniga et al., n.d.). About 17% of people 20 years and older have high cholesterol, about 32% have hypertension or are taking hypertension medications, and about 32% are obese. In addition, roughly 18.5% of people 20 years and older smoke, and about 39.5% engage in no leisure-time physical activity (“Heart disease,” 2009).

Despite a 50% reduction in coronary heart disease and stroke over the past 30 years, mostly attributable to advances in therapy and technology, disparities in heart disease among some subgroups have become more exaggerated (Zuniga et al., n.d.). In 1995, the death rate for African-American males from cardiovascular disease was 42% higher than white males, and the rate for African-American females was 65% higher than white females. This is particularly relevant to this study because the South has a substantial African-American population. About 22.3 million blacks live in the South, accounting for 54% of the total black population in the United States (“African-American population,” n.d.). While true prevalence data for heart disease and stroke in

rural versus urban areas are not readily available, the differences in mortality data often reflect disparities between rural and urban populations (Zuniga et al., n.d.). Other vulnerable populations to heart disease and stroke include older African Americans, Hispanic Americans, individuals of lower socioeconomic status, and rural populations, especially those in the South and Appalachian region (Zuniga et al., n.d.). The highest rates of heart disease deaths among women occur in large, Northeastern urban areas followed by the South's most rural counties (Zuniga et al., n.d.). The lowest death rates from heart disease for men and women occur in the West (Zuniga et al., n.d.). Unexplained regional variations cloud the notable progress in heart disease prevention and treatment, and rural areas appear to be "uniquely affected by cardiovascular disease" (Taylor, Hughes, & Garrison, 2002, p. 548). This trend suggests "heart disease has shifted from a disease of the privileged to one of the disadvantaged" (Zuniga et al., n.d.).

Even so, public health and communications researchers often ignore rural populations. Research illustrates that a general lack of awareness about heart disease exists among women (Hart, 2005; Mosca, Jones, King, Ouyang, Redburg, & Hill, 2000), especially among rural women (Krummel, Humphries, & Tessaro, 2002). This lack of awareness spurred the National Heart, Lung, and Blood Institute to launch *The Heart Truth* campaign in 2002. This national, multi-faceted, ongoing campaign aims to alert women that heart disease is the No. 1 killer of women and to encourage them to get screened for heart disease (Long, Taubenheim, Wayman, Temple, & Ruoff, 2008). While this campaign targeted all American women ages 40 to 60 years, relatively little attention was paid to what may be the most at-risk women in the country – rural women.

Evidence shows that these health campaigns and media coverage of the campaigns do increase awareness about issues, change perceptions, and can lead to behavior changes among certain populations (Haas et al., 2007; Yanovitzky & Blitz, 2000). However, this campaign has yet to be evaluated on a nationwide scale.

Based on a review of the literature, it appears that no researchers have investigated mass media coverage of heart disease in rural areas. In fact, only a handful of studies exist on any aspect of media coverage of heart disease (Clarke, 1992; Clarke & Binns, 2006; Clarke, Amerom, & Binns, 2007; Clarke & Amerom, 2008; Compton, 2006). Researchers have mentioned men and women as statistics in research and done limited epidemiology-focused studies. This study aims to fill a gap in research and give attention to one of the most underserved populations in the United States – rural women.

Rural Health Disparities

The U.S. Census Bureau classifies rural areas as places outside urban areas of 2,500 or more people. The Office of Management and Budget (OMB) defines metropolitan counties as “core counties with one or more urban areas of 50,000 people or more, and outlying counties economically tied to the core counties, as measured by the share of the employed population that commutes to and from core counties” (Cromartie & Buchholtz, 2008, p. 33). Rural counties are the remaining 2,050 nonmetropolitan counties in the United States (Cromarties & Buchholtz, 2008). In 2000, 21% of the U.S. population was designated as rural using the Census Bureau’s definition (Cromartie & Buchholtz, 2008) along with about 80% of the land mass area of the United States (Campo, Askelson, Routsong, Graaf, Losch, & Smith, 2008). Using the OMB definition, about 17% of the population was designated rural. However,

alternative definitions increase that range from 7 to 49% (Cromarties & Buchholtz, 2008, p. 31).

Rural populations differ significantly from urban populations in socioeconomic status, education, and health. “In contrast to the idealized view of ‘country life’ as active, not stressful, and replete with healthy foods and strong social and community support, the lives of rural Americans are more typically beset with a daunting array of obstacles to health maintenance” (Taylor, Hughes, & Garrison, 2002, p. 549). Possibly because of this idyllic – but inaccurate – vision of rural life, health issues in rural populations are often overlooked. “For example, alcohol, tobacco, and other drug use in rural areas among youth is given less attention than are similar problems in urban areas, despite the comparable level of use” (Campo et al., 2008, p. 750). Some of the structural barriers to health include “high levels of poverty, maldistribution of health care workers, absent or inadequate health infrastructure, remote location, and social isolation, particularly among the elderly and, most often, female rural Americans” (Taylor, Hughes, & Garrison, 2002, p. 549).

In general, the rural population is “older, poorer, and less educated than metro populations” (McGlaun & Cochran, 2003, p. 2). Cort and Fahs (2001) indicate that rural areas have consistently higher rates of poverty than urban areas, noting that 29% of poor Americans lived in rural areas in the 1990s. In 2000, the official poverty rate in nonmetropolitan areas was 13.4% compared with 10.8% in metropolitan areas (McGlaun & Cochran, 2003). Additionally, the rates of rural women in poverty are generally higher than those of men (McGlaun & Cochran, 2003). Low socioeconomic status has been correlated repeatedly with “low levels of health maintenance, poor

access to preventative care, and reliance on emergency departments or other episodic, discontinuous sources for primary care” (Taylor, Hughees, & Garrison, 2002, p. 549). Race may play a major role in the low socioeconomic status of the South. In 2008, the population of black people in the United States was about 41.1 million, making up 13.5% of the total U.S. population. Roughly 22.3 million or 54% of the U.S. black population resides in the South (“African-American population,” n.d.). Additionally, the South is the only place in the United States where blacks have a large population in rural areas. Population centers in the Northeast and West are mainly urban centers. According to Williams (2006), “Race is an antecedent and determinant of socioeconomic status” (p. 177). Furthermore, it is “the single most important policy ... that continues to have pervasive adverse effects on the socioeconomic circumstances and the health of African Americans is residential segregation” (Williams, 2006, p. 177). While Williams discusses racial segregation in relation to urban areas, his ideas about the importance of racial segregation can cross into non-metropolitan areas. One of the most important structural barriers to health is geographic location and isolation. Mobley et al. (2006) found that low-income women living in areas of low land use mix (the proportion of retail, office, and residential land uses that allow residents the option to walk, bike, or take transit in well-planned communities), such as a rural town with less than 2,500 people, are “approximately 12 pounds heavier and have a 19% greater 10-year CHD risk than women living in an area of high land use mix,” such as a larger town with much more than 2,500 people (p. 331). These researchers found that poorer neighborhoods were more densely covered with fast-food restaurants, had less availability of full-sized grocery stores, and higher obesity rates (Mobley et al., 2006).

Since 1979, rural Americans have been dying at higher rates from heart diseases than those living in urban areas (Cort & Fahs, 2001). Additionally, from 1985-1995, mortality rates for premature coronary heart disease have declined more slowly in the rural South than in other geographic areas, accounting for the slowest rates of annual decline in African-American women and men, 1.6% and 0.7%, respectively (Zuniga et al., n.d.). According to the 1996 National Health Interview Survey, “heart disease was 1.34 times more prevalent in non-metropolitan areas” when compared to metropolitan areas (Zuniga et al., n.d., p. 3).

Progress in Rural Health Disparities

As government officials began to recognize these disparities, rural health issues garnered some public attention. Just this year, the Obama Administration provided \$30 million through the American Recovery and Reinvestment Act to the USDA for 36 community facilities projects in rural areas that may help increase rural people’s access to care. Agriculture Secretary Tom Vilsack said in a news release published on October 14, 2009,

There are great disparities in our healthcare system today, and it is imperative that we achieve reforms this year to ensure that people in rural America have access the healthcare they deserve. Revitalizing rural communities and building a 21st century economy is a promise the Obama Administration is committed to delivering and rebuilding our healthcare infrastructure will help rural residents have access to critical care” (USDA, Department of Communications, 2009).

More specifically, the Centers for Disease Control and Prevention have reached out to women who may or may not live in rural areas but who are uninsured or underinsured through “WISEWOMAN: Well-Integrated Screening and Evaluation for Women Across the Nation.” “WISEWOMAN” provides underserved women with cardiovascular disease risk screenings, healthy lifestyle programs, and health care

referral services (WISEWOMAN, 2009). Since 1995, WISEWOMAN programs have screened more than 84,000 women. Between January 2000 and June 2008, WISEWOMAN participants had these initial risk factors: “28% had high blood pressure, 40% had high blood cholesterol, 23% had diabetes, 29% smoked, and 74% were overweight or obese” (“WISEWOMAN,” 2009, p. 3). The program has produced some astounding results. From January 2000 to June 2007, WISEWOMAN participants reduced their five-year cardiovascular disease risk after one year by 10.7% (Hispanic), 8.6% (Black), 8.1% (White), and 7.4% (American Indian/Alaska Native).

The Heart Truth

Still, the most comprehensive effort to reduce American women’s risk of heart disease and stroke across the country is *The Heart Truth* campaign, launched by the National Heart, Lung, and Blood Institute in September 2002. *The Heart Truth* continues today in its original capacities and a number of accompanying campaigns, most notably *Go Red for Women*. *Go Red* centers on women’s empowerment and celebrates events like “wear red” days and “red outs” across America. *The Heart Truth’s* ongoing, national campaign has a two-fold objective to “increase awareness among women that heart disease is their No. 1 killer [and to] encourage women to talk to their doctors, find out their risk, and take action to lower it” (Long et al., 2008, p. 2). The campaign targets American women ages 40 to 60 because this is the “time in life when a woman’s risk of heart disease begins to rise dramatically” (Long et al., 2008, p. 3). Campaign developers reviewed and analyzed newspaper coverage of women and cardiovascular disease and reviewed complementary and competing women’s heart health programs and campaigns. Their newspaper study, covering 6,000 articles published during a six-

month analysis period, “found that fewer than 30% mentioned heart disease as a woman’s issue” (Long et al., 2008, p. 3).

Two creative elements emerged at the outset of the campaign. The first element was the emphasis on the serious nature of the message through a strong campaign name. “*The Heart Truth* was designed as a play on ‘the hard truth,’ providing a sense of urgency and reality about heart disease” (Long et al., 2008, p. 4). The second element was the Red Dress symbol, created as the national symbol for women and heart disease awareness. “The Red Dress, designed to emphasize that heart disease is not a ‘man’s disease,’ was paired with tag line, “Heart Disease Doesn’t Care What You Wear – It’s the #1 Killer of Women” (Long et al., 2008, p. 4).

Campaign implementation centered on a three-part strategy – “partnership development, media relations, and community action” (Long et al., 2008, p. 5). Often, these strategies overlapped as media companies became corporate partners and corporate partners often sponsored community events, etc. To bring *The Heart Truth* to the communities, the campaign employed two venues. First, in “Single City Events,” hospitals and other institutions paid to bring the dresses and campaign materials to their community for use in their events, including “health fairs, fashion shows, celebrity teas, and rallies at the Statehouse” (Long et al., 2008, p. 7). The second venue, *The Heart Truth* Road Show, was a traveling exhibit set up in high-traffic shopping malls and featured a display of designer dresses along with free heart health screenings and information.

Finally, through funding from *The Heart Truth* partner Diet Coke, NHBLI and the Foundation for the National Institutes of Health came together to create a competitive

grant program called *The Heart Truth* Community Action Program to further address the lack of awareness about women and heart disease through messages aimed especially to low-income women and those of color or living rural areas (*The Heart Truth* Community Action Program”, n.d.). The Community Action Program seeks to:

1. “Increase awareness among women that heart disease is their #1 killer.
2. Promote *The Heart Truth*, Red Dress symbol, and the campaign’s key messages.
3. Provide heart disease risk factor screenings to inform women of their personal risk for the disease.
4. Educate women about lifestyle behaviors that promote heart health and lower their risk for developing heart disease.
5. Encourage and motivate women to take steps to adopt a heart healthy lifestyle.
6. Increase outreach to underserved women, particularly those of color, low income, or in rural areas” (*The Heart Truth* Community Action Program,” n.d.).

While analysis shows that *The Heart Truth* messages have reached hundreds of thousands of people over the life of the campaign, and the campaign has produced upwards of 2.1 billion media impressions (in 2008), what has its reach been in rural communities?

No researcher has looked at the coverage of heart disease in community media before or examined the reach of *The Heart Truth* campaign in rural areas. The proposed study will address this gap in the literature through a content analysis of heart disease coverage in a sample of rural newspapers. This content analysis is important because before any researcher can look at the possible health effects that the health information has in these rural areas, we must first find out what information exists.

CHAPTER 2 LITERATURE REVIEW

Since the beginning of mass communications studies, researchers have attempted to gauge the possible effects, both positive and negative, of media on their audiences. The mass media's effects on health remain in the forefront of media studies because of their immense importance to people's everyday lives. Throughout the world, people are bombarded with messages about health on a daily basis. Health communication professionals and researchers have been able to use the mass media as a platform to discuss health issues and as a tool for change.

Mass Media as a Tool of Health Communication

While people most often view physicians as the most credible and persuasive sources of health information, the general public's interaction with physicians is infrequent and/or of a limited duration. Thus, the media have become the "primary public educator in present-day society" (Stryker, Moriarty, & Jensen, 2008, p. 381). News coverage of health issues has been shown to predict "associated knowledge, attitudes, and behavior in a variety of ways" (Slater, Hayes, Reineke, Long & Bettinghaus, 2009, p. 514). Research suggests that frequent media users are more informed about health issues than those who do not frequently consume media (Stryker et al., 2008).

Beyond informing the public, mass media may influence behaviors. Haas et al. (2006) studied the influence of newspaper coverage and women's subsequent hormone therapy use. After the Women's Health Initiative revealed news information about estrogen plus progestin therapy, the news media facilitated the rapid dissemination of the findings proliferating the message that hormone therapy is harmful to women, and

women should stop using this therapy. The findings from Haas et al. (2006) show that the news media's attention increased women's likelihood of discontinuing hormone therapy. Their research illustrated that women who lived in areas with more newspaper coverage about the harmful effects of hormone therapy had greater declines in hormone therapy use (Haas et al., 2006). In addition, the quantity and quality of news impacted women's health behavior. Women who saw "good quality" media reports about hormone therapy were more likely to attempt to discontinue use than women who had not seen such reports (Haas et al., 2006). Finally, the researcher's results confirmed that rural residents had less access to news coverage than urban residents.¹

Similarly, Yanovitzky and Blitz (2000) found mass media to be a significant influence on women's decisions to get breast cancer screenings. While the most compelling evidence in this study was in support of the complementary relationship of both mass media and interpersonal communication channels' effect on mammography-seeking behavior, mass communication channels were reported to be particularly important to women without regular contact with or access to physicians (Yanovitzky & Blitz, 2000). As rural women often do not have access to care or physicians, these findings suggest that these women may rely on mass media more than many other groups.

Going further, targeted media, such as community newspapers, may be even more influential in affecting health outcomes especially in underserved populations. Caburnay et al. (2008) examined Black newspapers as a tool of health communication, comparing Black newspapers' content to that of general audience newspapers and

¹ This may have affected their decisions to discontinue hormone therapy. However, Haas et al. (2006) do not delve into issues of residents in rural areas in this much depth.

investigating African Americans' perceptions of both types of media. They found that Black newspaper's published proportionately more stories about cancer than general audience newspapers. Also, Black newspaper coverage was more favorable from the public health perspective as their coverage contained locally relevant and mobilization information, referrals to resources, and prevention information (Caburnay et al., 2008). Interestingly, this study found that readership of general audience newspapers varied by education, income, and age, but readership was constant for Black newspapers, suggesting that Black newspapers may be pivotal channels for addressing health disparities in African-American communities. The universal use among all classes of readers offers promise for other disadvantaged communities, such as those in rural areas.

Newspapers in Rural Areas

About 80% of U.S. newspapers have a circulation of 15,000 or less, and about 8,000 American community newspapers fit that description ("Annual readership study shows good news for small papers," 2009). While all of the headlines describe the grim road ahead for newspapers, community newspapers' readership is stable. While definitions of community newspapers vary, most agree that a community newspaper "is a periodic publication that is generated by and circulated primarily to a specific community such as a village, a small town or some other limited geographical area" ("Questionnaire on newspaper statistics," 2005, p. 5) The National Newspaper Association recently completed its fourth year of research on the readership patterns of America's community newspapers and found 86 million Americans are reading their community newspapers. About 60% said the community newspaper is the primary source of information about the local community, 81% read a local newspaper each

week, and 73% read most or all of their community newspaper, spending about 40 minutes with their paper (“Annual readership study shows good news for small papers,” 2009). These statistics illustrate the importance of community newspapers throughout the country.

For rural communities, community newspapers may be an even more important source of information. Unlike urban areas, rural communities have far less access to media channels. Despite the substantial growth of online resources for a large part of the United States, many rural residents have yet to gain access to these tools or have limited access to such tools. In addition, many people from rural areas, especially older people, continue to rely on more “traditional” information channels such as newspapers and radio and use the newer technologies as a compliment (Israel & Wilson, 2006).

Local daily and weekly newspapers are the “lifeblood” of rural communities (Tezon, 2003, p. 6). Despite the difficulties of staying economically stable, the staffs of these newspapers pour their souls into their communities (Tezon, 2003). They “promote progress, provide an essential historical record of weekly life, and give their readers information necessary for daily living and social interaction” (Tezon, 2003, p. 6). A survey of small town newspaper readers found 72% read their newspaper cover to cover, and 58% read it within two hours of receiving it (Tezon, 2003). People trust their community newspapers more than general audience newspapers and news sources and feel a connection to their newspapers (Smethers et al., 2007).

In terms of health communication, local newspapers may be an even more important source of health information for people in more isolated, rural areas (Brownson et al., 1996). Brownson et al. (1996) looked at media coverage throughout

the course of a community-based intervention to reduce cardiovascular disease risks. Using media content and a risk factor survey for analysis, they suggest an important role for the print media in rural, high-risk populations. Additionally, a recent survey of health journalists shows that reporters from small organizations were almost 70% more likely than respondents from large organizations to say that developing the health and scientific literacy of the public is an important priority when writing their stories (Wallington et al., 2010).

Nonetheless, few researchers have investigated the role of community news in health awareness and behavior. Griswold and Swenson (1992) examined “development news” in 14 rural Georgia weekly newspapers. According to the researchers, in the early 1990s, a weekly newspaper and one or more radio stations served a typical rural community in America (Griswold & Swenson, 1992). Albeit dated, this suggests the immense importance of community media in the daily lives of rural residents. However, the researchers’ findings indicated that the rural Georgia newspapers gave relatively little attention to reporting on social and economic development (Griswold & Swenson, 1992), let alone health development.

The Portrayal of Heart Disease in Mass Media

Mass media’s portrayal of disease has been associated with attitudes toward specific diseases and feelings about people with a disease as well as what needs to be done about the disease (Clarke & Ameron, 2008). Since the 1920s, cardiovascular specialists and scientists have been “framing” heart disease as a global epidemic crying out for public attention (Finnegan, Viswanath, & Hertog, 1999). Mass media generally publish a steady number of stories about heart disease, with spikes when new developments occur or special attention is paid to this disease. While early coverage

outlined the broad contours of this disease, later coverage has focused on specific risk factors. Beginning in 1964 with the Surgeon General's Report on Smoking, smoking came to the forefront as a major cause of heart disease and coverage spiked on this issue (Finnegan, Viswanath, & Hertog, 1999). In the 1970s, hypertension became the focus in heart disease coverage. In the 1980s, news about cholesterol dominated the media, creating another spike in coverage. Also in the 1980s, cardiovascular disease prevention specialists began to express concerns about the potential displacement of cardiovascular disease in the media agenda due to developments in cancer and HIV/AIDS. Through the 1980s, this displacement did not seem to occur. In fact, coverage of all three diseases spiked in the 1980s, illustrating an overall increased attention to public health. In the 1990s, obesity was identified as a top risk factor for heart disease, and the NHLBI launched its Obesity Initiative. While obesity (as well as smoking, hypertension, and high cholesterol) remains a culprit in heart disease, few new developments in scientific knowledge about the causes or treatment of heart disease have occurred since 1991 (Finnegan, Viswanath, & Hertog, 1999). The decrease in heart disease over the past 30 years is promising, but heart disease remains the No. 1 killer in the United States and throughout the world, and substantial disparities continue to exist in the United States and abroad.

Media portrayals of heart disease repeatedly emphasize the medical frame, meaning that heart disease is described in the context of "biomedical causation and treatment" (Clarke & Binns, 2006, p. 45). A glaring lack of attention to social-structural contributors to heart disease and the important link between poverty, relative poverty, and heart disease continues to exist in media coverage (Clarke & Binnes, 2006). In their

qualitative content analysis of heart disease coverage in mass-circulated magazines in the United States and Canada, Clark and Binns (2006) found several reoccurring themes in articles including an emphasis on individual risk factors rather than social determinants of health, emphasis on patients' power to improve their health, the assumption of conventional medical intervention, and the availability of support to aid individuals with this illness. While the individual holds the foremost responsibility for his or her own health, structural barriers to health hold back individual health prevention in underserved areas, especially in rural America.

Portrayal of Women and Heart Disease in Mass Media

Along with structural barriers to care, media have largely ignored women in coverage. The common image of the person having a heart attack is a "powerful and successful man in a stressful and high paying job" (Clarke, Ameron, & Binns, 2007, p. 19). Men are believed to be the usual candidates for heart disease, and "women are, by and large, invisible in everyday discourse regarding heart disease" (Clarke et al., 2007, p. 19). Relatively little research exists on the portrayal of men and women in heart disease. A qualitative content analysis revealed that heart disease is portrayed in a "gendered way" (Clarke et al., 2007, p. 29). These findings suggest that, for men, heart disease is almost inevitable, "a badge of successful manhood" (Clarke et al., 2007, p. 30). In contrast, for women, heart disease revealed their weaknesses. Media described women to be at the mercy of their pathological bodies and victims of medical care, reinforcing the passive and powerless position of women (Clarke et al., 2007). When women did get sick, they were described as less likely to acknowledge their heart symptoms and to be ashamed and incredulous in the face of them. Additionally, their portrayal emphasized their worry about loved ones, "particularly their husbands and

trying to get their husbands to practice good health habits” (Clarke et al., 2007, p. 31).

This media portrayal of women likely influences their awareness, perceptions and ability or inability to change their behaviors to reduce their heart disease risks.

Current Level of Awareness, Perceptions and Likelihood to Change Health Behaviors Among Women

Many Americans still perceive heart disease as a problem primarily for men. Women across the country underestimate their risk of heart disease (Hart, 2005; Krummel et al., 2002; Mosca et al., 2000;). Women repeatedly cite cancer, especially breast cancer, as their No.1 risk (Hart, 2005; Krummel et al., 2002; Mosca et al., 2002). This lack of awareness of the risk of cardiovascular disease may impede preventative efforts as well as the adoption of positive lifestyle changes (Mosca et al., 2002).

When asked about their perceived susceptibility and the severity of heart disease, rural women said they perceived breast cancer as their biggest risk, but women who had a family history of heart disease felt more susceptible. Perceived severity differed between younger and older rural women. Younger women were most concerned about who would raise their children if they got sick, rather than how to prevent heart disease. In contrast, older women were more empowered to change their behavior (Krummel et al., 2002). Low-income groups worried about how they would pay for medicines, extra doctor visits, etc. (Krummel et al., 2002).

Women who are able to practice health-promoting behavior including “moderate exercise, a good diet (high in fiber and low in trans fat and glycemic load), a BMI lower than 25, no smoking, and moderate alcohol consumption” have an 83% lower risk of heart disease (Thanavaro et al., 2005, p. 150). Nonetheless, behavior changes are difficult for all women. One study found that among women who had been diagnosed

with heart disease, more than 85% had not made significant lifestyle changes or healthy adaptations to their diet or activity program in light of their diagnosis. Unfortunately, only 3% of the subjects from this study practiced such behavior to the fullest extent (Marcuccio et al., 2003).

Barriers to health-promoting behavior are many. Some of the biggest barriers to change are lack of awareness, family obligations and lack of time (Hart, 2005). For rural women, family obligations may be more pronounced. Family food preferences and cultural traditions were overwhelmingly seen as the largest barriers to change in focus groups with rural women (Krummel, et al., 2002).

The Health Belief Model as a Theoretical Framework

This study will employ the Health Belief Model (HBM) as a guiding framework to interpret the news media messages in rural newspapers. While this study is not a test of this model, the HBM offers a valuable theoretical framework. By examining its elements in news coverage, the researcher gains a better understanding of the presentation of heart disease in community newspapers. Most often, the HBM is used to identify people's likelihood of adopting healthy behaviors, but researchers have used it in framing and content analyses as well. For example, Beaudoin (2005) used the HBM in a framing analysis to assess HIV/AIDS posters from sub-Saharan Africa. Beaudoin (2005) explains that although most research considers the predictive power of the HBM components on outcome variables, researchers can study content as a means to influence the development of the HBM components, and, as a result, outcome attitudes and behaviors. Also, Broz and Karel (2007) used the HBM in a content analysis of prescription drug Web sites. Broz and Karel (2007) noted that through this theoretical framework, "the communication behaviors describe(d) on Web sites become tools for

increasing patients' communication efficacy and cues to action, as well as a means of invoking threats and benefits" (p. 10). The HBM is a particularly good fit for a study about rural health because it highlights the functions of the information exchange as it pertains to rural residents taking information about heart disease and putting that information into action. Using this model throughout the analysis allowed the researcher to analyze how news media may be a cue to action for women at risk for heart disease as well as deciphering news media as a means of invoking threats and benefits.

Social psychologists at the U.S. Public Health Service developed the HBM in the early 1950s in an attempt to understand the "widespread failure of people to accept disease preventives or screening tests for the early detection of asymptomatic disease" (Janz & Becker, 1984, p. 2). Becker (1974) modified the model to focus on an individual's perceived threat of illness and his or her behavioral response to that illness (Wright, Sparks, & O'Hair, 2008). "When confronted with information about a disease or illness, people typically assess their perceived susceptibility to the threat and attempt to gauge the severity of the threat" (Wright et al., 2008, p. 238). Additionally, individuals assess their threats against the costs and benefits of changing their behaviors (Wright et al., 2008). Costs refer to perceived barriers that must be overcome (Rosentstock, Strecher, & Becker, 1988). In the case of engaging in heart disease prevention behavior, some of the costs could be the financial burden of eating more healthfully or family opposition to cooking changes.

To better explain, the HBM consists of five main dimensions: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and cues to action. The desired outcome from use of these dimensions is the decision to engage in

preventative action. Perceived susceptibility “refers to one’s subjective perception of the risk of contracting a condition” (Janz & Becker, 1984, p. 2). Perceived severity describes an individual’s feelings concerning the seriousness of contracting an illness, which varies widely from person to person (Janz & Becker, 1984). This dimension includes evaluations of both medical/clinical consequences as well as possible social consequences such as the effect of the condition on work, family life or social relations (Janz & Becker, 1984). Taken together, these two dimensions indicate the implied perceived threat of a condition or disease for an individual (Ali, 2002). Perceived benefits, according to the HBM, refer to potential positive outcomes or advantages that can be achieved by following the recommended action to avoid disease (Beaudoin, 2005). Perceived barriers are the potential negative aspects of a particular health action that may impede the adoption of the recommended behavior. Individuals are believed to engage in a kind of cost-benefit analysis to weigh the action’s effectiveness and other benefits against perceptions that it may be expensive, dangerous, unpleasant (e.g. painful, difficult, upsetting), inconvenient, time-consuming, and so on (Janz & Becker, 1984). Finally, the cues to action component of this theory refer to factors that prompt individuals to pay attention to messages (Wright et al., 2008). Internal cues emerge from within the individual, such as if a person starts an exercise program because of feeling bloated or lethargic from living a sedentary lifestyle (Wright et al., 2008). Internal cues could also come from having an ill family member or other uncomfortable symptoms within the individual (Ali, 2002). External cues could be mass media messages, pressures from peer groups, advice from friends or family, or reminders from physicians (Ali, 2002; Wright et al., 2008).

These dimensions affect an individual's perceptions and may be influenced by a variety of demographic and sociopsychological factors, as well as structural variables such as awareness of and knowledge about the disease. Addressing these variables in campaign messages and in the mass media can directly relate to people's willingness or lack of willingness to change their health behaviors (Wright et al., 2008). Many studies have used the HBM to examine health behaviors such as breast self-examinations, undergoing a mammogram, and smoking cessation (Ali, 2002). However, little research has investigated heart disease using this model. Ali (2002) formulated a modified HBM including variables for perceptions of susceptibility to coronary heart disease and for seriousness of CHD. The modified model included "sociopsychological variables for general health motivation to practice health behaviors and social support" and knowledge of risk factors of CHD as a structural variable. Cues to action in the study were family history of CHD and the taking of medications for diabetes, hypertension, and high cholesterol (Ali, 2002). Using Ali's model as a base, I have conceptualized an adapted HBM for heart disease among rural women.

In this adapted model (see Figure 2-1), news messages become the cues to action. This model assumes a certain level of exposure to these news messages among rural residents. News coverage is a cue to action because research shows that community newspapers provide an enormous amount of information to rural residents. The individual perception variables remain perceived susceptibility to heart disease and perceived seriousness to heart disease. The main modifying variables will include structural (awareness of risk of heart disease), demographic (geographic isolation from health information), and sociopsychological (general health motivation and social

support) variables. The cue to action in this adapted model will be news media messages.

Research Questions

This study is exploring how, if at all, the coverage of heart disease in rural newspapers relates to the risks of heart disease for individuals, especially women, in their circulation areas. For the HBM to be useful, people must be confronted with information about a disease. Information about heart disease may come from a variety of sources, but, in rural communities, community newspapers remain primary information sources. Therefore, this study will investigate the coverage of heart disease in these media outlets.

RQ 1.) How have community newspapers covered heart disease?

RQ 1a.) To what extent do community newspapers cover women's risk of heart disease?

The Heart Truth has been an influential campaign throughout the country since 2002. This study aims to investigate how this campaign is reflected in the coverage through specific mentions of the campaign, or its key messages or images.

RQ 2.) How, if at all, are the primary messages of *The Heart Truth* campaign reflected in the coverage of heart disease in rural media?

Finally, this study looks to see how elements of the HBM are reflected in the coverage of heart disease among rural media. The rationale behind these research questions is that if the elements of the HBM are reflected in the news coverage, then people may be more likely to see and react to them. As a cue to action, news coverage of heart disease could spur individuals to engage in preventative behavior. While this content analysis cannot be used as test of this model because newspaper coverage has

not been presented to individuals for analysis, it can be posited that stronger representation of the HBM dimensions in the coverage would produce greater likelihood of behavior change.

RQ 3: To what extent does community newspapers' coverage of heart disease reflect the dimensions of the Health Belief Model?

RQ 3a: To what extent do community newspapers discuss susceptibility to heart disease in their coverage? (RQ 3b.) To what extent do community newspapers provide information about the seriousness of heart disease?

RQ 3c: What information do newspapers provide that could raise rural residents' awareness of heart disease?

RQ 3d: Do community newspapers acknowledge rural residents' reduced access to health care in their content?

RQ 3e: Do community newspapers provide information that could contribute to rural residents' general health motivation and social support?

RQ 3f: To what extent does community newspapers' coverage of heart disease provide information about the benefits of preventative health action for rural residents?

RQ 3g: To what extent are barriers to preventative action addressed in community newspapers' coverage of heart disease?

RQ 3h: What types of heart disease preventative actions are discussed in community newspapers' heart disease coverage?

RQ4: To what extent do community newspapers present heart disease as a significant threat to readers in their circulation area? That is, to what extent do newspapers use words, phrases, and statistics to convey heart disease as serious threat?

RQ4a: Is there a correlation between heart disease mortality rates in newspapers' circulation areas and newspapers' presentation of heart disease as a significant threat?

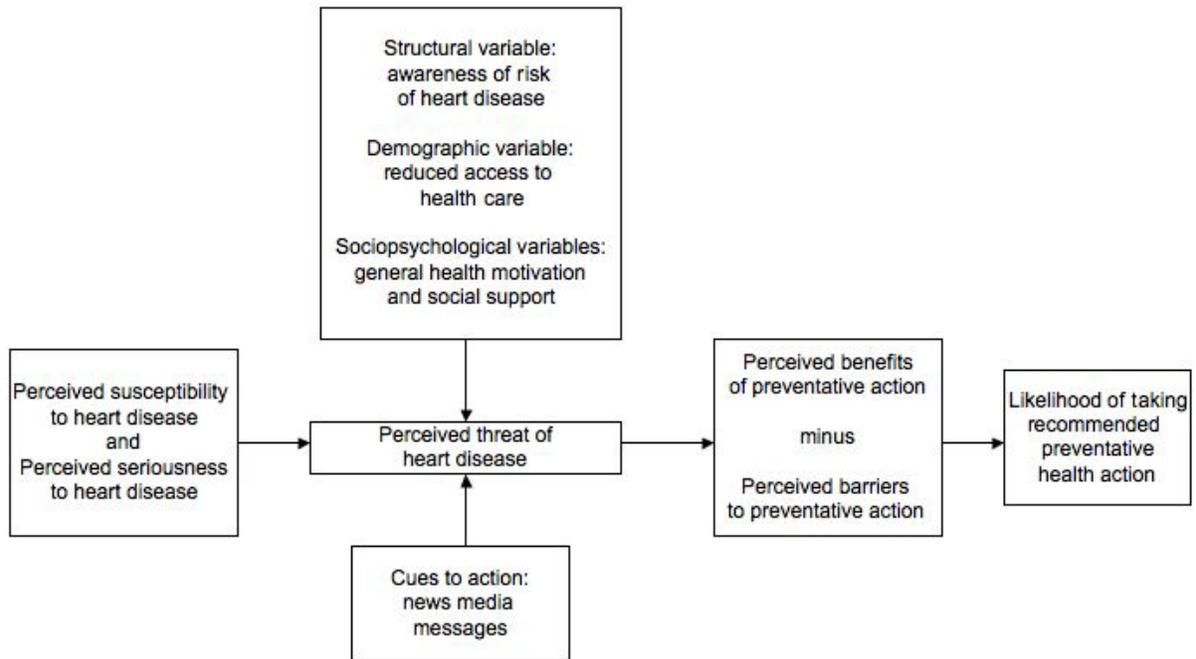


Figure 2-1. Adapted Health Belief Model

CHAPTER 3 METHODOLOGY

Because scholars have not systematically studied rural newspapers and have not examined rural newspapers in terms of their coverage of health issues in general or more specifically heart disease, analyzing the content of these newspapers is important and necessary.

Content Analysis

Content analysis is a systematic procedure to examine recorded content (Walizer & Wienir, 1978 as cited in Wimmer & Dominick, 2006). It is “a research technique for making replicable and valid inferences from texts to the contexts of their use” (Krippendorff, 2004, p. 18). Modern content analysis dates back to World War II, when Allied intelligence units diligently monitored the number and types of popular songs being played on European radio stations (Wimmer & Dominick, 2006). At about the same time, researchers used content analysis in attempts to verify the authorship of historical documents (Wimmer & Dominick, 2006). Krippendorff (2004) credits Berelson and Lazarsfeld (1948) with the first codification of this method but notes that scholars practiced “content analysis” well before these men. The method has become a popular research technique among mass communication scholars. “Riffe and Freitag (1997) found that 25% of the 1,977 full-length articles published in *Journalism and Mass Communication Quarterly* from 1971 to 1995 were content analyses” (as cited in Wimmer & Dominick, 2006). A more recent study revealed that content analysis was the most used data-gathering method reported in major mass communication journals between 1995 and 1999 (Wimmer & Dominick, 2006).

One of the main purposes of content analysis is to “identify what exists” (Wimmer & Dominick, 2006, p. 152). According to Berelson (1952), content analysis can “describe trends in communication content” and “audit communication content against its objectives” (as cited in Krippendorff, 2004, p. 45). Describing communication content can provide vital information as to what people know about the world and how they feel about certain issues (Wimmer & Dominick, 2006). This study aims to describe what rural newspapers are saying about heart disease; this gives us some idea of what information about heart disease is available for rural women.

Universe

Wimmer and Dominick (2006) describe defining the universe as specifying the boundaries of the body of content to be considered. This study considers daily and weekly newspapers with circulation less than 20,000 readers, located in a rural community in the Southern United States, published between January 2008 and December 2009 as the content analysis universe. This time period was chosen because *The Heart Truth* campaign was launched in 2002, and one of this study’s goals is to investigate the continued influence of *The Heart Truth* campaign on coverage of heart disease in these rural newspapers. In addition, this time period was chosen because of data availability. Due to the low staff and circulation numbers of many community newspapers, they have been some of the last papers to become searchable online and in databases. To gain the most complete sample, the researcher had to look to current dates for which data were available.

Sample

The first stage of the sampling process was to sample the newspapers. The researcher employed a purposive sampling of newspapers. Riffe and Freitag (1997)

confirmed the importance of purposive sampling in content analysis, finding that 68% of content analyses in *Journalism Quarterly* from 1971 to 1995 used a purposive sample (as cited in Wimmer & Dominick, 2006). Purposive sampling was appropriate for this task because it allowed the researcher to identify papers in locations with high, medium and low mortality rates from heart disease to provide the best sample to answer the research questions. These categories provided a relevant comparison analysis. It can be inferred that if many people are dying from heart disease, newspapers could be expected to cover this topic more often; this study examined this idea further. The researcher chose newspapers from each of 12 Southeastern states available through Access World News. This database contains the most comprehensive collection of newspapers around the world and provides greater access to local and regional newspapers compared to other large databases. The newspapers were purposively chosen based on their circulation size, circulation area within a rural community, and heart disease mortality rates. Access World News Database provided the circulation sizes of all its archived newspapers (See Appendix E for a list of newspaper used in this sample). Only newspapers with a circulation size of 20,000 or less were chosen for the analysis. Circulation within a rural community was evaluated based on finding the newspaper's location on census maps (see Figures A-1 and A-2 in Appendix A). Only newspapers located in areas classified as rural by both the U.S. Census definition and the U.S. Office of Management and Budget's definition of rural, non-metro counties were chosen for analysis. The mortality rates were identified using Centers for Disease Control and Prevention interactive state maps (see Figure A-3 in Appendix A) showing heart disease mortality rates in Alabama, Arkansas, Florida, Georgia, Kentucky,

Louisiana¹, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. Together, these states make up what is traditionally known as the deep South. These states have overwhelmingly higher heart disease mortality rates than the Midwest and the West, and higher rates than much of the Northeast. Additionally, more black people live in the South than anywhere else in the United States. These racial groups comprise a large part of the Southern, rural communities.

Once the sample newspapers were identified, the researcher searched the chosen newspapers for articles using the following search terms: “heart disease” in all text, “heart attack,” “stroke,” or “cardiovascular” in lead/first paragraph, and not “golf” in all text. Some search terms were used only in the lead/first paragraph because this is the emphasis of the story. Only the headline and lead or first paragraph were searched for the terms “heart attack,” “stroke” or “cardiovascular” because so many stories that mentioned these terms somewhere in the full text were actually not relevant to heart disease. Limiting the search to the lead or first paragraph also generated a sample small enough to make coding feasible. Many phrases such as “I almost had a heart attack when I saw that alligator staring at me” or “It nearly gave me a stroke” occurred often as colloquial phrases in my search and were deemed irrelevant for the purposes of this story. In addition, the word “stroke” remained problematic when searched throughout all text because the word appeared in a multitude of stories about golf, swimming, motorcycle racing and boating. The exclusion of “golf” was made part of the search criteria after the initial search revealed that the search produced a significant number of stories about golf, describing how many “strokes” a player was up or down.

¹ Louisiana was not used in this sample because no newspapers were available that fit the sample criterion in this state.

The researcher examined each results list and discarded obituaries and irrelevant articles, finally arriving at a sample of 253 newspaper articles.

Unit of Analysis

The unit of analysis was the article. This study aimed to evaluate the overall coverage of heart disease in rural areas. Therefore, examining just the titles or photos or first paragraphs would not provide the desired results. Coders coded each article as a whole.

Content Categories

Content analysis coding was divided into 11 categories. The first category was general information. It comprised general questions such as item ID number, newspaper title, article title, length of story in words, date of publication, day of the week, and whether the story was from a wire or syndicate. In addition, this category addressed whether a newspaper was located in an area with low, medium, or high heart disease mortality rates, according to the CDC. This question was answered by examining a supplemental coding sheet that listed every newspaper and the heart disease mortality rate category for its circulation area. Also, this category addressed whether a newspaper was a weekly or a daily newspaper, also listed in the supplemental spreadsheet. The last three variables in this category were type of story, focus of the article, and whether the article focused on men, women or both. All variables are explained in depth in the coding guidebook (see Appendix B).

The next nine categories were inspired by aspects of the HBM explained in Chapter 2. The first of these categories, susceptibility to heart disease, included four variables. First, coders looked for a mention of risk factors for heart disease and identified which risk factors were mentioned. Also, coders looked for a mention of some

version of the phrase “heart disease is the No. 1 killer” and whether the article specified that heart disease was the No. 1 killer of women, men, or both sexes. A mention of heart disease prevalence also was categorized as likely to influence readers’ understandings of susceptibility. Coders looked for statistics or phrases that explained the prevalence of heart disease in the local area, state, region, or country.

Category three, seriousness of heart disease, included six variables related to the seriousness of heart disease. Coders looked for a mention of heart disease mortality and morbidity rates in the local area, state, region, or country. Also, coders looked for a mention of the impact of women’s heart disease on women’s physical health in the local area, state, region, or country. The last three variables included in this category were the mention of the economic, social, and/or emotional impact of women’s heart disease.

The fourth and fifth categories, awareness about heart disease and *The Heart Truth*, measured the extent to which the stories provided information likely to increase readers’ awareness of heart disease in general and *The Heart Truth* campaign messages specifically. Variables included in this category were whether stories mentioned research about heart disease, whether they mentioned events related to heart disease among women, men, or both sexes, and whether the stories included messages consistent with the two major public health communication campaigns related to heart disease. In addition, this category included the variables that identified whether the stories mentioned *The Heart Truth* and *The Go Red for Women* campaigns, and if the stories mentioned any of the key messages or symbols of the campaigns as these campaigns were designed to increase awareness among women about heart disease.

Category six examined the extent to which the stories addressed the problem of reduced access to health care among rural residents. It included items assessing whether the stories mentioned access to health care, socioeconomic or geographic health disparities, racial disparities in health, medical technology, heart disease screenings, doctors, and access to drug therapy. These variables were included to provide a better view of how newspapers addressed health care needs in their communities.

The seventh category, general health motivation and social support, included variables assessing whether the stories discussed women who had fought through heart disease, motivators for adopting health behaviors, health fairs, other social events related to heart disease, and family support for family members with heart disease or caring for someone with heart disease. For example, a story that discussed how a husband is helping his wife recover from a heart attack or a story about the lifestyle changes a family is making to help their mother avoid heart disease would have been included.

Preventative action, category eight, included items measuring whether the articles mentioned various preventative actions individuals could take to reduce their risk of heart disease, including smoking cessation, exercise, healthful eating, weight loss, controlling diabetes, or maintaining healthy cholesterol levels.

Categories nine and ten addressed the mention of any benefits or barriers to preventative action. These categories were designed to address two key dimensions of the health belief model, perceived benefits of and perceived barriers to preventative action.

Finally, category 11 addressed the extent to which stories presented heart disease as a significant threat to readers. To measure the portrayal of heart disease as a threat, both coders were trained to assess the word choices, use of statistics, discussion of deaths from heart disease and impacts of heart disease on individuals or community. Using these story characteristics, coders categorized every story as a whole. Stories could present heart disease as a low, medium, or high threat based on this scale. (See Appendix A for a complete listing of content categories).

Quantification System

This analysis focused primarily on nominal level analyses in which coders counted the frequency or occurrence of each category. As this was an exploratory study, focusing on the occurrence of heart disease-related content provided an informative analysis. However, to answer research questions 4 and 4a, a scale variable was added to evaluate risk. The scale variable was constructed to allow each individual coder to rate each story as to whether it presented heart disease as a mild, moderate or significant threat to individuals within the newspaper's circulation area; coders based this assessment on the choice of words, use of statistics, discussion of death, and impact of heart disease on individuals and community.

Coding

A theoretically driven standardized coding sheet (see Appendix C) and guidebook (see Appendix B) guided the coding of the content. Appendix A outlines the categories for the content analysis. A detailed coding guidebook accompanies the coding sheet to ensure consistency of coding throughout all of the stories.

Pretest

Three pretests or pilot studies were conducted before coding commenced. The researcher remained the primary coder; however, coder training and pilot studies were necessary to train both the researcher and the second coder who would eventually double-code 20% of the sample to ensure intercoder reliability. Coder training included two different sessions as well as e-mail and phone conversations. First, the second coder was introduced to the coding sheet and guidebook. Both coders discussed the coding sheet and guidebook and coded 10 stories about heart disease that were not in the final sample together. After both coders were comfortable with the coding, they each separately coded 35 stories for the first pilot study. Cohen's Kappa was used to calculate reliability along with percentage agreement. However, these measures were too low to ensure reliability on nine key variables after the first study; Kappa ranged from $-.067$ to $.778$ on these variables. Certain shortcomings of the coding sheet were identified and revised. For example, in variable 11, type of story, the answer options of opinion, editorial, and column were combined to make one answer choice, editorial. The guidebook definition of focus of the story was discussed between coders and revised in the guidebook, as well as definitions of prevalence, mortality, and morbidity. Also, the definition of motivators and benefits and barriers were discussed as these were some of the variables on which there was the greatest extent of disagreement. Finally, the risk scale was revisited. The pilot study revealed that the coders disagreed on the five-point risk scale. However, their disagreements were most often between a 1 and 2, or 4 and 5. So the researcher decided to change the scale from a five-point to a three-point scale.

After discussion of the revised coding sheet and guidebook, coders conducted a second pilot study of 15 articles not included in the final sample. In this pilot study, Kappa ranged from .5 to 1.0 on all variables, and percentage agreement ranged from 60 to 100%. The variables coders disagreed on were focus of the story, events related to heart disease, access to health care, motivators, and benefits of preventative action. For most of these variables, Kappa was between .6 and .7, close to agreement but not strong enough. These variables were discussed once more, and the definitions were narrowed in the guidebook.

Finally, coders coded a sample of five articles to see if the more narrow definitions would ensure reliability. In this third and final pilot study, Kappa was 1.0 for all variables, and percentage agreement was 100% for all variables.

Final Coding

The researcher analyzed and coded the entire sample of 253 articles. The second coder, a graduate student in mass communications, double-coded a reliability subsample of 20% or 53 articles. Both coders were permitted to spend as much time as necessary to make sure all data was accurately extracted from the stories. Both coders used the same coding sheet and guidebook that had been developed and refined through the pilot studies.

Intercoder Reliability

When coding was complete, a reliability assessment was conducted using PASW (formerly SPSS) to calculate reliability, Cohen's Kappa ranged from .84 to 1.0 (See Appendix A). In addition to SPSS calculations, reliability results were confirmed using ReCal ("ReCal: Reliability calculation for the masses," n.d.), an online agreement

calculator, that compared Cohen's Kappa with Scott's Pi and Krippendorff's Alpha. All calculations provided comparable results.

Statistical Analysis

PASW Statistics Grad Pack 18.0 for Mac was used to analyze data. Results from the analysis are explained in the Chapter 4.

CHAPTER 4 RESULTS

Overview of the Coverage of Heart Disease in Rural Community Newspapers

The mean length of stories was 618 words; the median length was 582 words. Of the newspapers represented, 65.2% were daily newspapers and 34.8% were weekly newspapers. The average newspaper circulation size was 8,389; the minimum circulation size was 500, and the maximum was 17,910. Features were the most popular type of story represented, accounting for 43.5% of stories; 28.5% were editorials; 18.2% were news stories; 9.9% were announcements or briefs (See Table 4-2). Newspaper staff or contributors wrote almost all of the stories. Wire or syndicate stories accounted for only 2.8% of the sample.

Research Question 1

- How have community newspapers covered heart disease?

In general, community newspapers did not focus much of their coverage on heart disease. Despite the fact that stories were included only if they included some terms related to heart disease, only 30.8% of stories in this sample focused on heart disease. Of the stories that did not focus on heart disease, 54.9% focused on some aspect of general health; 8.7% focused on health policy; 2% focused on a social events; most often, these social events related to some aspect of health as they were fundraising luncheons or galas, or bake sales, etc.; 2% focused on death (mainly due to heart disease or stroke); and 1.2% focused on sports (See Figure 4-1). Despite a weak focus on heart disease, 60.9% of stories mentioned one or more risk factors, and 56.9% mentioned one or more methods of preventing heart disease.

- **Research Question 1a:** To what extent do community newspapers cover women and heart disease?

Community newspapers, most often, focused equally on both sexes (88.1%).

About 6.7% of stories focused on women, and 5.1% focused on men.

Research Question 2

- How, if at all, were The Heart Truth and the Go Red for Women campaigns reflected in the coverage of heart disease in rural media?

The Heart Truth has been an influential campaign throughout the country since 2002. One of this study's aims was to investigate how this campaign and one of its most popular accompanying campaigns, *Go Red for Women*, was reflected in the coverage through specific mentions of these campaigns and their key messages and images.

Community newspapers, by and large, did not cover these campaigns. About 9.5% of stories mentioned some sort of public health communication campaign, but only 1.8% or four stories in the sample mentioned *The Heart Truth*, and 1.8% or four stories mentioned *Go Red for Women*. In relation to these campaigns, stories mentioned the "red dress" symbol, which is the symbol associated with *The Heart Truth* and *Go Red for Women* campaigns, in 1.8% of stories, and key campaign messages were mentioned in 2.3% or five stories.

The Health Belief Model

In addition to a general description of the coverage of heart disease in rural, community newspapers, this study looked at variables inspired by the Health Belief Model (HBM). As was discussed in Chapter 2, this study used an adapted HBM consisting of perceived susceptibility and perceived seriousness, structural variables including awareness of heart disease risk, reduced access to health care, and general health motivation and social support, and perceived benefits and barriers to preventative action. The idea is that mentioning these HBM dimensions will increase

people's likelihood to engage in preventative action. Because this study did not address the impact of these stories on readers, it was not able to test this model. However, it did assess the extent to which these stories specifically mentioned these dimensions with the assumption that people read these newspapers and, therefore, had information that could possibly influence their decisions to make individual behavior changes.

Research Question 3

- To what extent does community newspapers' coverage of heart disease reflect the dimensions of the Health Belief Model?

In general, community newspapers did not emphasize the dimensions of the HBM. Parts of the HBM can be seen in this analysis; however, stories do not present dimensions of the model in a complete manner.

Research Question 3a

- To what extent do community newspapers discuss susceptibility to heart disease in their coverage?

As was discussed in Chapter 3, to analyze susceptibility to heart disease, mentions of risk factors, heart disease as the No. 1 killer, and the prevalence of heart disease were coded. More than 60% of stories mentioned one or more risk factors for heart disease. Most often, stories mentioned diabetes (26.9%), followed by high blood pressure and overweight or obesity (both 25.3%), diet (23.7%), physical inactivity (22.9%), cholesterol (20.2%), smoking (19.8%), and genetics (9.5%) (See Figure 4-3). According to a bivariate correlation analysis, a positive relationship existed between mention of risk factors and newspapers' presentation of heart disease as a threat ($r=.295$, $p<.01$).

While a significant percentage of stories mentioned heart disease risk factors, few stories (19) mentioned the prevalence of heart disease (5 stories referred to

prevalence in the local area, 7 in the state, none in the region, and 7 in the country).

This accounts for mention of prevalence in less than 3% of stories. Additionally, only 13 stories mentioned heart disease as the “No. 1 killer” (3 of women, 10 of both sexes), accounting for a mention in 5.9% of stories. Based on these findings, the susceptibility component of the HBM was not addressed because newspapers did not provide enough information about the frequency of heart disease to enable readers to accurately assess their risk.

Research Question 3b

- To what extent do community newspapers provide information about the seriousness of heart disease?

Community newspapers did not provide much information about the seriousness of heart disease in their communities. Only 3.2% or seven stories mentioned heart disease mortality rates in their local areas, 1.4% or three stories mentioned mortality in the state, <1% or two stories mentioned mortality in their region, and 9.6% or 21 stories mentioned mortality in the United States. Reporting on morbidity was even less common, with less than 1 % of stories mentioning morbidity in their local area, the region or the United States and only 1.6% of stories discussing heart disease-related morbidity in the newspaper’s home state. In addition, no more than 2% of the stories mentioned the physical, economic, social, and emotional impacts of women’s heart disease.

Research Question 3c

- What information do newspapers provide that could raise rural residents’ awareness of heart disease?

Rural residents’ awareness of heart disease was measured by the mention of research studies, events, and public health communication campaigns mentioned in the

articles. About 24% of stories mentioned some aspect of research, and 24.5% of stories mentioned events; 9.9% mentioned events for women (<1% mentioned events for men, and 14.2% mentioned events for both sexes). Additionally, 9.5% mentioned public health communication campaigns. As stated earlier, neither *Go Red for Women* (N=6) nor *The Heart Truth* (N=3) campaign was mentioned often; nonetheless, they were the most mentioned public health communication campaigns. The *Help is Here Express*, a campaign aimed at educating at-risk people about drug therapy to treat chronic diseases, was also mentioned in 3 stories. The rest of the campaigns mentioned concentrated on local or state populations, such as the *Delta Diabetes Project*, *Get Fit Tennessee*, or *Get Moving Kentucky*.

Research Question 3d

- Do community newspapers acknowledge rural residents' reduced access to health care in their content?

Access to health care is a structural variable discussed in the adapted HBM. This variable examines the coverage of access issues relevant to rural residents. Many community newspaper stories acknowledged rural residents' reduced access to health care. About 35% of stories mentioned reduced access to health care. Additionally, 18.6% mentioned rural health disparities, yet only 5.5% mentioned racial disparities. An ANOVA showed that a relationship existed between stories' mentioning of access to health care and the portrayal of heart disease as a threat ($p=.000$).

Also, the mention of medical technology, screenings, doctors, and access to drug therapy were used to analyze the coverage of reduced access. For these measures, 19% of stories mentioned medical technology, 15% mentioned access to screenings, 27.3% mentioned access to doctors in and 17% mentioned access to drug therapy. The

inclusion of these additional variables was meant to shed light on other areas of health care that rural residents often lack such as regular visits with a physician or access to advanced medical technology such as cardiac catheterization.

Research Question 3e

- Do community newspapers provide information that could contribute to rural residents' general health motivation and social support?

General health motivation was examined as an additional structural variable explained in the adapted HBM. This study looked at content to see if it provided motivation dimensions that may influence readers. But often, newspaper content neglected to cover the general health motivation and social support components of the HBM. Stories mentioned motivators in 23.3% of stories. Pearson's chi-squared test showed a significant relationship between mention of motivators and mention of preventative action ($\chi^2 = 22.4$, d.f.=1, $p < .05$). This shows that stories that discussed reasons why people choose to take charge of their health were related to stories that offered readers ways to change their behaviors.

In addition, stories mentioned health fairs in 2% of the content. However, the majority of mentions of health fairs were significant mentions discussing when health fairs were scheduled and what they would provide residents or stories about successful health fairs and what people had learned.

Social support was seldom mentioned in stories. Social events were mentioned in 7.9% of articles, and family support for people with heart disease was mentioned in 12.6% of articles. However, as with health fairs, when family support was mentioned, often stories relied on family support as a central theme of the story telling compelling stories about one family's struggle to fight through heart disease.

Research Question 3f

- To what extent does community newspaper coverage of heart disease provide information about the benefits of preventative action for rural residents?

Research Question 3g

- To what extent are barriers to preventative action addressed in community newspapers' coverage of heart disease?

While benefits of preventative action were mentioned more often than barriers to preventative action, neither variable was mentioned in much significance. Benefits were mentioned in 20.6% of stories; barriers were mentioned in 15.4%. A bivariate correlation analysis showed that a positive relationship existed between coverage of benefits and discussion of barriers ($r=.433$, $p<.01$), meaning that stories that mentioned benefits were more likely to mention barriers as well and vice versa. However, neither mention of benefits nor barriers were significantly correlated with the newspapers presentation of threat.

Research Question 3h

- What types of preventative action were addressed in community newspapers' coverage of heart disease?

Community newspapers' content mentioned preventative action in 57% of stories. According to bivariate correlation analysis, no relationship existed between mention of prevention and the area's heart disease risk based on heart disease mortality rates in newspapers' circulation area. However, there was a significant relationship between mention of prevention and level of heart disease risk portrayed by the newspaper ($r=.233$, $p<.01$).

The mention of prevention was spread over six categories. Newspapers mentioned healthful eating in 40.3% of stories, exercise in 34.4%, weight loss in 27.7%,

diabetes in 22.9%, smoking cessation in 19.8%, and reducing cholesterol in 17% (see Figure 4-2).

Research Question 4

- To what extent does the newspaper present heart disease as a serious risk for the readers in its circulation area?

Based on the scale developed for this analysis, newspapers most often presented heart disease as a moderate or medium risk for their circulation area. The scale variable was individually calculated for each article based on the word choice, use of statistics, discussion of death from heart disease or stroke, and impact of heart disease on individuals and the community. In this sample, 112 stories, or 44.3%, were coded as reflecting medium risk, 77 stories, or 30.4%, as portraying heart disease as a high risk, and 64 stories (25.3%) presenting heart disease as low risk.

- **Research Question 4a:** Is there a correlation between heart disease mortality rates in newspapers' circulation areas and newspapers' presentation of risk?

Newspapers most often presented heart disease as a moderate risk for their readers (See Tables 4-2 and 4-3). Yet nearly half of the newspapers in this sample circulated to areas with high heart disease mortality rates, according to the CDC heart disease mortality rate maps explained in Chapter 3. A bivariate correlation analysis suggested that there might be a relationship between heart disease mortality rate in a newspaper's circulation area and the newspaper's presentation of heart disease risk. While the relationship only approached significance ($r=.111$, $p=.078$), it merits discussion nonetheless. This relationship suggests that newspapers located in areas of high heart

disease mortality rates were more likely than newspapers in areas of low heart disease mortality to present heart disease as a significant risk to their readers.¹

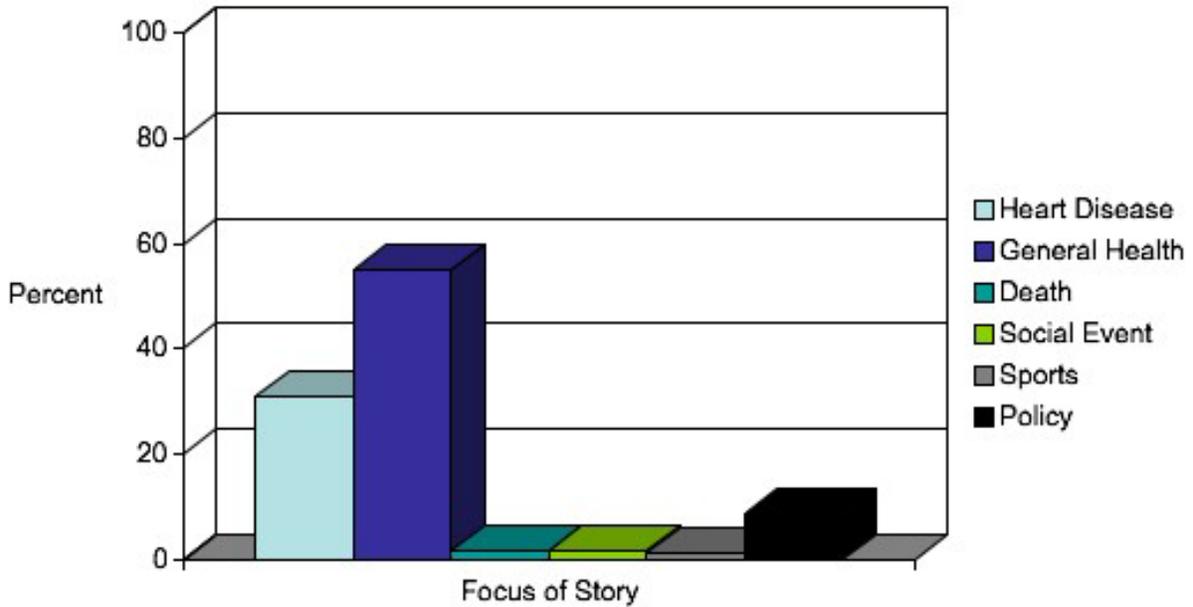


Figure 4-1. Focus of Story

Table 4-1. Type of Story

Type of Story	Frequency	Percent
News	46	18.2
Feature	110	43.5
Announcement/Brief	25	9.9
Editorial	72	28.5
Total	253	100

¹ These results may be skewed because of the high frequency of stories included in this sample from high heart disease mortality rate areas high-risk areas. However, this relationship cannot be determined by the given data.

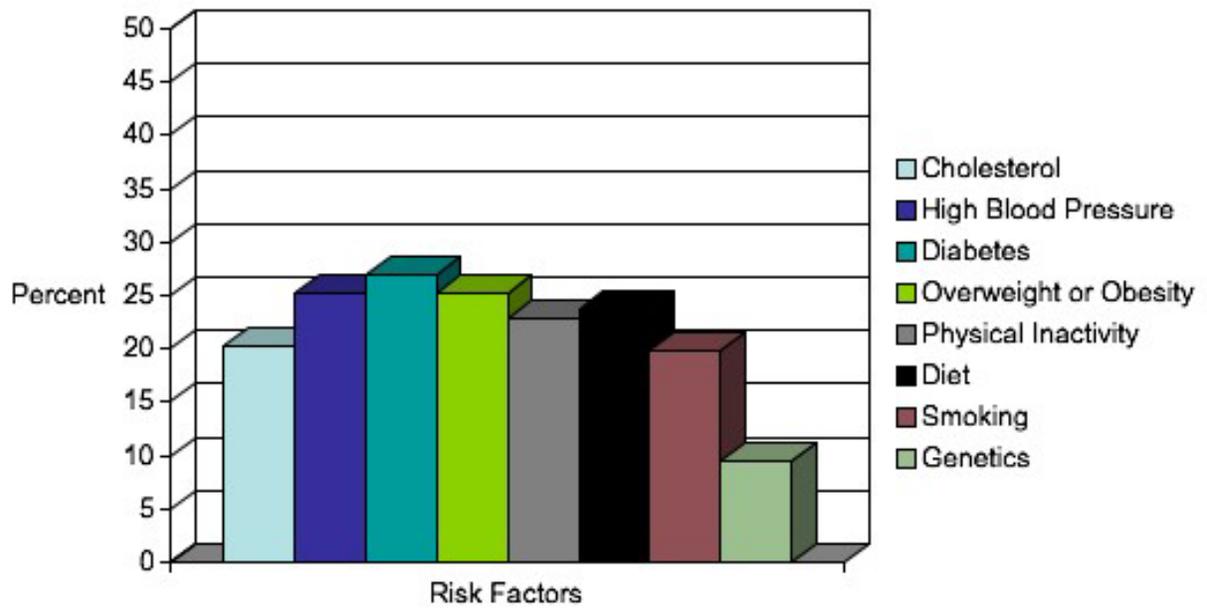


Figure 4-2. Risk Factors

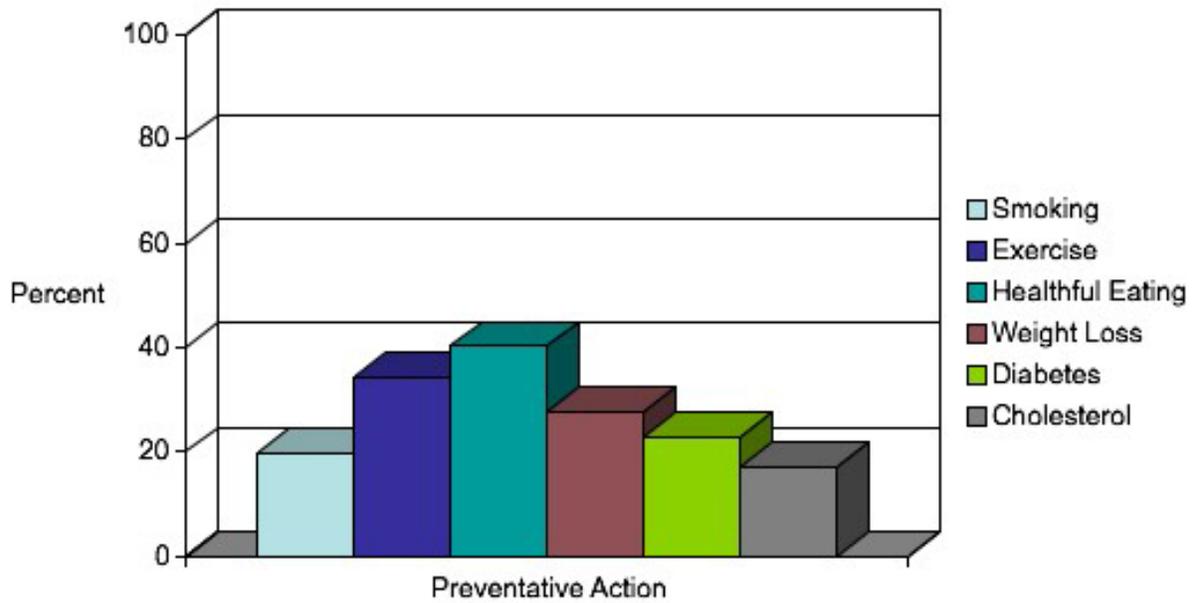


Figure 4-3. Preventative Action

Table 4-2. Frequency of Heart Disease Mortality Rate in Newspapers' Circulation Area (v4) and Newspapers' Presentation of Heart Disease Risk (v54)

	Heart Disease Mortality Rate in Newspapers' Circulation Area (v4)	Newspapers' Presentation of Heart Disease Risk (v54)
Low risk	64	64
Medium risk	57	112
High risk	132	77
Total	253	253

Table 4-3. Percentage of Heart Disease Mortality Rate in Newspapers' Circulation Area (v4) and Newspapers' Presentation of Heart Disease Risk (v54)

	Heart Disease Mortality Rate in Newspapers' Circulation Area (v4)	Newspapers' Presentation of Heart Disease Risk (v54)
Low risk	25.3%	25.3%
Medium risk	22.5%	44.3%
High risk	52,2%	30.4%
Total	100%	100%

CHAPTER 5 DISCUSSION

This study was meant to fill a gap in research about heart disease and its coverage in the media. While health and mass communication scholars have paid considerable attention to the portrayals of other diseases such as cancer and HIV/AIDS, scholars have studied neither news coverage of heart disease nor rural communities' news coverage of any health topic in any depth. Clarke (1992) seems to have been one of the few researchers to take an interest in heart disease portrayals in the media. This study was meant to explore news coverage of heart disease in geographic areas that are particularly at risk.

In general, the newspapers seemed to lack in-depth coverage of issues relating to heart disease. With the mean length of stories at only 618 words, reporters lacked the space to discuss issues related to heart disease in any significant depth. However, the prevalence of feature stories about heart disease shows that these newspapers wanted to keep heart disease on their news agendas even when news events related to this issue were not occurring. While the findings revealed that newspapers do not provide extensive coverage of heart disease, women were given voice in three-quarters of the articles. Most often, stories focused equally on both sexes. While one might argue that more articles should have focused specifically on women, by focusing equally on both sexes, newspapers bridge the gap between sexes and put forth an image of equality in the articles. Nonetheless, the lack of overall coverage of heart disease remains problematic. If community newspapers remain the "lifeblood" of rural communities, as noted in Chapter 2, then the question remains -- if these media outlets are not focusing

on this issue, who is? While the focus of the stories was not promising, other findings revealed by this study merit discussion and further study.

The Health Belief Model

In large part, the articles analyzed did not mention the components of the HBM. This differs from the findings in Broz & Karel's (2007) content analysis of prescription drug Web sites and Beaudoin's (2005) content analysis of AIDS/HIV posters in sub-Saharan Africa. In their studies, they found components of the HBM positively represented in nearly all cases. However, as was true in this study, not every dimension of the HBM was included in the material (Beaudoin, 2005; Broz & Karel, 2007).

Newspapers in this study often mentioned risk factors -- a valuable component of the perceived susceptibility dimension of the HBM. Emphasizing risk factors may help people to identify with those who have a disease and thus could be more likely to engage in preventative behaviors. Ali (2002) found that women who practiced preventative behaviors for heart disease "perceived that they (were) susceptible to the disease, and believed it to be serious" (p. 89). Likewise, these women "exhibited knowledge of risk factors of CHD, were motivated to engage in healthy behaviors, and perceived social support" (Ali, 2002, p. 89). While it cannot be determined from this study how the information the newspapers provide contributes to audiences' heart disease-related perceptions and behaviors, the importance of the components of the HBM are clearly illustrated. In addition, Ali (2002) found that the HBM variables taken together were better predictors of heart disease preventative behaviors than any one tested individually. This illustrates the importance of the full model coming together -- something that does not seem to have occurred in the news stories examined for this study. While some aspects of the adapted HBM developed for this study were

represented, including susceptibility to heart disease and reduced access to health care, newspapers largely ignored other components, such as the seriousness of heart disease, awareness about heart disease, general health motivation and social support, and benefits and barriers to preventative action.

The absence of significant discussion of the seriousness of heart disease in the content is particularly important because seriousness combines with susceptibility to produce people's perceived threat of a disease, according to the HBM. Without proper representation of seriousness in the content, people's perceived threat of heart disease may be diminished. In addition, the relationship between presence of motivators and level of risk presented by newspapers shows that stories that discuss reasons why people choose to take charge of their health were related to the newspapers' portrayal of the significance of the heart disease threat. Motivators, as structural variables, play an important role in the adapted HBM in encouraging people to seek out ways to change behavior. However, motivators were only mentioned in 23.3% of stories in this sample. Another pitfall appeared in the absence of discussion of benefits and barriers to preventative action. This absence illustrates a significant shortcoming in the content presented by rural newspapers. For rural residents to choose to adopt healthy behaviors, they need to know why and how they can do this. It is not enough to tell people they should reduce their cholesterol levels or lose weight; why people should take these actions, how they can make these changes, and what barriers they can expect to encounter are vital pieces to the health puzzle.

A dimension of the adapted HBM that was well represented in the content was the acknowledgement of reduced access to health care in rural areas. This relationship

is particularly important as researchers rarely have found health disparities of any kind discussed in news coverage. In fact, from 2000 – 2004, 1,188 stories mentioning minority health disparities were published in major newspapers, representing .09% of all articles about health (Amzel & Ghosh, 2007). The discussion of reduced access to health care in community newspaper coverage has two possible impacts. First, the significant relationship between mention of reduced access and the presentation of heart disease as a more serious threat reflects the way reporters cover the topics. Newspapers that mentioned health care access issues in their communities seemed to be more likely to present information that conveys a more serious message to their readers. Also, many of the stories that mentioned some aspect of reduced access to health care in rural areas explained alternative ways to find health care, such as at free clinics or a traveling clinic like the “Help Is Here Express.” Second, coverage of these health care access issues may affect readers through an impact on policy decisions. Often, newspaper coverage of an issue is the first step in fixing the problem. The role of the community newspaper may be to spur a city council to build a new clinic or provide transportation subsidies for people to travel to get care or even recruit new doctors to the area. Although more than 20% of Americans live in rural areas, only 9% of U.S. physicians practice in rural areas, creating an even wider health care gap (Kavilanz, 2010).

Lastly, newspapers emphasized prevention. While prevention is typically an outcome of the HBM components coming together, this analysis looked to see if it was on these newspapers’ agenda. Because 57% of stories mentioned some aspect of preventative action it seems that rural community newspapers believe prevention

information is important to their communities. The significant correlation between mention of prevention and presentation of risk shows that newspapers that took the time to mention ways to prevent heart disease also presented heart disease as a more serious risk for readers. Another way of viewing this relationship is that it suggests that when journalists portrayed heart disease as a serious threat to their readers, they also took the time to help readers understand what they could do to combat that threat.

However, the distribution of mentions of different preventative action is interesting. Smoking cessation (19.8%), one of the most significant controllable risk factors for heart disease, was mentioned half as often as healthful eating (40.3%). According to the American Heart Association, smokers are two to four times more likely to develop heart disease compared to nonsmokers (“Risk factors and coronary heart disease,” n.d.). While diabetes was mentioned slightly more than smoking cessation (22.9%), three-quarters of people with diabetes die from some sort of heart or blood vessel disease (“Risk factors and coronary heart disease,” n.d.), so the emphasis on diabetes may well be justified

Heart Disease Risk

A key finding in this study centered on the presentation of heart disease risk. Making informed decisions about risky situations requires quality information. While the most trusted sources for help with risky decisions, especially risky situations about one’s health, remain friends, family, and health professionals, often these sources are either not available or not knowledgeable about a particular risk (Dudo, Dalstrom, & Brossard, 2007). As a consequence, people look to media to supplement these sources. Assuming mass media can provide quality information, people likely use media to assess risks related to science, health, and the environment (Dudo et al., 2007). Thus,

the presentation of risk remains an important component of heart disease coverage and this analysis.

In this study, a positive though non-significant correlation was found between a newspaper's presentation of heart disease risk and the prevalence of heart disease mortality in its circulation area. Although not statistically significant, this relationship illustrates that newspapers located in areas where heart disease was a more severe risk presented heart disease to their readers as a more a serious condition. These findings coincide with Beaudoin's (2005) content analysis of HIV/AIDS posters in sub-Saharan Africa. Beaudoin's findings indicated that sub-Saharan countries that were most in need of effective preventative messages produced messages (within the context of the HBM) "best suited for influencing the development of positive HIV-related attitudes and behaviors" (Beaudoin, 2005, p. 19). That is, the areas most at risk for HIV/AIDS produced posters that presented HIV/AIDS as a more serious risk to residents in whichever way followed the relevant cultural theory of that area (Beaudoin, 2005).

This relationship is what may be expected. One would hypothesize that in areas where more people are dying from heart disease, newspapers would cover this topic more often and with more urgency. In contrast, journalists whose publications are located in areas where fewer people are dying from heart disease may not feel the need to emphasize this disease; it may seem that residents either are largely aware of heart disease and are controlling it or are less susceptible for whatever reason. This relationship suggests that these community newspapers may be in touch with the needs of their community and the state of the public health issues in their area.

Implications

This study provides professionals and scholars interested in community journalism a look into the health role newspapers play in the rural South. In an area where people rely on their community newspapers for information, newspapers seem to be in touch with their communities in relation to heart disease. Health writers should take note of this important relationship and stay on top of the health trends and mortality rates from different diseases in their communities. Where people live and the community members who surround them may be the most important predictors of health outcomes (Mobley et al., 2006). Staying tied into this and acknowledging problems in these areas, such as reduced access to care, will help health writers positively impact their communities.

Limitations

As is true of every study, this study has some limitations. First, the sample was limited to newspapers accessible to the researcher. A more thorough sample would have included every rural newspaper available in these areas. However, many of these newspapers do not publish online and do not keep archives available to the public, meaning that one could only compile a complete sample by collecting the newspapers as they were published. Second, this study examined newspapers only. The researcher was not able to incorporate other types of media that may have a significant influence on people in the South, such as TV or radio.

An additional limitation was the inability to test the Health Belief Model. Because this study did not include surveys of or interviews with individuals to see if and how they were using the information from these community newspapers, the researcher had to assume people were exposed to this information. The variables inspired by the HBM in

this analysis show what is directly mentioned in the content. They do not predict preventive action. Also, the variable in the general information category that asked what sex each article focused on could have been more specific. The answer choices for coders were focused on men, focused on women, or focused equally on men and women. And additional answer choice should have been added to represent stories that did not mention either sex..

Future Research

This study was the first of its kind and, thus, provides a platform for exploration of media and heart disease in a variety of capacities. The next step in this research might be to talk with editors and reporters at these newspapers to see what they think of heart disease and their coverage of heart disease. Do they know how heart disease affects their community and at what rate? How do they think they present heart disease? These questions and many more would be useful to understand the presentation of heart disease in community newspapers.

Additionally, a thorough content analysis of mainstream newspapers would be helpful in evaluating the coverage of heart disease. A content analysis examining major national newspapers such as *The New York Times*, *The Washington Post*, and *The Los Angeles Times* would help provide a well-rounded view of heart disease coverage, as would an analysis of heart disease coverage in less prominent urban newspapers. A content analysis of the coverage of heart disease in other rural areas would be helpful as well. A look at rural regions of the Midwest or the West, where heart disease mortality rates are considerably lower, would make an interesting comparison for research purposes. Also, an analysis of other media outlets would be extremely telling

for this topic. As our media landscape continues to change, it would be helpful to see how coverage of this disease differs across mediums such as TV and Web sites.

Finally, the next step in this research is to study people. For this research to be most helpful, we must find out how people use it. A study with quantitative and qualitative components examining women's media use and the effects of that use on their knowledge, attitudes and behaviors regarding heart disease would enhance our understanding of the impact of news organizations' inclusion of components suggested by the HBM, such as risk severity information and how to overcome barriers. This type of study could also help us ascertain which media outlets would be most effective for publicizing heart disease prevention messages.

Summary and Conclusion

While this study provided evidence that rural community newspapers do not provide extensive coverage of women's heart disease, data show that newspapers provided some information that may contribute to positive behavior changes among rural women, especially through the susceptibility dimension of the HBM and prevention. Past research has documented that increasing perceptions of susceptibility may spur preventative behaviors (Ali, 2002). Further research is needed to better assess the validity of this relationship and whether the type of susceptibility information provided in newspapers has the effect of increasing perceived susceptibility. Another aspect newspapers emphasized was prevention. While not part of the traditional HBM, discussion of preventative action may reflect the needs and desires of the community. In addition, this study suggested that newspapers in high heart disease mortality areas were more likely to present heart disease as a more severe risk to readers. This relationship indicates an important connection between newspapers and readers. It

shows that reporters and editors at these newspapers stay in touch with the beat of their communities' hearts.

“Mass media research literature supports that ability of news media to influence public opinion” (Haas et al., 2006, p. 72). There have been many efforts to ascertain an explanation of the relationship between media communication and health outcomes. However, one important assumption reverberates throughout the literature – health and communication are related, and they must work together. Heart disease will remain a priority health issue in rural areas as long as access to care and prevention efforts are not addressed. Mass communication could be one link that helps to shrink this gap in care, especially in the rural South.

This research scratched the surface of the relationship between rural women, heart disease, and mass media in the South. Nonetheless, it provides a valuable contribution to the research community by exploring a topic that previously had not been examined. Given the vast health disparities that continue to exist between rural, urban and suburban populations, this topic likely will remain relevant for years to come.

APPENDIX A
ADDITIONAL FIGURES AND TABLES

This appendix contains additional figures and tables meant to augment the thesis. The map of Mississippi below is an example of a U.S. Census map I used to distinguish urban and rural populations.

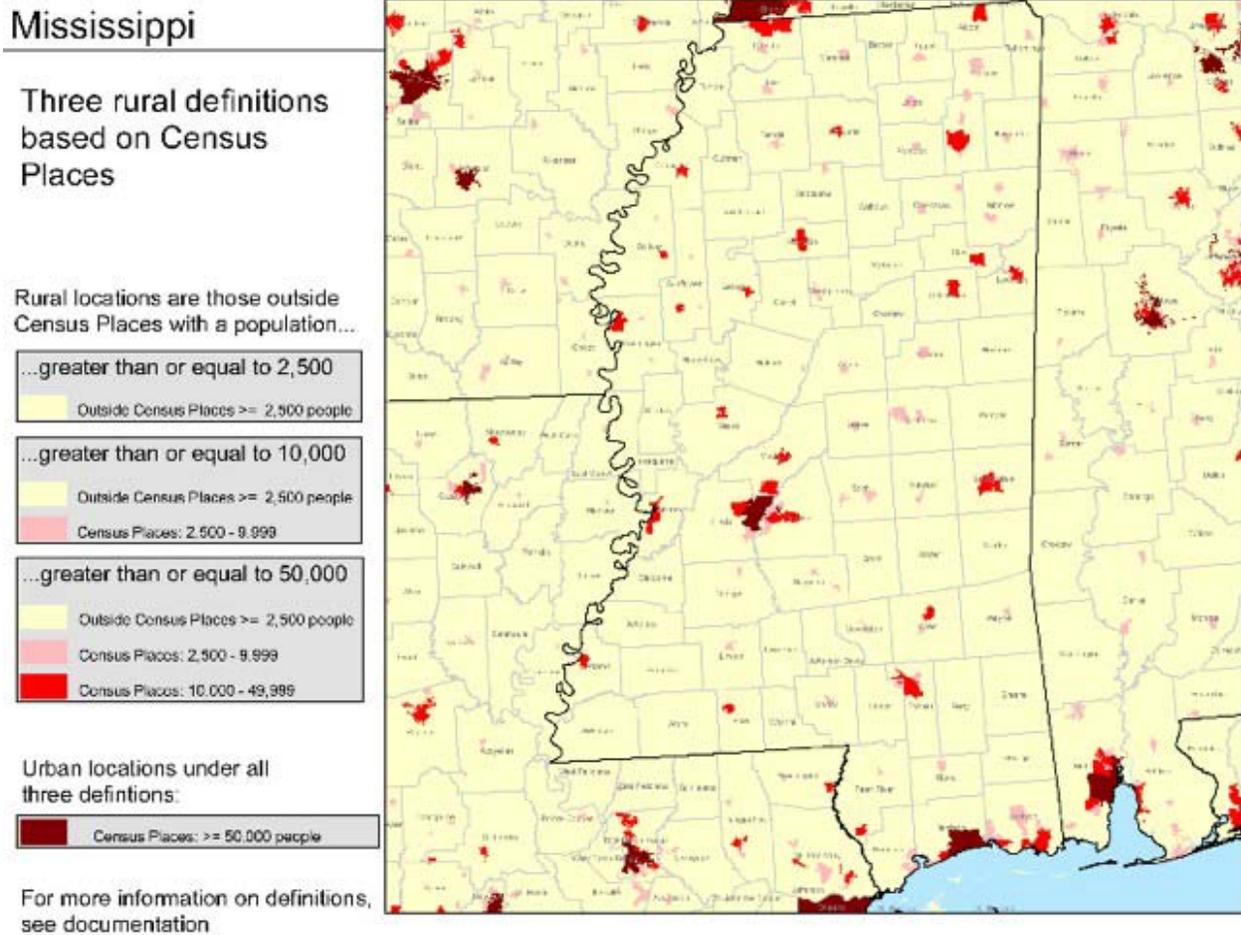
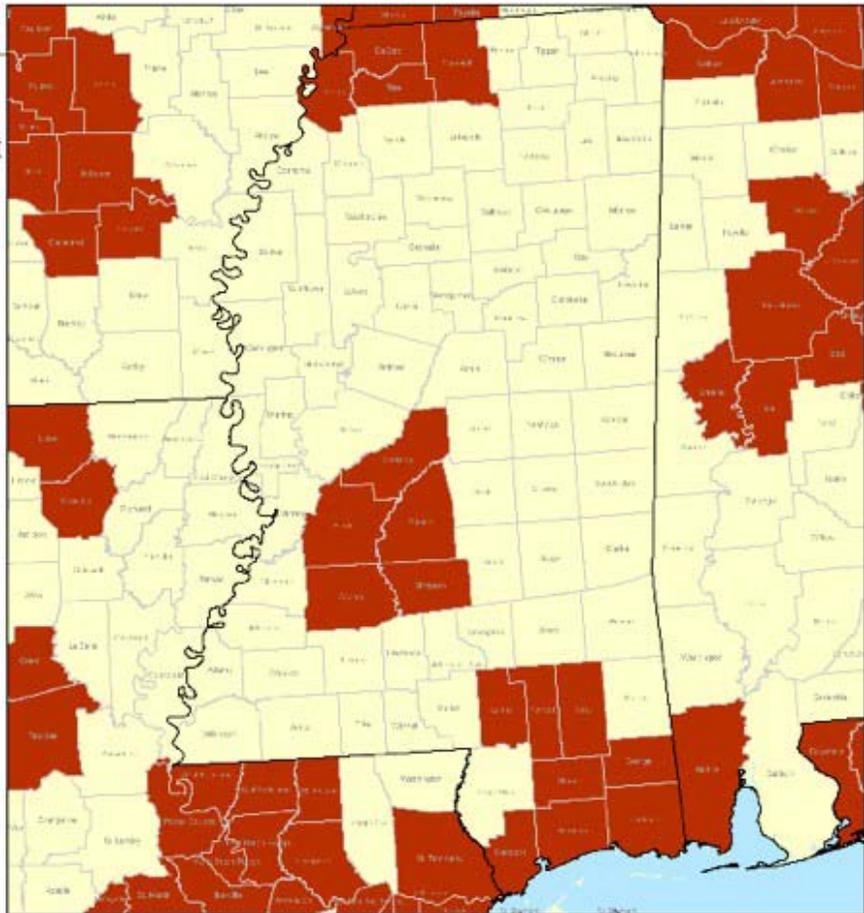
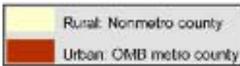


Figure A-1. Example of U.S. Census map

The next table is an example of an Office of Management and Budget (OMB) that was also used to distinguish urban and rural areas. For newspapers to be included in this sample, they had to be located in a rural or nonmetropolitan area according to both the U.S. Census and Office of Management and Budget's definitions.

Mississippi

Rural definition based on Office of Management and Budget (OMB) metro counties

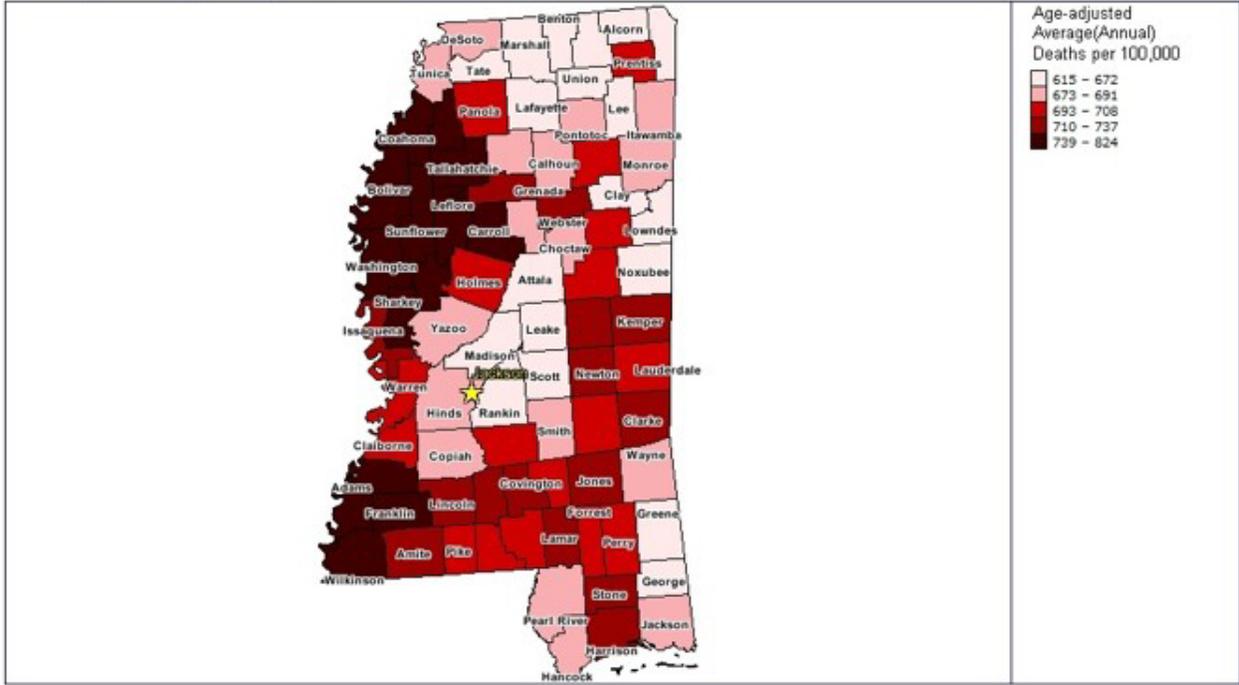


For more information on definitions, see documentation

Figure A-2. Example of Office of Management and Budget (OMB) map

The last map in this appendix is an example of a map published by the Centers for Disease Control and Prevention. Each map illustrates the heart disease mortality rates in per county in every state. The deepest red represents the highest heart disease mortality rates, and the lighter pinks and white represent the lowest heart disease mortality rates.

Mississippi — Heart Disease Death Rates
 Total Population, Ages 35+, 1996 – 2000





 Department of Health and Human Services
 Centers for Disease Control and Prevention
 National Center for Chronic Disease Prevention and Health Promotion

Figure A-3. Example of CDC map

The following table lists all of the content categories used and the main subjects of every variable used in the content analysis.

Table A-1. List of content categories

General Information
v1. Article ID number
v2. Newspaper title
v3. Article title
v4. Heart disease risk category
v5. Length of story in number of words
v6. Date of publication
v7. Day of the week
v8. Dateline
v9. Weekly or daily
v10. Wire or syndicate story
v11. Type of story
v12. Focus of the article on heart disease (Yes or No)
v12a. If no, what is the focus of the article?
V13. Focus on women or men or balanced
Susceptibility to heart disease
v14. Does the article mention any risk factors?
v15. Which risk factors does the article focus on?
1. Cholesterol
2. Hypertension
3. Diabetes
4. Overweight or obesity
5. Physical inactivity
6. Diet
7. Smoking
8. Genetics
v16. Does the article mention heart disease as the No. 1 killer?
1. Of women
2. Of men
3. Of both sexes
4. Does not mention
v17. Does the article mention the prevalence of heart disease?
1. In local area
2. In state
3. In county
4. Does not mention
Seriousness of heart disease
v18. Does the article mention mortality rates of heart disease?
1. In local area
2. In state
3. In country

Table A-1. Continued

4. Does not mention

v19. Does the article mention morbidity rates of heart disease?

1. In local area

2. In state

3. In country

4. Does not mention

v20. Does the article mention the impact of women's heart disease on women's physical health?

1. In local area

2. In state

3. In country

4. Does not mention

v21. Does the article mention the economic impact of women's heart disease?

1. In local area

2. In state

3. In country

4. Does not mention

v22. Does the article mention the social impact of women's heart disease?

1. In local area

2. In state

3. In country

4. Does not mention

v23. Does the article mention the emotional impact of women's heart disease?

1. In local area

2. In state

3. In country

4. Does not mention

Awareness about heart disease

v24. Does the article mention research about heart disease?

v25. Does the article mention events for or about heart disease?

1. For men

2. For women

3. For both sexes

4. Does not mention

v27. Does the article mention any public health communication campaigns related to heart disease?

v27a. Which one(s)?

The Heart Truth

v28. Does the article mention *The Heart Truth* campaign?

v29. Does the article mention the *Go Red for Women* campaign?

v30. Does the article mention the "red dress" symbol?

v31. Does the article mention one of the key messages of *The Heart Truth* or *Go Red for Women* campaigns?

v31a. If yes, which message(s)?

Table A-1. Continued

Reduced access to health care

- v33. Does the article mention access to health care?
 - v34. Does the article mention health disparities in rural America?
 - v35. Does the article mention racial disparities?
 - v36. Does the article mention medical technology?
 - v37. Does the article mention heart disease screenings?
 - v38. Does the article mention doctors?
 - v39. Does the article mention access to drug therapy?
-

General health motivation and social support

- v40. Does the article mention any women who have fought through heart disease?
 - v41. Does the article mention motivators to adopt healthy behaviors?
 - v42. Does the article mention health fairs?
 - v43. Does the article mention social events for help, such as walks or fundraisers for heart diseases?
 - v44. Does the article mention family support for family members with heart disease?
-

Preventative actions

- v45. Does the article mention preventative action?
 - v46. Does the article mention smoking cessation?
 - v47. Does the article mention exercise as a way to prevent heart disease?
 - v48. Does the article mention healthful eating choices to prevent heart disease?
 - v49. Does the article mention weight loss for overweight or obese people?
 - v50. Does the article mention diabetes?
 - v51. Does the article mention reducing cholesterol levels?
-

Benefits of preventative action

- v52. Does the article mention ANY benefits of adopting healthy behaviors?
-

Barriers to preventative action

- v53. Does the article mention ANY barriers to adopting health behaviors?
-

Barriers to preventative action

- v54. How does the newspaper present as heart disease as a risk for the readers in its circulation area?
-

The below table shows the final agreement scores for intercoder reliability. Each score is based on Cohen's Kappa calculation.

Table A-2. Intercoder Reliability Scores per Variable

v1. Item ID number	1.0
v2. Newspaper title	1.0
v3. Article title	1.0
v4. HD risk category	1.0
v5. Length of story	1.0
v6. Date of publication	1.0
v7. Day of week	1.0
v8. Dateline	1.0
v9. Weekly or daily	1.0
v10. Wire or syndicate	1.0
v11. Type of story	.93
v12. Focus of article on HD	.92
v12a. Focus of article not on HD	.84
v13. Sex focused on in article	.94
v14. Risk factors mentioned	.95
v15.	
v16. HD as No. 1 killer	1.0
v17. Prevalence of HD	.91
v18. Mortality of HD	1.0
v19. Morbidity of HD	1.0
v20. WHD impact on women's physical health	1.0
v21. Economic impact of WHD	1.0
v22. Social impact of WHD	1.0
v23. Emotional impact of WHD	1.0
v24. Research	.95
v25. Events	1.0
v27. Public health communication campaigns	1.0
v28. The Heart Truth	1.0
v29. Go Red for Women	1.0
v30. "Red dress" symbol	1.0
v31. Key messages	1.0
v32. Access to health information	.95
v33. Access to health care	.86
v34. Health disparities	.94
v35. Racial disparities	.84
v36. Medical technology	1.0
v37. HD screenings	1.0
v38. Doctors	1.0
v39. Access to drug therapy	1.0
v40. Women who have fought through HD	1.0
v41. Motivators	.92
v42. Health fairs	1.0
v43. Social events	1.0
v44. Family support	.941

Table A-2. Continued

v45. Preventative action	.92
v46. Smoking cessation	.94
v47. Exercise	.92
v.48. Healthful eating	.96
v49. Weight loss	1.0
v50. Diabetes	.92
v51. Cholesterol	.90
v52. Benefits	.96
v53. Barriers	.93
v54. Risk	.91

*All scores based on Cohen's Kappa.

APPENDIX B CODING GUIDEBOOK

Coding Guidebook for Rural Women, Heart Disease, and Mass Media

Introduction

This guidebook is aimed at assessing the coverage of heart disease in rural newspapers in the southern United States during the past few years. It examines the coverage given to the elements in public health campaigns and the Health Belief Model. The following definitions may aid you in the coding process:

Heart disease

Heart disease is a broad term used to describe a range of diseases that affect your heart, and in some cases, your blood vessels. The various diseases that fall under the umbrella of heart disease include diseases of your blood vessels, such as coronary artery disease; heart rhythm problems (arrhythmias); and heart defects you're born with (congenital heart defects). The term "heart disease" is often used interchangeably with "cardiovascular disease" — a term that generally refers to conditions that involve narrowed or blocked blood vessels that can lead to a heart attack, chest pain (angina) or stroke. Other heart conditions, such as infections and conditions that affect your heart's muscle, valves or beating rhythm also are considered forms of heart disease. In summation, words that could be used in articles to refer to heart disease include, cardiovascular disease, arrhythmias, congenital heart defects, angina, stroke, ischemic heart disease, coronary heart disease, dilated cardiomyopathy, heart attack or myocardial infarction, heart failure, heart arrest, or pulmonary stenosis. This is a long list for your reference. There could be other terms that refer to heart disease, but it should relate to one of these terms and be clear.

Public health communication campaign

Public health communication campaigns are a form of health communication in which the goals could be to inform an audience about a health issue, persuade them to take action to improve their health, teach them ways to improve their health and/or prevent disease, etc. They can be carried out in a variety of ways including advertising, media advocacy, entertainment education, interventions, face-to-face interactions such as health fairs or screenings or education programs. The one common theme in a public health communication campaign is that there is some form of communication involved. It is not simply a nonprofit, advocacy, or charity group or program.

Guidebook Instructions

In order to maintain the highest degree of accuracy during this content analysis, please follow the following steps. (1) Each ARTICLE should be coded as one entity. (2) Use the descriptions below to identify answers to each question. (3) Mark all answers on the accompanying Excel spreadsheet in their respective boxes. Notes this acronyms: HD: heart disease; WHD: women's heart disease; MATA: mark all (answers) that apply. (4) Please feel free to contact the research with any questions at any time.

Category Descriptions

General information

v1. *Item ID number*: This will be located at the top of each article.

v2. *Newspaper title*: List the publication that the article is published in, even if it is a wire story or a story from another newspaper.

v3. *Article title*: Write in the name of the newspaper article.

v4. *Heart disease risk category*: This describes the level of risk the area in which the newspaper is circulated for heart disease. A list of each newspapers and their risk categories will accompany this coding guidebook. Just look at the sheet and mark the correct category number (1 -5)

v5. *Length of story in number of words*: It may be listed, if it is not, highlight everything except the headline and use the word count function in Microsoft Word.

v6. *Date of publication*: Month/Day/Year

v7. *Day of the week*: If none given, write none.

v8. *Dateline*: Write city and state given in dateline. If none is given, write none.

v9. *Weekly or daily newspaper*: This information will be specified on the accompanying spreadsheet. Please mark W (weekly) or D (daily).

v10. *Wire or syndicate service*: Wire services include: The Associated Press (AP), United Press International (UPI), and Reuters. Syndicates include: Chicago Tribune Service, Gannett New Service, Knight Ridder News Service, NY Times Service, Washington Post Service, Scripps-Howard News Service and USA Today news service.

v11. *Type of story*: News stories should contain a time element in the lead. Consider length as well. Announcement stories concentrate only on the details of an event such as where, when, etc. A brief is similar to announcement as it is short in length and briefly explains one item. If it is an in-depth story about an event, it would be a feature or news. Columns are regular opinion pieces that are usually specified as columns or the write is specified as a columnists. Any piece that is from a guest author should be marked as an opinion/editorial.

v12. *Focus of the article on heart disease*: This question is meant to ascertain if the story is about heart disease or if heart disease is merely mentioned in passing. The focus of the article is on heart disease is the bulk of the story (no matter how long or short it is) discusses heart disease and/or issues pertaining to heart disease.

v12a. *Focus*: If article is not focused on heart disease, how did it end up in the sample? Answer choice *health* is for article focusing on a different health issue such as the flu or cancer and mention heart disease. Answer choice *death* is for articles concentrating on the death of someone who may or may not have died from heart disease or where heart disease played a role. Answer choice *social event* is for articles that focus on social events where heart disease is mentioned in reference to someone returning to social events or for someone not at the social event. Answer choice *sports* refers to any article concentrated on sports but mentions heart disease somewhere in the article either in reference to a player, coach, or fan or in reference as a health problem. Answer choice *policy* should be marked to refer to any story focused on a policy choice, government policy, health policy, etc.

v13. *Sex the article focuses on*: If the article focuses equally on both sexes it may either not mention sex at all in the article or mentions men and women fairly equally.

Susceptibility of heart disease

v14. *Risk factors*: Risk factors include cholesterol, hypertension, diabetes, overweight or obese, physical inactivity, diet, smoking, and genetics. The article may mention these things specifically in reference to heart disease or in reference to general health promotion. **Do not mark yes to this question unless you intend to mark a risk factor in the next question. The article must mention a specific risk factor.**

v15. *Risk factors*: LDLs may also be categorized with cholesterol. High blood pressure may be categorized with hypertension, high blood sugar can be categorized with diabetes, fat or morbidly obese can be categorized with overweight or obese, lack of exercise or inactive can be categorized with physical inactivity, weight loss, healthy eating, dieting, or slim down can be categorized with diet, and genetics also refers to family history or characteristics people are born with.

v16. *No. 1 killer*: Look for exact phrase.

v17. *Prevalence*: Refers to the total number of cases of a disease in a given population at a specific time. This could be mention by saying how many people are affected by heart disease or how many people die from heart disease in a given area. The article may mention prevalence generally. For example, it may say, heart disease has become prevalent among the baby boomers. This would be a general reference and should be marked as such. The article should mention the word prevalence or discuss the number of people effected by heart disease to mark anything besides does not mention.

Seriousness of heart disease

v18. *Mortality rates of heart disease*: Refers to the death rate or the ratio of the total number of deaths to the total number of the population during a specified time period. This may be expressed in the article by saying how many people in any of the answer choice areas died in a given period of time. Again, this could be a general reference. For example, mortality rates are highest among elderly Americans. This doesn't specify a certain area, but it **explicitly states the word mortality**.

v19. *Morbidity rates of heart disease*: Refers to the proportion of patients with a particular disease during a given year per given unit of population. This means the article will mention how many people have heart disease in a given area during a certain time period. For example, the article could say, 46,000 people are diagnosed with heart disease in Southern Alabama in 2008. Also, this can be expressed generally, such as morbidity rates are on the rise. It must use the word **morbidity** to count as a general reference.

v20. *Impact on physical health*: Physical health refers to any physical discomfort, pain or shortcoming heart disease has made. For example, because of heart disease, women may become short of breath after physical activity, or they may feel weak. This question also refers to things women cannot do because they have heart disease such as riding roller coasters or scuba diving. This could also be a general reference, such as heart disease highly effects women's physical health or women are restricted physically after having a heart attack. Remember this variable (v20) through v23 ask about **WOMEN'S** heart disease. Keep that in mind when marking answers.

v21. *Economic impact of heart disease*: This refers to any monetary impact on the community, family, or individual due to heart disease. This could refer to the community's need to build a new wing on the local hospital to care for heart disease patients. It could refer to a family's adoption of budget-friendly food choices that their loved one can also eat. It could refer to a family or individual's high medical bills, medications, or the costs of physical therapy, gym memberships, and healthful food purchases.

v22. *Social impact of heart disease*: This refers to any social ramification from heart disease such as not being able to attend social functions, not being able to eat the foods served at social functions, family life impact, or impact on relationships.

v23. *Emotional impact of heart disease*: This refers to any internal emotional hardship suffered by the individual with heart disease or close family or friends. Emotional impact may include depression, lack of confidence, feelings of instability, weakness or vulnerability, or isolation from family, friends, or colleagues.

Awareness about heart disease

v24. *Research*: The article must contain the words **research, study, experiment** and discuss some sort of research related to heart disease.

v25. *Events*: Events refer to any activities including walks, fundraisers, health fairs, galas, dinners, charity auctions, etc. that relate to heart disease.

v27. *Public health communication campaigns about heart disease*: This refers to any campaign aimed at reducing people's risk of heart disease; it could be a local initiative, statewide campaign, or something at the national level like *The Heart Truth*. It must

contain some sort of element of **communication** either in advertising, face-to-face communication, interventions, community outreach, etc.

The Heart Truth

v28. *The Heart Truth campaign*: There are public health campaigns that can be mentioned either directly or indirectly.

v29. *Go Red For Women campaign*: A public health spin-off campaign from *The Heart Truth* that can be mentioned either directly or indirectly such as “Mississippi goes red for women.”

v30. *Red dress symbol*: The red dress symbol is the official symbol of *The Heart Truth* and *Go Red For Women* campaigns. The article may mention the red dress symbol or red dresses in general in reference to heart disease events or awareness.

v31. *Key messages of The Heart Truth campaign*: The key messages of the campaign are: “Heart disease is the No. 1 killer of women” and “women should talk to their doctors, find out their risk, and take action to lower it”. Finding either these exact phrases or paraphrasing of these messages would be a mention.

Reduced access to health care

v33. *Access to health care*: This refers to the availability of doctors, nurses, ENTs and facilities to care for people with heart disease in their area. The article must directly reference **health care**. This means it discusses **facilities** in which people can be cared for.

v34. *Health disparities in rural America*: Health disparities refers to any gaps in the quality of health and health care across racial, ethnic, sexual orientation, and socioeconomic groups. In the sample articles, some mention of the rural disparities should be mentioned.

v35. *Racial disparities*: Racial disparities refer to any mention of gaps in quality of health and health care across racial lines specifically. Most likely, the racial disparities will note African Americans.

v36. *Medical technology*: This refers to any technology aimed at reducing heart disease risks. Also, this includes any form of advanced surgery or treatment for heart disease such as stent implants or cardiac catheterization. Other examples of medical technology include EKGs, microscopic surgery, emergency defibrillation etc.

v37. *Heart disease screenings*: This refers mostly to blood tests that examine people levels of cholesterol, LDLs, and triglycerides. The word **screening or test** must be present in an article that refers to screenings.

v38. *Doctors:* This specifically refers to any mention of **doctors caring for hearts, heart disease, or stroke patients**. This does not include references to general doctors who are not involved or were not involved in the care of someone with heart issues.

v39. *Drug therapy:* This refers to access to any of the drugs that help **prevent or treat heart disease** such as cholesterol-lowering drugs, blood thinners or nitroglycerin pills. **This does not refer to drugs or vaccines for other conditions such as flu or cancer.**

General health motivators

v40. *Women who have fought through heart disease:* This refers to stories about women who have heart disease and have made the best of it. These stories may emphasize topics such as how these women changed their eating habits or started exercising or how they broke the news to their families.

v41. *Motivators to adopt health behaviors:* Motivators to adopt healthy behaviors include both internal and external health motivators. Internal motivators may be things such as a desire to be able to be more active, fear of death, or desire to take charge of health. External motivators could be public health messages, encouraging friends or family, or community activities. This is the “aha” moment people describe. For example, I wasn’t sure I’d be able to bend down to tie my shoe and get up. That’s when I knew I had to take charge of my health. Or after my best friend died from a stroke, I need I had to change my lifestyle.

v42. *Health fairs:* Health fairs are activities where health professionals share information and products with people to encourage healthy behaviors. They may occur on a very large scale in conference centers or on a smaller scale in the high school gym or at a park. Either way, the word **health fair** must be present in the article.

v43. *Social events:* This refers to any **social events related to heart disease** in some way including walks, fundraisers, galas, dinners, charity events, etc..

v44. *Family support for family members with heart disease:* This refers to the direct family’s support or lack thereof when another family member has been diagnosed with heart disease. The article should **specifically mention a family member or members**. It could mention things like the family’s support of healthy behaviors, ability to help with chores to reduce stress, or availability to go to doctor’s appointments with their loved ones.

Preventative action

v45. *Preventative action:* Refers to any sort of preventative action that would decrease the risk of acquiring heart disease. A specific preventative action must be mentioned. **If you cannot ascertain a specific preventative action that article is discussing then do not mark yes to this question.** Examples include smoking cessation, exercise, healthful eating, weight loss, etc.

v46. *Smoking cessation*: Refers to ways to quit smoking.

v47. *Exercise to prevent heart disease*: Refers to any mentions of any type of physical exercise as a way to prevent heart disease.

v48. *Healthful eating choices to prevent heart disease*: Refers to any mention of eating healthy to reduce risk such as eating more fruits and vegetables and whole grains and less saturated fats.

v49. *Weight loss for overweight or obese people*: Refers to any mention of how people with larger midsections are at a higher risk for heart disease and what people can do about that.

v50. *Diabetes*: Refers to anything relating to diabetes such as how you get it, how it is harmful to the body, and how to treat it.

v51. *Reducing cholesterol levels*: Refers to any mention in the article about reducing cholesterol (reducing bad and increasing good) and ways to go about doing this.

Benefits of preventative action

v52. *Benefits adopting healthy behaviors*: This refers to any of the **benefits** of adopting healthy behaviors. The benefit must be something explicitly expressed such as weight loss, increased energy, reduced stress, reduced loss of energy, leisure time with family, ability to do outdoor activities with friends or family, better sexual health, improved confidence, etc.

Barriers to preventative action

v53. *Barriers to preventative action*: This refers to any barriers to preventative action that keeps people from living a healthy lifestyle and preventing heart disease. For example an article might say, living a healthy lifestyle can be difficult because ... x,y,z. Examples of barriers to preventative action include lack of time, lack of money, lack of access to parks or recreational facilities, lack of access to full grocery stores, dislike for heart-healthy foods, family's distaste for healthy foods, cultural barriers, lack of access to medicines that reduce cholesterol, etc.

Risk

v54. *Risk*: This question is meant to be a predictor of how risky the newspaper views heart disease for its readers. The answer should be based objectively on the kinds of words use, such as killer, devastating, death, etc., and the statistics used such as how many people died this year because of heart disease.

Risk level 1: Article simply mentions heart disease while focusing on something else. For example, the H1N1 vaccine is now available, however, women who are pregnant, people who have heart disease, or those who live in close quarters with someone who has a low immunity system should not receive the vaccine.

Risk level 2: The article mentions heart disease when talking about healthy lifestyle behaviors, but only mentions heart disease. It does not focus mention risk

factor, talk about statistics or discusses consequences of heart disease. For example, losing weight is great for your health, and it decreases your risk of heart disease.

Risk level 3: Article is concentrated on heart disease and commands attention for the topic. Event article focuses on is about heart disease. Heart, heart disease, or stroke is stated in the headline. Mention of multiple deaths from heart disease or mortality or morbidity rates

APPENDIX C
CODING SHEET

Coding Sheet for Rural Women, Heart Disease and Mass Media Proposal
Jan. 15, 2009

General information

v1. Item ID number _____

v2. Newspaper title _____

v3. Article title _____

v4. Heart disease risk category of newspaper? (1 – 5) _____

v5. Length of story in number of words _____

v6. Date of publication _____

v7. Day of the week _____

v8. Dateline _____

v9. Weekly or daily newspaper

1. weekly

0. daily

v10. Is the article from a wire or syndicate service?

1. yes

0. no

v10a.) If yes, which one? _____

v11. What type of story is it?

1. news

2. feature

3. announcement/brief

4. column/opinion/editorial

v12. Is the focus of the article on heart disease?

1. yes

0. no

v12a.) If no, what is the focus of the article?

1. health

2. death

3. social event

4. sports
5. policy

v13. What sex does the article focus on?

1. women
2. men
3. focuses equally on both men and women

Susceptibility to heart disease

v14. Does the article mention risk factors for heart disease? (**Do not mark yes to this question unless you intend to mark a risk factor in the next question. The article must mention a specific risk factor**)

1. yes
0. no

v15. Which **risk factor(s)** does the article mention on? (MARK ALL THAT APPLY)

1. cholesterol
2. hypertension (high blood pressure)
3. diabetes
4. overweight or obesity
5. physical inactivity
6. diet
7. smoking
8. genetics

v16. Does the article mention **heart disease as the No. 1 killer?**

1. of women
2. of men
3. of both sexes
4. does not mention

v17. Does the article mention the **prevalence** of heart disease? (MARK ALL THAT APPLY)

1. in local area
2. in state
3. in region
4. in country
5. does not mention

Seriousness of heart disease

v18. Does the article mention **mortality** rates of heart disease? (MARK ALL THAT APPLY)

1. in local area
2. in state
3. in region
4. in country

5. does not mention

v19. Does the article mention **morbidity** rates of heart disease? (MARK ALL THAT APPLY)

1. in local area

2. in state

3. in region

4. in country

5. does not mention

v20. Does the article mention the impact of **women's heart disease on women's physical health**? (MARK ALL THAT APPLY)

1. in local area

2. in state

3. in region

4. in country

5. does not mention

v21. Does the article mention the **economic impact of women's heart disease**? (MARK ALL THAT APPLY)

1. yes

0. no

v22. Does the article mention the **social impact of women's heart disease**?

1. yes

0. no

v23. Does the article mention the **emotional impact of women's heart disease**?

1. yes

0. no

Awareness about heart disease

v24. Does the article mention **research** about heart disease?

1. yes

0. no

v25. Does the article mention **events related to heart disease** focused on?

1. women

2. men

3. both sexes

4. does not mention events

v27. Does the article mention any **public health communication campaigns** about heart disease?

1. yes

0. no

v27a. If yes, which campaigns? _____

The Heart Truth

v28. Does the article mention ***The Heart Truth*** campaign?

- 1. yes
- 0. no

v29. Does the article mention the ***Go Red For Women*** campaign?

- 1. yes
- 0. no

v30. Does the article mention the “**red dress**” symbol?

- 1. yes
- 0. no

v31. Does the article mention any of the **key messages of *The Heart Truth*** campaign?

- 1. yes
- 0. no

v31a. If yes, which message? _____

Reduced access to health care

v33. Does the article mention **access to health care**?

- 1. yes
- 0. no

v34. Does the article mention **health disparities** in rural America?

- 1. yes
- 2. no

v35. Does the article mention **racial disparities** in rural America?

- 1. yes
- 0. no

v36. Does the article mention medical technology?

- 1. yes
- 0. no

v37. Does the article mention heart disease screenings (e.g. blood tests)?

- 1. yes
- 0. no

v38. Does the article mention doctors (cardiovascular experts)?

- 1. yes

0. no

v39. Does the article mention access to drug therapy (e.g. access to cholesterol-lowering drugs like Lipitor, blood thinners, etc.)?

1. yes

0. no

General health motivation and social support

v40. Does the article mention any **women who have fought through heart disease**?

1. yes

0. no

v41. Does the article mention **motivators** to adopt healthy behaviors (e.g. weight loss, increased confidence, etc.)?

1. yes

0. no

v42. Does the article mention **health fairs**? (Must use this exact phrase)

1. yes

0. no

v43. Does the article mention **social events** such as walks or fundraisers related to heart disease?

1. yes

0. no

v44. Does the article mention **family support for family members** with heart disease?

1. yes

0. no

Preventative action

v45. Does the article mention **preventative action** for heart disease?

1. yes

0. no

v46. Does the article mention **smoking cessation**?

1. yes

0. no

v47. Does the article mention **exercise** as a way to prevent heart disease?

1. yes

0. no

v48. Does the article mention **healthful eating choices** to prevent heart disease?

1. yes

0. no

v49. Does the article mention **weight loss** for overweight or obese people?

1. yes

0. no

v50. Does the article mention **diabetes**?

1. yes

0. no

v51. Does the article mention reducing **cholesterol** levels?

1. yes

0. no

Benefits of preventative action

v52. Does the article mention **ANY benefits** of adopting healthy behaviors?

1. yes

0. no

Barriers to preventative action

v53. Does the article mention **ANY barriers** to adopting healthy behaviors?

1. yes

0. no

Risk

v54. Based on the word choices, statistics, focus and the emphasis of the article, to what level of risk does this newspaper present heart disease as threat to the readers in its circulation area based on this article?

1. low risk

2. medium risk

3. high risk

APPENDIX D EXAMPLE STORIES

This appendix provides examples of stories that scored a one, two, or a three by coders on the threat index variable.

Example one, below, provides a story that was a low (1) risk according to the threat scale variable.

Taking a closer look at caffeine - For Better Living

Bladen Journal (Elizabethtown, NC) - Tuesday, April 14, 2009

Author: Kelly N. C. Cooperative Extension

Caffeine has been found in tea brewed by the Chinese as far back as 5,000 years ago. In today's society, caffeine is present in a wide variety of products, including coffee, tea, soft drinks and chocolate.

For many Americans, freshly brewed coffee or tea is a key part of the morning ritual. For others, it's a caffeinated soft drink that helps get them through the afternoon. Yet despite the popularity of caffeinated beverages, there are still questions and misperceptions about caffeine.

Caffeine, a mild stimulant that comes from the leaves, seeds or fruits of more than 60 plants, is one of the most comprehensively studied ingredients in the U.S.

food supply. To date, no scientific evidence has demonstrated an association between caffeine and any health-related problems including heart disease, hypertension, cancer, osteoporosis, fibrocystic breast disease, ulcers or dehydration.

Most medical and nutrition experts agree that moderate caffeine consumption is safe for otherwise healthy individuals.

Although caffeine sensitivity varies from person to person, it is affected by many factors, including the frequency and amount of regular intake, body weight and physical condition.

The general consensus is that a daily caffeine intake of 300 milligrams, which is equal to about 3 cups of coffee, is safe for most adults. The American Dietetic Association does, however, offer the following advice for individuals who fall in certain categories.

- If you're pregnant or nursing, it's generally a good idea to limit caffeine intake.

Although most physicians agree that moderate caffeine consumption during pregnancy is safe, sensitivity may increase during pregnancy. Caffeine can be passed to the baby through breast milk, but consumption of small amounts of caffeine by the mother does not appear to affect the baby.

C · If you have an existing medical problem, ask your physician to advise you on caffeine consumption as it may aggravate certain conditions such as gastritis, ulcers and high blood pressure. People with stomach problems are advised to avoid caffeinated beverages, and often their decaffeinated counterparts as well, because substances in both tend to stimulate the production of stomach acids that potentially can irritate the stomach lining.

- If you're older, keep in mind that your sensitivity to caffeine may increase with age.

- If you have insomnia, it's a good idea to avoid caffeine in the late afternoon and evening.

Although caffeine is not considered to be addictive, it can be habit forming.

Anyone interested in reducing caffeine intake may find it helpful to: · Cut back gradually. For some, abruptly going cold turkey can temporarily cause headaches, drowsiness and difficulties with concentration. Eliminating one cup a day will help avoid this problem.

- Substitute herbal tea, decaffeinated tea or coffee, hot cider or water for caffeinated drinks.
- Mix a half-cup of regular coffee with a half-cup of decaffeinated coffee.
- Brew tea for a shorter time to reduce caffeine content.
- Read soft drink and medication labels carefully. Nearly 75 percent of soft drinks and some over-the-counter pain relievers contain caffeine. Caffeine will be listed in the ingredient list if it's present in the product.

Source: America Dietetic Association; Colorado Cooperative Extension Cajun Pork Roast 2 pounds boneless pork loin roast 2 teaspoons olive oil 3 tablespoons paprika 2 tablespoons dried oregano 2 tablespoons dried thyme 1 tablespoon garlic powder 1/ 4 teaspoon each salt, crushed red pepper flakes,

ground cumin and white pepper 1/4 teaspoon ground nutmeg Rub pork roast with oil. Combine remaining ingredients and rub over roast.

Cover and refrigerate for 1 - 3 hours.

Bake, uncovered, at 325 degrees, for 1 1/2 to 2 hours or until a meat thermometer reads 160 degrees. Transfer to a serving platter. Let stand for 10 - 15 minutes before slicing.

Yield: 8 servings.

Example two, below, provides a story that was a medium (2) risk on the threat scale variable.

Get outdoors, Florida!

Suwannee Democrat (Live Oak, FL) - Thursday, January 8, 2009

Florida Fish Busters' January 2009

By Bob Wattendorf, Fish and Wildlife Conservation Commission "Nature deficit disorder" is a growing concern, but a new initiative of the Florida Fish and Wildlife Conservation Commission (FWC) and others endeavors to make the problem obsolete.

Coined by Richard Louv in the book *Last Child in the Woods*, nature deficit disorder refers to the growing disconnect between people and the outdoors.

To address these concerns over the disconnect, the "Get Outdoors Florida!" coalition is bringing together highly energized staff from state and federal conservation and land-management agencies, state and county health organizations, non-government organizations dealing with youth, conservation education or health organizations, universities, and commercial businesses. The coalition's mission is "Engaging communities, families and individuals in outdoor experiences to achieve healthier lifestyles and sustain Florida's natural resources."

The Centers for Disease Control reports that more than one in six youth ages 2-29 were obese, creating risks for heart disease, diabetes, respiratory problems and more. Meanwhile, daily participation in school physical education programs dropped from 42 percent in 1991 to 33 percent in 2005. Studies also demonstrate that children between the ages of 8 and 18 spend an average of 6.5

hours per day with electronic media. For young kids, every hour of extra TV increases the likelihood of their developing attention-deficit, hyperactivity disorder (ADHD) by age 7, by 10 percent. Remaining in modern, sealed buildings all day also increases the prevalence of allergies and asthma because of molds, mildews and allergens that aren't "aired out."

Many parents want their kids away from the electronic babysitters - the television, DVDs, iPods, Nintendos - and instead want them engaged in play outside. Not all of those kids may realize it, but they may be wishing for the same thing.

If just the joy of getting outdoors for some creative free play and recreation isn't enough, research shows there are many benefits to the individual, family and society when young people engage in outdoor activities.

Studies have clearly demonstrated that children who spend time outdoors perform better academically, play more creatively, have less stress, and are more imaginative. In addition, they experience fewer symptoms of ADHD, have healthier immune systems and develop a greater respect for themselves, others and nature than do their peers who do not recreate outside.

These connections with nature address not only health and education issues but also societal issues, such as sustaining fish, wildlife and their habitats in the face of unprecedented development.

Many of the groups and individuals most excited about the coalition have been actively creating programs to get Floridians back to nature. The "Get Outdoors Florida!" coalition provides an opportunity to bring these dissonant efforts together to be more productive. One of the first efforts by the coalition will be to seek the support of Florida's state government.

The time is right for this initiative. Government programs at federal, state and local levels have emerged in response to the deficit of nature experiences citizens are suffering. From Connecticut's "No Child Left Inside" to California's "Children's Outdoor Bill of Health," state programs are budding with the hope of rekindling a relationship between their residents - especially the children - and the land. Awareness of the problem and calls-to-action are sweeping the nation because society feels the urgent need to address these health, societal and conservation issues at their roots.

To learn more, visit MyFWC.com/Fishing/GetOutdoorsFlorida, where you can make a donation or your group can request to become part of the evolving coalition. With your help, we can build a community that is connected with nature, reflects social diversity, and exhibits a true conservation ethic. Such a healthy

community will ensure a sustainable future for our wildlife resources and residents whose participation in safe outdoor recreational opportunities enhances their health and happiness.

Instant licenses are available at MyFWC.com/License, or by calling 888-FISH-FLORIDA (347-4356). Report violators by calling *FWC or #FWC on your cell phone, or 888-404-3922. Visit MyFWC.com/Fishing/Updates for more Fish Busters' columns.

Finally, example three, below, provides a story that was a high risk (3) on the threat scale variable.

Heart talk at monthly luncheon

Cullman Times, The (AL) - Sunday, October 25, 2009

Author: *Trent Moore*

Cardiovascular disease — which causes 34 percent of all deaths in Alabama — is a serious threat, said cardiologist Dr. James Lee during a Cullman Area Chamber of Commerce luncheon on Friday.

Lee explained the overall threats of cardiovascular heart disease, and also offered some tips to lower the chances of being affected.

“Alabama has the fourth highest rate for heart disease in the United States,” Lee said. “We have an educational goal to make everyone aware of cardiovascular mortality and how to go on and change it.”

Cardiovascular problems begin to manifest in people as they become older, Lee said.

“The majority of people affected are over 60,” he said. “One million people per year die from cardiovascular disease.”

The major risk factors for heart problems include age, family history, tobacco use, alcohol use and diabetes. Men are also more affected than women, in most cases.

Lee said high blood pressure can cause hypertension, which can later lead to stroke and cardiovascular problems.

“The treatment for that can be a lifestyle change restricting sodium intake,” he said. “Weight reduction, exercise and avoiding excess alcohol use are also good

guidelines.”

High blood pressure can also cause cardiovascular concerns, Lee said.

“You can increase physical activity to help with that, as well as medication tailored to a patient’s needs,” he said.

One major risk factor is smoking, Lee said.

“That doesn’t just cause heart disease, you can also have problems with cancer and emphysema,” he said. “Smoking really does add to that.”

The best way to address cardiovascular problems, Lee said, is check with your local doctor.

“To prevent heart disease, it’s a life long process,” he said.

The Cullman Area Chamber of Commerce’s Health Services Committee hosted the luncheon. The topic was chosen because the Alabama Department of Health has launched a statewide health initiative to educate citizens on cardiovascular disease and its impact on our quality and longevity of life, as well as how preventing rather than treating cardiovascular events effect health care costs in Alabama.

* Trent Moore can be reached by e-mail at trentm@cullmantimes.com, or by

telephone at 734-2131, ext. 225.

APPENDIX E
NEWSPAPER LIST

This table shows the newspapers used in this sample divided by state.

Table E-1. Sample Newspapers by State

State	Newspapers
Alabama	Cullman Times, The Enterprise Ledger, The Daily Home, The Sand Mountain Reporter Valley Times-News
Arkansas	Alma Journal Courier, The
Florida	DeSoto Sun Glades County Democrat Hernando Today News-Sun Okeechobee News Suwannee Democrat
Georgia	Cordele Dispatch LaGrange Daily News Moultrie Observer, The
Kentucky	Glasgow Daily Times Grayson County Daily News Gazette Floyd County Times, The Harlan Daily Enterprise, The Hazard Herald, The Middlesboro Daily Enterprise, The
Mississippi	News-Democrat & Leader Clarksdale Press Register Delta Democrat Times Greenwood Commonwealth, The
North Carolina	Meridian, The Bladen Journal, The Free Press, The Jefferson Post Laurinburg Exchange, The Mt. Airy News Pilot, The Robesonian, The Sampson Independent, The
South Carolina	Tribune, The Cheraw Chronicle, The Dispatch, The Newberry Observer
Tennessee	Union Daily Times Claiborne Progress Daily Herald, The Greenville Sun, The

Table E-1. Continued.

State	Newspapers
Virginia	Culpeper Star-Exponent
West Virginia	Bluefield Daily Telegraph
	Point Pleasant Register
	Times West Virginian
	Williamson Daily News

REFERENCES

- African-American Population. (n.d.). Retrieved February 22, 2010, from <http://www.blackdemographics.com/>
- Ali, N. S. (2002). Prediction of coronary heart disease preventative behaviors in women: A test of the health belief model. *Women & Health, 35*(1), 83-96.
- Amzel, A., & Ghosh, C. (2007). National newspaper coverage of minority health disparities. *Journal of the National Medical Association, 99*(10), 1120-1125.
- Annual readership study shows good news for small papers. (2009, October 6). *National Newspaper Association*. Retrieved November 22, 2009, from http://nna.org/eweb/Dynamicpage.aspx?webcode=NewsTemplate&wps_key=7ec77927-8694-4c3d-8dab-4421dc2a27a3
- Balamurugan, A., Rivera, M., Sutphin, K., & Cambell, D. (2007). Health communications in rural America: Lessons learned from an arthritis campaign in rural Arkansas. *Public Health, 270*-275.
- Bensen, L. (Writer). (2009, October 5). Income, zip code, education seen as good indicator of health [Radio broadcast]. In *All Things Considered*. Minneapolis, MN: MPR: Minnesota Public Radio.
- Beaudoin, C. (2005). *HIV/AIDS Prevention in Sub-Saharan Africa: A Multilevel Analysis of Message Frames and Their Predictors*. Presented at the International Communication Association General Meeting, New York, NY.
- Brownson, R. C., Mack, N. E., Meegama, N. I., Pratt, M., Brownson, C. A., Dean, C., & Luke, D. A. (1996). Changes in newspaper coverage of cardiovascular health issues in conjunction with a community-based intervention. *Health Education Research, 11*(4), 479-486.
- Broz, S., & Karel, A. (2007). "Talk to your doctor": A theory-driven content analysis of communication advice on prescription drug websites. Paper presented at the National Communications Conference.
- Caburney, C. A. et al. (2008). Black newspapers as a tool for cancer education in African-American communities. *Ethnicity & Disease, 18*, 488-495.
- Campo, S. C., Askelson, N. M., Routsong, T., Graaf, L. J., Losch, M., & Smith, H. (2008). The green effects: The need for a new colorectal cancer screening campaign tailored to rural audiences. *Health Education & Behavior, 35*(6), 749-762.
- Clarke, J. (1992). Cancer, heart disease, and AIDS: What do the media tell us about these diseases? *Health Communication, 4*(2), 105-120.

- Clarke, J., & Binns, J. (2006). The portrayal of heart disease in mass print magazines, 1991 -- 2001. *Health Communication, 19*(1), 39-48.
- Clarke, J., & Amerom, G. (2008). Mass print media depictions of cancer and heart disease: Community versus individualistic perspectives? *Health and Social Care in the Community, 16*(1), 96-103.
- Clarke, J., Ameron, G. V., & Binns, J. (2007). Gender and heart disease in mass print media: 1991, 1996, 2001. *Women & Health, 45*(1), 17-35.
- Compton, J. (2006). Serious as a heart attack: Health-related content of late-night comedy television. *Health Communication, 19*(2), 143-151.
- Cort, N. A., & Fahs, P. S. (2001). Heart disease: The hidden killer of rural black women. *Journal of Multicultural Nursing & Health, 1*-6.
- Cromartie, J., & Bucholtz, S. (2008). Defining the "rural" in rural America. *Amber Waves, 6*(3), 28-34.
- Dudo, A. D., Dahlstrom, M. F., & Brossard, D. (2007). Reporting a potential pandemic: A risk-related assessment of avian influenza coverage in U.S. newspapers. *Science Communication, 28*(4), 429-454.
- Finnegan, J. R., Viswanath, K., & Hertog, J. (1999). Mass media, secular trends, and the future of cardiovascular disease health promotion: An interpretive analysis. *Preventative Medicine, 29*, S50-S58.
- Griswold, W. F., & Swenson, J. D. (1992). Development news in rural Georgia newspapers: A comparison with media in developing nations. *Journalism Quarterly, 69*(3), 580-590.
- Haas, J. S. et al. (2007). Average household exposure to newspaper coverage about the harmful effects of hormone therapy and population-based declines in hormone therapy use. *Society of General Internal Medicine, 22*, 68-73.
- Hart, P. L. (2005). Women's perceptions of coronary heart disease: An integrative review. *Journal of Cardiovascular Nursing, 20*(3), 170-176.
- Heart Disease. (2009, September 20). Retrieved September 20, 2009, from <http://www.cdc.gov/heartdisease/>
- Israel, G. D., & Wilson, K. (2006). Sources and channels of information used by educational program clients. *Journal of Applied Communication, 90*(4), 55-78.
- Janz, N. K., & Becker, M. H. (1984). The Health Belief Model: A decade later. *Health Education & Behavior, 11*(1), 1-47.

- Jensen, K. B., & Jankowski, N. W. (Eds.). (1991). *A Handbook of Qualitative Methodologies for Mass Communication Research*. New York, NY: Routledge.
- Kavilanz, P. (2010, March 28). Doctor-starved: America's heartland in crisis. *CNNMoney*. Retrieved March 30, 2010, from http://money.cnn.com/2010/03/26/news/economy/health_care_rural_care_country_doctors
- Klugger, J. (2009, September 14). Study: More Americans at higher risk for heart disease. *Time.com*. Retrieved October 4, 2009, from <http://www.time.com/time/health/article/0,8599,1923086,00.html>
- Krippendorff, K. (2004). *Content analysis: An introduction to its methodology* (2nd Ed.). Thousand Oaks, CA: Sage.
- Krummel, D. A., Humphries, D., & Tessaro, I. (2002). Focus groups on cardiovascular health in rural women: Implications for practice. *Journal of Nutrition Education and Behavior*, 34(1), 38-46.
- Long, K. H. (2006). *Public relations and branding in health communication programs: A case study of a successful campaign*. Unpublished master's thesis. University of Maryland, College Park.
- Long, T., Taubenheim, A., Wayman, J., Temple, S., & Ruoff, B. (2008). "The Heart Truth:" Using the power of branding and social marketing to increase awareness of heart disease in women. *Social Marketing Quarterly*, 14(3), 3-29.
- Marcuccio, E., Loving, N., Bennett, S. K., & Hayes, S. N. (2003). A survey of attitudes and experiences of women with heart disease. *Women's Health Issues*, 13, 23-31.
- McGlaun, J., & Cochran, C. (2003). Women's health frequently asked questions. Retrieved October 20, 2009, from http://www.raconline.org/info_guides/public_health/womenshealthfaq.php
- Mobley, L. R., Root, E. D., Finkelstein, E. A., Khavjou, O., Farris, R. P., & Will, J. C. (2006). Environment, obesity, and cardiovascular disease risk in low-income women. *American Journal of Preventative Medicine*, 30(4), 327-332.
- Mosca, L., Jones, W. K., King, K. B., Ouyang, P., Redberg, R. F., & Hill, M. N. (2000). Awareness, perception, and knowledge of heart disease risk and prevention among women in the United States. *Arch Fam Med*, 9, 506-515.
- Questionnaire on newspaper statistics* (pp. 1-10, Rep.). (2005). Montreal, Canada: UNESCO: Institute for Statistics.
- ReCal: Reliability calculation for the masses. (n.d.). Retrieved March 02, 2010, from <http://dfreelon.org/utills/recalfront/>

- Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1988). Social learning theory and the health belief model. *Health Education & Behavior, 15*(2), 175-183.
- Slater, M. D., Hayes, A. F., Reineke, J. B., Long, M., & Bettinghaus, E. P. (2009). Newspaper coverage of cancer prevention: Multilevel evidence for knowledge-gap effects. *Journal of Communication, 59*, 514-533.
- Smethers, S., Bressers, B., Willard, A., Harvey, L., & Freeland, G. (2007). Kansas readers feel loss when town's paper closes. *Newspaper Research Journal, 28*(4), 6-21.
- Smith, R. (2007). Media depictions of health topics: Challenge and stigma. *Journal of Health Communication, 12*, 233-249.
- Stamfer, M. J., Hu, F. B., Manson, J. E., Rimm, E. B., & Willett, W. C. (2000). Primary prevention of coronary heart disease in women through diet and lifestyle. *New England Journal of Medicine, 343*(1), 16-22.
- Stryker, J., Moriarty, C. M., & Jensen, J. D. (2008). Effects of newspaper coverage on public knowledge about modifiable cancer risks. *Health Communication, 23*(3), 380-390.
- Taylor, H. A., Hughes, G. D., & Garrison, R. J. (2002). Cardiovascular disease among women residing in rural America: Epidemiology, explanations, and challenges. *American Journal of Public Health, 92*(4), 548-551.
- Tezon, A. L. (2003). Cheerleaders, watchdogs and community builders: How rural weekly newspaper publishers in the Midwest view their roles. *Grassroots Editor*, Winter, 1-8.
- Thanavaro, J. L., Moore, S. M., Anthony, M., Narsavage, G., & Delicath, T. (2006). Predictors of health promotion behavior in women without prior history of coronary heart disease. *Applied Nursing Research, 19*, 149-155.
- The Heart Truth: A national awareness campaign for women about heart disease.* (n.d.). Retrieved October 3, 2009, from <http://www.nhlbi.nih.gov/educational/hearttruth/>
- The Heart Truth's Aommunity Action Program.* (n.d.). Retrieved October 20, 2009, from <http://www.nhlbi.nih.gov/educational/hearttruth/partners/grantees.htm>
- USDA, Department of Communications. (2009, September 30). *Agriculture secretary Vilsack highlights healthcare disparities in rural America announces rural health and education grants to help elderly living in rural areas* [Press release]. Retrieved October 4, 2009, from http://www.usda.gov/wps/portal/!ut/p/_s.7_0_A/7_0_1RD?printable=true&contentidonly=true&contentid=2009/09/0482.xml

- Vardeman, J. (2007). *Marketing of a killer: How The Heart Truth campaign commodified heart disease awareness to women using fear, science, Laura Bush, and a red dress*. Unpublished manuscript, University of Maryland at College Park.
- Wallington, S. F., Blake, K., Taylor-Clark, K., & Viswanath, K. (2010). Antecedents to agenda setting and framing in health news: An examination of priority, angle, source, and resource usage from a national survey of U.S. health reporters and editors. *Journal of Health Communication, 15*, 76-94.
- Wathen, C., & Harris, R. M. (2007). "I try to take care of myself." How rural women search for health information. *Qualitative Health Research, 17*(5), 639-651.
- Williams, D. R. (2006). Race, socioeconomic status and health: The added effects of racism and discrimination. *Annals of The New York Academy of Sciences, 896*, 173-188.
- Wimmer, R. D., & Dominick, J. R. (2006). *Mass Media Research: An Introduction* (8th ed.). Belmont, CA: Thomson Wadsworth.
- WISEWOMAN: Well-Integrated screening and evaluation for women across the nation. (n.d.). Retrieved October 3, 2009, from <http://www.cdc.gov/WISEWOMAN/>
- Women and Heart Disease Facts. (n.d.). Retrieved September 22, 2009, from http://www.womensheart.org/content/HeartDisease/heart_disease_facts.asp
- Wright, K. B., Sparks, L., & O'Hair, H. D. (2008). *Health Communication in the 21st Century*. Malden, MA: Blackwell.
- Yanovitzky, I., & Blitz, C. L. (2000). Effects of media coverage and physician advice on utilization of breast cancer screening by women 40 years and older. *Journal of Health Communication, 5*, 117-134.
- Zuniga, M., Anderson, D., & Alexander, K. (n.d.). Heart disease and stroke in rural America: A literature review. *Health People 2010*. Retrieved October 19, 2009, from <http://srph.tamhsc.edu/centers/rhp2010/Vol2heartdiseasestroke.htm>

BIOGRAPHICAL SKETCH

Tracy Loope was born on November 17, 1985 in SanClemente, California. Soon after her arrival, her family moved to Clearwater Beach, Florida, where she grew up with two older brothers, Peter and Ryan. After graduating from Clearwater High School in 2004, Tracy began her undergraduate studies at the University of Florida.

During her undergraduate studies, Tracy majored in journalism and wrote for a number of newspapers and magazines including the Clearwater Gazette, the Florida Frontier, the Independent Florida Alligator, INsite magazine, and Orange and Blue magazine. During her senior year, she won a scholarship to participate in the summer Institute on Political Journalism in Washington, D.C. In Washington, Tracy interned at Fox 5 WTTG and attended classes at Georgetown University, concentrating on media ethics and economics. She graduated, summa cum laude, with a Bachelor of Science in journalism in December 2008.

In January 2009, Tracy formally began her Master of Arts in Mass Communication although she had been taking graduate-level classes since 2007. She not only maintained a 4.0 throughout these studies, but also she developed professionally. She accepted a summer internship with CBR Public Relations where she was able to translate the skills she learned in journalism to the public relations field. In August 2009, she became the communications coordinator at the Southeast Center for Research to Reduce Disparities in Oral Health.

After her graduation in May 2010, Tracy plans to work in the health communication field.