# Women's health and fitness magazines: An accurate portrayal? 

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# WOMEN'S HEALTH AND FITNESS MAGAZINES: 

## AN ACCURATE PORTRAYAL?

by

Jennifer M. Shymansky
Bachelor of Arts
Bloomsburg University of Pennsylvania 2006

A thesis submitted in partial fulfillment of the requirements for the

# Master of Arts Degree in Journalism \& Media Studies <br> Hank Greenspun School of Journalism \& Media Studies Greenspun College of Urban Affairs 

Graduate College<br>University of Nevada, Las Vegas

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# Thesis Approval 

The Graduate College
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The Thesis prepared by
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## Entitled

Women's Health and Fitness Magazines: An Accurate Portrayal?
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#### Abstract

\title{ Women's Health and Fitness Magazines: An Accurate Portrayal? }

by

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This study is a content analysis examining the representation of health information, particularly the leading causes of death, in cover story headlines of one year of the top women's health and fitness magazines: Prevention, Shape, Fitness, Self, Health and Women's Health. The study is grounded in social responsibility theory, a normative media theory. The findings show that women's health and fitness magazines' cover story headlines predominately discuss diet and exercise for weight loss, rather than the leading causes of death facing women. This under representation of actual societal health concerns can limit the vast readerships' health knowledge and awareness, and therefore their ability to understand their risks and take proper precautions to protect themselves.


## TABLE OF CONTENTS

ABSTRACT ..... iii
LIST OF TABLES ..... v
CHAPTER 1 INTRODUCTION .....  1
Purpose of the Study ..... 2
Significance of Study ..... 3
CHAPTER 2 REVIEW OF RELATED LITERATURE ..... 7
Women and Health ..... 7
Research on Popular Women's Magazines ..... 11
Advertising in Popular Women's Magazines ..... 14
Health and Fitness Magazines ..... 15
Knowledge versus Perception of Risk ..... 18
Gaps in Research. ..... 27
Theoretical Framework ..... 28
Research Questions ..... 30
CHAPTER 3 METHODOLOGY ..... 31
Collection of Data ..... 31
Treatment of Data ..... 32
Intercoder Reliability ..... 36
CHAPTER 4 FINDINGS OF THE STUDY ..... 38
Analysis of Data ..... 38
Research Questions ..... 39
Summary of Data ..... 45
CHAPTER 5 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS ..... 47
Discussion ..... 47
Limitations ..... 51
Conclusion ..... 52
APPENDIX ..... 57
Coding Scheme Index ..... 57
BIBLIOGRAPHY ..... 58
VITA ..... 66

## LIST OF TABLES

Table 1 Frequency of headline topics ..... 40
Table 2 Percentages of headlines in three main categories ..... 43
Table 3 Percentages of leading causes of death headlines on magazines' covers ..... 44

## CHAPTER 1

## INTRODUCTION

The media yield the power to influence what consumers see and when they see it. Many media consumers rely on their preferred media platform to get information about issues of interest. Whether it is via television, Internet, radio, or print, these consumers often turn to the media to receive information on topics ranging from sports to finances, current news and trends, and even issues involving family or their health (Barnett, 2006; McKay, 2000; O’Keefe, Boyd, \& Brown, 1998; "Women are unaware," 2003). Magazines often serve as the primary, and at times sole, form of information for its readers, including information on the health concerns facing women today (Kerwin, 1999; Mosca, Jones, King, Ouyang et al., 2000; O'Keefe, Boyd, \& Brown, 1998; "Where women get," 2000; "Women are unaware," 2003). Magazines appear to be particularly influential among young women, given they play a large role in what types of information these readers value (Davalos, Davalos, \& Layton, 2007). Women are often unaware of specific diseases, symptoms and medications that directly affect them (Jones, Denham, \& Springston, 2007; Mosca et al., 2000; University of Pennsylvania Health System [UPHS], 2006; "Women are unaware," 2003). While most magazines today have a section dedicated to health and/or fitness, these sections are somewhat superficial in that they offer minimal coverage relating to in-depth health issues (Kogan et al., 2003;

Pratt et al., 1996; Westin \& Ruggiero, 1986). Given the role of women's health and
fitness magazines in influencing and shaping the health knowledge of women today, it would be expected that women's health and fitness magazines would take responsibility to their female readership, and expose the numerous illnesses, diseases, and health concerns salient to them. This study examined the role of popular women's health and fitness magazines in providing health information to their readers from other popular magazines available. It analyzed the representation of health issues affecting women as seen on popular women's health and fitness magazines' covers.

There exists a recent, increased interest in the health and fitness industry across the United States (Hoover's, Inc., n.d.). In particular, women's health and fitness magazines have grown in response to this surge, with the top five magazines having a circulation of 9.4 million within the first six months of 2006 (Magazine Publishers of America). The National Directory of Magazines includes information on more than 16,500 magazines, tabloids, specialized newspapers, and major journals that carry advertising. Its publication titles are divided into 260 subject categories, of which Health \& Fitness remains a top category with 488 titles (Hendrickson, 2008). The prevalence of women's health and fitness magazines is important to recognize when studying their role in distributing factual information to their readers.

Purpose of the Study
The purpose of this present study was to determine if the headlines of the most popular women's health and fitness magazines depicted the dominant health concerns facing women today. The study was designed to investigate how frequently six popular women's health and fitness magazines cover women's health issues.

In order to accomplish this, this study analyzed the relationship between the headlines of these popular magazines and actual societal conditions in the area of women's health today, in particular the leading causes of death for women. One goal was to determine if the stories receiving the dominant cover-story location on each magazine were representative of health concerns facing women, as indicated by women's health statistical data of the same time period.

## Significance of Study

Hard-copy magazines have been around for over a century. Readers of magazines appreciate the structure and the layout, allowing them to partake in a journey throughout their reading. Magazines allow readers to pick and choose where to start and stop, as well as keep them actively engaged throughout the process (McCann, 2005). Magazines can be considered a customized reading experience, in that the reader has the ability to start and stop and skip around throughout the reading. Readers can pick those articles they find particularly interesting, while ignoring other articles. They offer a wide range of genres, maintain a relatively long shelf-life, and are considered a low brow form of entertainment (McLoughlin, 2000). And, perhaps most importantly, magazine readership, despite numerous new media options, has remained stable, or even slightly increased ("10-year magazine," 2006; McKay, 2000). And women aged 18-34 make up the demographic with the highest average issues read per month, showing a .7 increase between 1997 and 2006. Women aged 35-49 were unchanged, while the 50+ demographic also increased, 6 , during the same time frame ("10-year magazine," 2006).

Magazines are also the medium with the least amount of multitasking involved. Fifty percent of magazine readers engage in no other activity while reading them, while only $7 \%$ of television viewers do not (Magazine Publishers of America [MPA], 2007). This is important because if readers are presumably active in their reading, then they are taking in more of the information available to them. Magazine readers' second reported motivation for reading magazines is that they make them smarter. Readers also say they learn things first with magazines and they trust magazines (MPA). With respect to health and fitness issues presented in popular women's magazines this is very important. When readers put their trust into what they are reading, it is imperative that the information is accurate and timely, with respect to what they should know.

The current study was particularly concerned with the presentation of health information. Were the headlines presented on the cover the most important health issues facing women? This importance was based off the list of leading causes of death facing women from the Centers for Disease Control and Prevention. Covers of magazines serve a very important function, as this is the most efficient selling tool. The cover is used to motivate readers to buy the magazine (McLoughlin, 2000). The cover really has two main jobs: to sell and to reflect the content of the magazine (McKay, 2000). The cover should place emphasis on the main contents inside the package. It is the feature articles found on the cover of magazines that have the greatest impact on purchase decisions (Reichert, 2005). Magazine covers offer a significant impact on this study in that they foreshadow the contents and highlight the main topics of discussion in each issue.

Davalos et al. (2007) conducted a content analysis of magazine headlines to determine if the dominant messaging to women had changed over three decades. After
analyzing 120 magazine covers, from 1976, 1986, and 1996, including Seventeen, Teen, Good Housekeeping, Glamour, Mademoiselle, Cosmopolitan, Redbook, New Woman, Vogue, and MC Calls, they found that the dominant messages were for women to be thin, beautiful, and attractive to men. Overall, the researchers concluded that "magazine headlines have, in general, maintained a static representation of females and their role in society over the years and generally convey messages that focus on body image and sexual relationships" (p. 256). Headlines consisting of health-related topics were only found in $7-10 \%$ of the headlines from the three chosen decades.

In a study ("Women are unaware," 2003), $83 \%$ of women were unaware of gender differences in medication risks, $73 \%$ were unaware of the link between sexually transmitted disease and HIV in women, and $79 \%$ of women were not aware that there is a link between consuming more than two alcoholic drinks daily and breast cancer in women. The media, playing the largest role, would be expected to portray this information to women, by covering important health issues facing women, including the leading causes of death. Magazines, in particular, play an increasingly active role in the dissemination of health information, with $26 \%$ of women utilizing them very often and regularly for their knowledge (Kerwin, 1999; Mosca et al., 2000; O'Keefe et al., 1998). Women even consider magazines as the second most reliable source of health information (tied with nurses at $5 \%$, while doctors maintain the number one position with $70 \%$ ) ("Women are unaware," 2003).

This study begins with a thorough review of related literature in Chapter 2.
Chapter 3 reviews the methodology, coding scheme, and coder training. The findings are
discussed in Chapter 4, and the study ends with a discussion of results and conclusions in Chapter 5.

## CHAPTER 2

## REVIEW OF RELATED LITERATURE

This study addressed the concern of the representation of health information through an examination of the extensive literature on female magazines, as well as an analysis of current health topics presented on popular women's health and fitness magazines' covers. A critical examination of this literature revealed particular magazines' representation of health concerns facing women today.

First, an overview of women and health provides the necessary background on this topic. It is important to understand the background of women and health, as well as the current concerns of this field, in order to better understand the incompatible representation given to them in popular women's magazines.

## Women and Health

Although women comprise more than half of the population of the United States, issues concerning their health are often not equally proportionate (Lewin, 1993). Many studies testing medicines or diseases affecting the body often only include male subjects, yet the results are still generalized to women (Meyer, 2000). It was not until the 1990s that the National Institute of Health established an Office for Research on Women's Health. It was then that a national research agenda including women's health was defined (Inhorn, 2006).

Women in today's society tend to be the primary health providers in their family, as they are often considered the nurturer of the family. Women in the United States make three-fourths of all health care decisions in the households. It is also important to note that women spend more money on health care than men, spending two of every three health-care dollars (Kogan, Kellaway, Rickard, \& Borrayo, 2003). Yet, even with these facts taken into consideration, women receive significantly less attention in medical situations than men (Abramson, 1990; Lewin, 1993). It is rare that women are given the opportunity to identify and define their own health problems because their concerns are often put in the hands of powerful biomedical and public health establishments, which are often led by men (Inhorn, 2006). Often constraining women into the role of reproducer, an overwhelming amount of research involving women solely focuses on reproduction, while other serious health concerns, including cervical cancer, pelvic inflammatory disease, fistulas, uterine prolapses, and pain during sexual intercourse, continue to be ignored (Inhorn; Lewin).

Many illnesses facing women were considered undesirable and were often attributed to women's reproductive organs and hormones (Meyer, 2000). It is this continued relationship between women's health and reproduction that limits the proper medical services and health care available to them. This notion even carried medical personnel to go as far as giving unnecessary hysterectomies as treatment to women in the $19^{\text {th }}$ century as a form of treatment to their health problems, because all health problems in women were thought to be related to their uteruses (Meyer, 2000). It is also important to note that the majority of physicians at this time were men.

Diseases such as diabetes can have particularly detrimental affects on women. Diabetes has even been referred to the epidemic of the $21^{\text {st }}$ century, with many other illnesses spring-boarding off of it, such as eye disease, kidney disease, and nerve damage. Diabetes greatly increases the risk of heart disease and stroke. If a woman has diabetes, she is five to seven times more likely to suffer from heart attack or stroke than a woman without diabetes (Manson, 2004). This is just one example of a disease that needs more research to fully explain the effects is has on women.

The prevalence of heart disease among women needs to be more effectively promoted. Heart disease and stroke kill more women each year than men, yet many women refer to heart disease as a 'man's disease' and they need not worry (Lipman, 1994; Manson, 2004). Heart attacks are deadlier for women than men, yet women continue to believe they are immune from them (Lewin, 1993). This is also dangerous because, due to this myth, women are less likely to receive a thorough diagnosis and treatment for coronary heart disease (Lipman, 1994). Nearly one in four women in the United States suffers from some form of cardiovascular disease, which is the single leading cause of death for women, killing almost 500,000 women each year, even though it is considered one of the most preventable health conditions (Mayo Clinic, 2007; UPHS, 2006). And even though those numbers are quite staggering, only $13 \%$ of women identify heart disease as the greatest health concern facing them. Most believe it to be breast cancer (UPHS, 2006).

Another important aspect of women's health that is slowly gaining ground is that of women's health and the environment. Environmental health issues were first concentrated on in 1993 with the Society for the Advancement of Women's Health

Research (Greenberger, 1998). Although environmental concerns are often neglected from research, they are particularly important with respect to women's health. Greenberger (1998) reported that women are uniquely vulnerable to environmental hazards because: (1) women face greater exposure than men due to smaller size, (2) women have a greater percentage of body fat, developing a greater body burden of environmental toxins that are stored in fat cells, (3) issues of pregnancy and breast feeding arise because fetuses and newborn infants are exposed to the pollutants that are stored in women's adipose tissue, and (4) estrogen-like substances in the environment add to women's current estrogen levels which may increase risk of cancer and other disorders. These aforementioned issues constitute some very serious health concerns that affect women today. If women are not notified that everything they eat, drink and breathe can have an effect on their body and health, they unknowingly increase their risks of various diseases.

This lack of awareness of prominent health concerns facing women is significant. If women are uninformed about the problems they can face, they are less likely to take the proper precautions to avoid them. According to the National Heart, Lung, and Blood Institute (2007), the leading causes of death for American women in 2004 were heart disease, stroke, lung cancer, chronic obstructive pulmonary disease, and breast cancer. These diseases kill $332,000,91,000,68,000,64,000$, and 41,000 women annually, respectively (National Heart, Lung, \& Blood Institute, 2007). These statistics have not changed significantly in the previous two years. The Centers for Disease Control and Prevention (2005) reported that the top ten leading causes of death for women in the United States in 2002 were: heart disease, cancer, stroke, chronic lower
respiratory diseases, Alzheimer's disease, diabetes, unintentional injuries, influenza and pneumonia, kidney disease, and septicemia. It is important to note that for specific age groups the leading cause of death can shift. It is equally important to consider the total number of women in the United States, over 149 million, when looking at the number of deaths caused by these diseases (Mayo Clinic, 2007).

## Research on Popular Women's Magazines

Popular women's magazines often play a vital role in the prevention and detection of various health concerns facing women, whether they know it or not. It has been reported that $37 \%$ of women who were diagnosed with heart disease were unaware of the specific symptoms relating to women. Yet, of the women that did know of these symptoms, $22 \%$ cited magazines as the source of their information ("Women are unaware," 2003). This is why the quality and accuracy of information available in these popular women's magazines is so important.

A study by Walsh-Childers (1997) claimed to be the most exhaustive and comprehensive content analysis of its kind and examined 50 of the most widely read magazines over a year. This study not only looked at women's magazines, but also men's, teen, and other specialty magazines for their representation of sexual health coverage. The 12 women's magazines with highest readership, Better Homes \& Gardens, Good Housekeeping, Family Circle, Ladies' Home Journal, McCall's, Woman's Day, Redbook, Cosmopolitan, Glamour, Mademoiselle, Self, and New Woman, were used in this study. In her study, Walsh-Childers, determined that $34 \%$ of all the articles in the studied women's magazines focused on sexual health. Of these articles,
topics of discussion included, pregnancy, abortion, contraceptive options, HIV/AIDS, sexual activity, enhancing sex appeal, and sexual fantasies. The study concluded that although these women's magazines covered issues such as pregnancy, contraception, and abortion, there was little attention overall to other critical health issues facing women.

In another study of women's health in magazines, the framing of breast cancer in the 1990s was examined (Andsager \& Powers, 1999). In this study seven magazines were examined, three news magazines (Newsweek, Time, and U.S. News \& World Report) and four women's magazines (Good Housekeeping, Ladies' Home Journal, McCall's, and Ms.). A content analysis was used to identify the main issues addressed in these magazines, and the number and type of sources used in the articles. A total of 74 women's magazine articles were analyzed. They found that women's magazines were more likely to use personal stories in their coverage of breast cancer and that most stories were concerned with the prevention of cancer. The women's magazines framed the issue of breast cancer in three ways: coping with disease and its effects, personal experiences, and risk factors involved in cancer. And, although the use of personal stories in the women's magazines added an element of personal point of view, the coverage neglected to include interests of all women. Only one article in this study discussed African American women, even though they are more likely than white women to have and die from breast cancer.

Women's magazines are sometimes considered the "how-to" guide for daily living, which would include health issues. It was under this notion that Barnett (2006) completed a study of the role of magazines in teaching women about health and femininity. Barnett's study examined how women's magazines framed health messages
and determined how these messages in turn reinforced or challenged traditional stereotypes of femininity. Ten popular women's magazines were utilized in this study: Cosmopolitan, Curve, Essence, Girls'Life, Jane, Ladies ' Home Journal, Latina, MarieClaire, Ms., and Redbook. Of the 337 non-fiction articles, 42 were concerned with health topics. It was determined that the topics were broad and diverse, and covered issues from emotional to physical health. Sexual/reproductive health and diet/exercise each amounted for 16 articles, mental/emotional health issues were included in 10 articles, and cardiovascular disease received 5 articles. The remaining articles included topics of cancer (2), diabetes (1), osteoporosis (1), and other (10). Barnett also found that the magazines placed disease and illness as a threat, and often provided information in prescriptive terms, depicting health as that which could be mapped, planned, and achieved. It was also noted that although the magazines covered some valuable key women's health concerns, e.g., heart disease, osteoporosis, and depression, they also neglected concerns such as lung cancer, which at the time was the fourth leading cause of death in women.

With all the health concerns facing women today, and only a select few addressed in popular magazines, women utilizing this resource could be denied adequate knowledge needed to accurately care for and maintain a healthy lifestyle. In a study involving 150 female participants, Inhorn (2006), found that women want to, and need to, read about HIV/AIDS, violence against women, childbirth, abortion, smoking, and diabetes. In another ethnographic study (Banister \& Schreiber, 2001), involving 42 young women, other health concerns were found. These participants stressed concerns about feeling invisible to their physicians, as well as anger and frustration with their
inability to trust physicians with accurate information about their bodies. They were particularly concerned with the pressure they were placed under to accept certain methods of birth control, while their own feelings were ignored and neglected. Given a potential discomfort with their physician, women, for better or worse, might turn to magazines for their health information. Yet, these major health concerns facing women are left out of the mainstream media, in particular popular women's magazines.

## Advertising in Popular Women's Magazines

Other studies involving popular women's magazines concentrated on the role of advertisements in these magazines and their effects on the female readers. In a study of advertisements in magazines read by $12 \%$ of college students, it was found that all women's magazines featured at least one nutrition article oriented toward health and slimness (Hertzler \& Grun, 1990). It was noted that their findings paralleled literature on college students and weight control, fitness, and supplements. They found an emphasis on weight loss themes in women's magazines, and determined that slimming and fitness were key areas of interest. It is not just college students affected by advertisements in these magazines. Of women age 45-54 that find three quarters of their health information in magazines, $19 \%$ of them utilize the magazine's advertisements for health information ("Where women get," 2000). Another study conducted a content analysis of weightcontrol advertisements found in Essence and Ladies' Home Journal from 1984-1993 (Pratt, Pratt, Montague, Salazar, \& Graves, 1996). In their study, Pratt et al. determined that "the responsibility of the media for health promotion could be undermined by advertisements that promote products that are detrimental to public health" (p. 360).

According to the Magazine Publishers of America Magazine Handbook 2006/07, magazine ad pages are continuing to increase. In 1995 there were 208,378 ad pages, which jumped all the way to 243,305 pages in 2005 . If this is any indication as to the frequency of advertisements in popular magazines, it is quite possible for the numbers to keep rising. This finding could prove beneficial to the study of women's health and fitness magazines because it points out the fact that even if there are accurate health topics discussed, there could still be advertisements that negate the effect of the coverstory editorials.

## Health and Fitness Magazines

With the growing popularity of health and fitness in general through recent years, it is no wonder why health and fitness magazines have received more acclaim; some of the most popular seeing fairly dramatic increases as the result. Fitness grew $1.8 \%$ in the first-half of 2006, Shape climbed $3.1 \%$ and Self rose a dramatic $6.4 \%$ in 2006 (Moses, 2006). It is also important to note one of the newest women's health and fitness magazine and its success. Women's Health launched in October 2005 with a base rate circulation of 400,000 and is said to increase again to 850,000 in July ' 07 (Moses, 2006). According to A. Falkenberry, Director of Public Relations for Women's Health magazine, there is an expected announcement of a $1,000,000$ circulation slated for beginning ' 08 . Falkenberry says Women's Health is the fastest growing publication according to Audit Bureau of Circulations (ABC) reports (personal communication, February 28, 2007). The success of this new publication serves as proof of the interest and readership in women's health and fitness magazines, and the expectation for it to continue to rise.

Women's magazines are changing. While they used to concentrate on particular life stages of their readers, they are now more focused on particular lifestyles, which includes health and fitness (Wellner, 2002). Even when considering general popular women's magazines, the best-read sections are often the health columns (Kerwin, 1999). Due to this increased interest in health and fitness, there have been studies, albeit still involving general women's magazines, which focus strictly on the use of articles that present health topics to women and the comparison to the actual health and death risks facing them.

In a study of women's magazines and their presentation of health issues, Weston and Ruggiero (1986) completed a content analysis of popular women's magazines in the 1970s and compared the results with health statistics of women in the United States during the same time period. Their 10 -year analysis included six magazines, three which they considered "established" magazines (Ladies' Home Journal, Woman's Day, and Cosmopolitan) and three that they considered "new" magazines (Ms., Working Woman, and Essence). The sample of magazines resulted in 203 articles concerning women's health themes. It was found that the topics given the most coverage were dieting/exercise/nutrition, mental health, and reproductive health, respectively. Given moderate coverage were issues about patients' relationships with doctors and health care delivery systems, self-help medicine/medical care, sexuality/sexual problems, chronic problems/pain, and cosmetic surgery. And those topics categorized as receiving only low level coverage consisted of breast cancer, alcohol/drug abuse, rape, eating disorders, accidents, diabetes, and occupational health issues. It is important to note that their findings indicated that there were no articles discussing lung cancer, dangers of
cigarette smoking, suicide, heart disease, cerebral vascular disease/stroke, homicide, and battered women. It was concluded that neither the "established," nor the "new" popular women's magazines gave much attention to serious health problems or the leading causes of death or disease.

In another study, nearly replicating the study discussed above, researchers investigated the relationship between health issues covered in magazines with the leading causes of death and loss of quality of life for women in the United States (Kogan, Kellaway, Rickard, \& Borrayo, 2003). This content analysis examined nine women's magazines, seven marketed to mainly white women (Cosmopolitan, Ladies' Home Journal, Ms., Self, Shape, Women's Day, and Working Women) and two marketed to primarily black women (Ebony and Essence) for one year. They grouped the topics found in the magazines into 11 general categories: diet/exercise for weight loss, diet/exercise for health, mental health, reproductive health, sexually transmitted diseases, cancer, substance use/abuse, violence, heart/cardiovascular problems, chronic problems, and other. The study determined that there was little commonality between the health articles found in the magazines and the leading causes of death. An important note made by the researchers was the coverage of cancer. They found that cancer received the most coverage ( $9.5 \%$ ), but this coverage mainly consisted of breast and ovarian cancer, while the leading type of cancer death suffered by females is lung. They also found that the area that received the most coverage was diet/exercise for weight loss $(22.4 \%)$, followed closely by diet/exercise for health $(20.3 \%)$. The next closest topic was that of reproductive health, only receiving $11 \%$ of all the articles in the studied magazines.

The above mentioned studies offer much information regarding the study of the representation of women's health concerns in popular women's magazines. But, it is important to note that every one of these studies concentrated solely on popular women's magazines. The general women's magazine carries many topics of interest and it is not their role to completely cover the issue of women's health on their pages.

## Knowledge versus Perception of Risk

As women continue to utilize popular magazines as their often preferred source for health information, it may affect not only their knowledge of diseases and illness, but also their perceptions of risk of such diseases and illnesses, for themselves and others. Equally important is the question of why some women seek health information from a variety of sources, while others choose not to.

In order to better understand why some choose to seek health information, while others do not, Ramanadhan and Viswanath (2006) utilized the data from the 2003 Health Information National Trends Survey. Their goal was to develop a profile of the nonseekers in order to study possible determinants of their behaviors. A particular focus of this study was placed on cancer information. It was determined that those with higher education, higher income, and part of a younger age group were more likely to be health information seekers. Nonseekers scored lower on attention to health in the media and trust in mass media health information. Ramanadhan and Viswanath offered two suggestions as explanations for the nonseekers: (1) more positive experiences with their providers; and (2) more trust in doctors as a source of information. It was also found that information seeking was a strong correlate of a healthy lifestyle, with nonseekers
reportedly less likely to be physically active and having higher rates of obesity. The researchers suggested that although some nonseekers may be information avoiders, there should be a system designed to provide needed information to them in places they trust.

Another study explored the autonomous consumer health information search (Dutta-Bergman, 2005). The purpose of this study was to move beyond the standard demographic variables used in previous health and information behavior studies, and determine if communicative and health consciousness related to autonomous health information search. After the utilization of the annual consumer survey sponsored by DDB Needham, Inc., which resulted in 3,388 mail-response questionnaires, it was determined that health consciousness positively predicted consumer search for additional health information. Also, it was found that interpersonal communication, community participation, newspaper and magazine readership, and Internet usage each significantly predicted a consumer's intention to search for health information beyond the doctor. The consumers actively engaged in interpersonal networks were more likely to seek additional health information. Unlike predicted, it was determined that television viewership did not have a relation with health consciousness and autonomous health information seeking.

Yet another study investigated the preferred channels for health information (O'Keefe, Boyd, \& Brown, 1998). The purpose of the study was to determine where individuals learned the most information about preventive health care. It was important to the researchers to understand the patterns of preventive health information learning across the communication environment. In each of the eight communities selected, a random telephone survey of adults over the age of 18 was conducted. This yielded a
probability sample of 1,963 interviews. Along with standard demographic measures, questions regarding health orientation and exposure to preventive health information were asked.A clear repertoire for television channels and for magazines and newspapers (print), and also for personal media, which included health professionals, family and friends, books, and computers was indicated. It was determined that television news and information programs were the highest rated channel for learning about preventing illness and maintaining good health. Television was followed by health professionals, family and friends, magazines and newspapers, and print educational materials. Older, better educated, and wealthier individuals reported learning more from magazines and newspapers, while younger adults and the lesser educated reported learning more from television. Women were also more likely than men to learn from personal media. It was also found that perceived actual health status predicted channel selection. Those in better health reported more learning from newspapers and magazines, than other channels (O’Keefe et al., 1998).

Recognizing the prevalence of heart disease among women in the United States, another study examined how women perceive their risk of this disease and their knowledge of the disease (Mosca, Jones, King, Ouyang, Redberg, et al., 2000). The purpose of the study was to assess the knowledge of the risks of heart disease and stroke and the perceptions of heart disease and its prevention among women in the U.S. Another goal of this study was to determine the knowledge of symptoms and preventive measures among women. The researchers conducted a national random sample of 1,000 women aged 25 and older that completed a 38 -item questionnaire via telephone. It was determined that approximately $61 \%$ of women noted cancer as the greatest health
problem facing women, while only $8 \%$ reported heart disease or stroke. Respondents also rated cancer as a higher leading cause of death than heart disease or stroke, $50 \%$ and $31 \%$, respectively. Less than $20 \%$ of women reported that they were very well informed about heart disease, with approximately $7 \%$ unknowing of warning signs associated with a heart attack. The most often cited factors contributing to heart disease were being overweight, not exercising, smoking, and high cholesterol. Less than 5\% identified a high-fat diet, racial heritage, alcohol consumption, poor nutrition, and other prominent contributors as causes of heart disease. It was also found that less than $30 \%$ of the women reported that their physicians ever discussed heart disease when discussing their health. Women aged 45 to 64 years yielded the highest awareness of information regarding heart disease. Of these women, magazines were identified as the major source of information (43\%), followed by television (24\%) and health care professionals (18\%) (Mosca et al., 2000).

Women that overestimate their risk of breast cancer may suffer from unnecessary anxiety, while those that underestimate their risk may miss their window for primary prevention. Haas et al. (2005) decided to examine the characteristics associated with perception of breast cancer. The purpose was to determine these factors among women at average and increased risk. It was hypothesized that increased media exposure would be associated with an elevated perception of risk among women at average risk. It was also suggested that it would not be associated with differences in risk perception among women at higher risk. The random sample yielded over 1,700 women, aged 4074 and without a history of breast cancer. It was determined that approximately twothirds of the women surveyed had an average risk of developing breast cancer. Among
these women, $72 \%$ accurately perceived their risk status, while those considered at high risk, only did $43.1 \%$ of the time. Younger women were more likely than older women to perceive they were at increased risk. Also, women at average risk that had a family history of breast cancer were much more likely to overestimate their risk. It was also found that women at average risk, who reported frequent exposure to the media, were more likely to perceive they were at an increased risk of developing breast cancer. When considering race, Asian Pacific Islander women were less likely than white women to overestimate their objective risk, while African American women at high risk were less likely than white women, also at high risk, to accurately perceive their risk (Haas et al., 2005).

Another study examined the knowledge of college students and their mothers about breast cancer (Jones, Denham, \& Springston, 2007). The researchers explored the effects of mass and interpersonal communication on the participants' perception of breast cancer risk. It was the purpose of this study to determine whether women underestimated, estimated correctly, or overestimated the role of genetics based on the extent to which they reported being exposed to both print and broadcast media, as well as family communication. Their survey questionnaire was administered to 320 individuals ( 160 were students and 160 were mothers). Findings indicated that overall knowledge of breast cancer risk was misconstrued, with only 13 respondents correctly estimating breast cancer risk properly. The majority of respondents overestimated this risk, with nearly one in three estimating that $20 \%$ of women will be diagnosed, when the real statistic is about $12 \%$. It was determined that among mothers and students exposed to media reports that addressed genetics, they consistently predicted overestimations of risk. While
mothers that read an article about the role of genes in the development of breast cancer were more likely to overestimate the percentage of breast cancers caused by a gene mutation, students were less likely than those who had not read the newspaper to overestimate the percentage caused by a gene mutation. Students that had consulted with a physician underestimated the risk of a mother passing along a gene, while $47.8 \%$ of mothers that discussed the role of genetics with a family member overestimated such risk. Finally, mothers who read a news magazine overestimated the risk of a man passing on a breast cancer gene, while those that saw a national television news program offered an underestimate. Students, on the other hand, tended to underestimate this risk in higher numbers (Jones, Denham, \& Springston, 2007).

Recognizing that there have been few studies reporting measures of women's knowledge about menopause, Fox-Young, Sheehan, O’Conner, Cragg, and Del Mar (1999) examined the commonly available knowledge, as well as the biomedical knowledge of Australian women. The participants were aged 45 to 54 , with 381 randomly selected for a telephone survey and 95 selected from those in attendance of a menopause seminar. It was hypothesized that the information seeking group (those that attended the seminar) would be better informed. Participants were asked to select from a list of 39 symptoms that they thought were directly caused by menopause. The mean score for commonly available knowledge was $69.2 \%$ correct, with the mean of biomedical knowledge lower, with $55.1 \%$ correct. It was determined that there were no significant differences between the two groups of women in their commonly available or biomedical knowledge of menopause. Women who had used hormone replacement therapy (HRT) were more likely to identify a larger number of the possible symptoms
related to menopause, while those who had had a hysterectomy were less likely to attribute symptoms to menopause. Interestingly, single women appeared to experience fewer problems related to menopause than women with partners. The findings also suggested that women were less likely to accept a biomedical model of menopause and that they were using HRT for more reasons than just estrogen deficiency (Fox-Young et al., 1999).

Another study explored Canadian women's information seeking behavior and decision making regarding menopause, hormone replacement therapy (HRT), and use of complementary and alternative medicines (CAM) (Wathen, 2006). The purpose of the study was to determine these information seeking behaviors and their effects on the participants' decision making process concerning HRT and CAM. It consisted of two separate studies. The first study utilized qualitative interviews, which involved 20 women aged 45-65 that volunteered to participate. The interviews consisted of questions on women's information seeking behavior and decision making, which included where they sought information, how helpful they found the sources, and the impact the information had on their decisions. The second study included a nonrandom sample of 285 women that completed a questionnaire survey. The survey consisted of questions about women's experiences with menopause, HRT, use of CAM, attitudes toward HRT, information needs and sources, helpfulness of information about HRT and CAM, as well as demographics. This study focused primarily on women's decisions to stop HRT (Wathen, 2006). It was determined that the vast majority of women in the study sought information about HRT, with most primarily seeking answers from their physicians. A significant proportion of participants cited themselves as their main influence, however,
when making the decision to stop HRT. The author utilized help-seeking theory to explain their consultations with informal sources (e.g. family and friends). Even though they themselves were their main influence, the women sought outside assistance to confirm their decisions. Magazines, news media, and the Internet were used $19 \%$ of the time for information about stopping HRT. When seeking information about CAM, women went to a variety of sources, including health food/specialty stores, friends or family, doctors, the Internet, and magazines and news media. Nearly $21 \%$ of the participants preferred health food stores, while about $14 \%$ considered the Internet or magazines and news media to be the first source of information regarding CAM (Wathen, 2006).

After distinguishing that there was little known about the mechanisms and the transitions of health promoting lifestyle behaviors from adolescence to adulthood in Japanese young women, Tashiro (2002) decided to study the topic. The study examined perceived health promoting lifestyle behaviors (HPLBs), health status, and health concerns of Japanese college women, aged 18-22 years. First, the qualitative data was collected using four focus groups. Then, this data were used to develop a questionnaire which included component measures of demographics, perceived HPLBs, perceived health status, and perceived health concerns. The questionnaire yielded 446 mailresponses (Tashiro). It was found that nearly $40 \%$ of the female students reported being rather unhealthy and unhealthy. Only $15 \%$ reported being healthy. Each participant reported about four health concerns, including future plans, interpersonal relationships, nutrition/diet, and lack of physical exercises. Interestingly, physical exercises were the least common activity reported, while commitment to group and mental health self-care
were more commonly practiced. The most common motives to engage in HPLBs were starting to live alone, books and magazines, and from childhood, while the most common barriers were time (mental energy) and personality. The study also found that the most common information sources were personal experience, parents, books or magazines, and friends (Tashiro).

Thomsen (2002) conducted a convenience sample survey of 340 college-age women (aged 18-25) to determine the influence of magazines on body image. The survey examined three potential factors, including hope, beliefs about men's expectations for female thinness, and expected weight gain or loss in five years. The survey examined both health and fitness magazines and beauty and fashion magazines. It was a goal to understand the relationship between reading women's magazines and body shape and size concerns. There was a strong positive association found between beliefs about men's expectations for female thinness and body shape concerns, a positive association between health and fitness magazine reading frequency and body shape concerns, and no statistically significant relationship between beauty and fashion magazine ready and body shape concerns. It was determined that hope was not influenced by the reading of either type of magazine. Hope was also found to have no effect on relationships between reading, expected future weight gain or loss, and body shape and size concerns (Thomsen, 2002).

As shown in these previous studies, women often actively seek health information from a variety of sources outside of their primary health provider. Often, and frequently, magazines were cited as preferred and sought after sources. This strengthens the case that what is in these magazines needs to be accurate and timely. After seeking
these sources, women use their newfound knowledge to weigh their personal risk, and these sources may cause undue stress or increased levels of perception of risk if not properly representing health issues and concerns.

## Gaps in Research

While there have been studies examining various effects of advertising in women's magazines, or the role of popular women's magazines in promoting plastic surgery and/or eating disorders (see Hertzler \& Grun, 1990; Pratt, Pratt, Montague, Salazar, \& Graves, 1996), there exists the need for women's health and fitness magazines to accurately represent the real-life health concerns of women. These magazines need to be examined in order to determine their role in exposing the most important and valuable information regarding health to their readers. There has not been a comparison as to the topics in these popular health and fitness magazines and the actual top health and/or death concerns facing women today.

It is imperative to determine this in that millions of readers, presumably women, rely on these magazines each month as their primary form of health information (Kerwin, 1999; Magazine Publishers of America, 2006; "Women are unaware," 2003). These magazines often serve at the forefront of health issues important to the readers. Rather than concentrating on one singular topic represented in these magazines, as much previous research has done (e.g. Andsager \& Powers, 1999; Barnett, 2006; WalshChilders, 1997), it is important to complete an overall content analysis of all the topics receiving coverage in these magazines. And finally, in this particular study, the magazines studied were limited to strictly categorized women's health and fitness
magazines. When, as previous research has done, only looking at the most popular general women's magazines it should not be expected that they fully articulate all the major health concerns facing their female readers (see Kogan, Kellaway, Rickard, \& Borrayo, 2003; Weston \& Ruggiero, 1986). While on the other hand, that is ideally the role that would be fulfilled by the self-proclaimed women's health and fitness magazines.

## Theoretical Framework

In 1923, the American Society of Newspaper Editors adopted the Canons of Journalism, which in part accepted the press's responsibility to the general welfare. Soon after, other industries adopted similar codes (Leweke, 1998). Historically, the journalist was a community's gatekeeper, as they decided what information was worth knowing (White, 1950). Citizens learn what issues and ideas are important because of this agendasetting function of the media. It is not a matter of identifying what information, but rather a matter of identifying what information to trust (Singer, 2006). According to Singer, "trust is best established and nurtured by those with an existential commitment to social responsibility" (p. 15). Nordenstreng (1998) wrote that freedom of speech should ensure both democracy and quality of life to citizens. The media serve the people much in the same way as an elected government official, and therefore should act in the best interests of the people. Social responsibility, as a theory, provides the backbone (ethics or ideologies) for an entity as to whether or not they have a responsibility to society.

Given this background, normative theories of media are quite fitting to this study of the coverage of women's health isssues in women's health and fitness magazines. Social responsibility theory (SRT) is a normative theory that served as a $20^{\text {th }}$
century guide for media practice. Its purpose is to inform, entertain, and sell, but also to raise conflict to the plane of discussion. SRT establishes responsibility as a necessary component of a free press (Leweke, 1998). Evolving from the work of the Commission on Freedom of the Press (the Hutchins Commission), SRT provides an ethical standard against which to measure media performance. The commission stated, "it is no longer enough to report the fact truthfully...it is now necessary to report the truth about the fact" (1947). The theory of social responsibility of the media encompasses the idea of media as a "public trustee" (McQuail, 2003, p. 233). The commission recommended, among others, that the media provide greater context and meaning to the news (Commission, 1947). As a normative theory, SRT is concerned with how media ought to operate rather than acting as a theory to describe and explain how they actually operate (Leweke, 1998; McQuail, 2005). It asks what should be and what should not be. Normative theory articulates that public interest is culturally based and it assumes that the media should operate in the public interest (McQuail). SRT recognizes that media do not necessarily tell consumers what to think, but rather what to think about. The role of the media are to keep the public informed.

Through the utilization of a normative media theory, this study viewed the data through a social responsibility model. According to McQuail (2005) responsible media will "maintain high standards by self-regulation" (p. 185). Because media are often regarded by their audience(s) as influential, they are in particular need of direction and control by society. Accountability plays a critical role in the overall functioning of the media-"to be accountable is in fact to be responsible" (Plaisance, 2000, p. 260). Normative theory applies primarily to the "relationship between media and society and
deals with claims on the part of the media, especially in respect of their freedom, and also claims on the part of society" (McQuail, 2005, p. 562). With respect to this current study, issues involving health care are extremely important to media consumers. It has already been shown in the above literature review that magazine readers greatly rely on these sources for valid and up-to-date health concerns facing them today. If the magazines are not depicting the issues, then the consumers will not receive the proper information.

## Research Questions

After reviewing current research on the topic of women's health and the representation of these health concerns in popular women's magazines, along with taking into consideration the noted gaps in research, the following research questions were addressed in the present study.

RQ 1: What cover story headline topics were displayed on the six most popular women's health and fitness magazines' covers and what was their frequency of coverage?

RQ 2: What was the frequency of cover story headlines consisting of the leading causes of death facing women, health concerns/issues, and other categories?

RQ 3: Which of the magazines in the study included more cover story headlines concerning the leading causes of death facing women?

## CHAPTER 3

## METHODOLOGY

## Collection of Data

## Overal Approach and Rationale

Following a method used by previous research on this topic, this study utilized a quantitative content analysis of the cover story headlines of the top six women's health and fitness magazines (Barnett, 2006; Davalos et al., 2007; Kogan et al., 2003; WalshChilders, 1997; Weston \& Ruggiero, 1986). As expressed earlier, the headlines on magazine covers offer a representation of the content within the pages of the magazine. The use of content analysis helped to determine the quantity of subject areas covered on the six selected magazines' covers, as well as the frequency of their appearance on the magazines. It has already been shown in the above literature review that magazine readers greatly rely on these sources for valid and up-to-date health concerns facing them today. It is expected that if exposed to a potential health concern, even if not in-depth, a reader has the option to research more about the topic. The coverage in the magazine brings the issue to their attention and empowers them to use this newfound knowledge in whatever way they deem fit. If the magazines are not depicting the issues, then the consumers will not receive the proper information.

## Sample Selection

The magazines used for this study were selected based on their circulation reported by Magazine Publishers of America (2007), which was from the 2006 Audit Bureau of Circulations report of the top 100 magazines by average circulation: (1) Prevention, total circulation 3,302,350, (2) Shape, total circulation 1,710,589, (3) Fitness, total circulation 1,550,973, (4) Self, total circulation 1,490,019, (5) Health, total circulation $1,365,111$, and (6) Women's Health, January '06 circulation 600,000. These magazines also vary in the ages of the target market.

The magazines were studied for the duration of a one-year span (March 2007February 2008). The magazine cover story topics were coded using a three general category typology consisting of health topics selected from the 2003 study by Kogan, Kellaway, Rickard, and Borrayo, as well as the top ten leading causes of death facing women as reported by the CDC (2005) (see Appendix).

## Treatment of Data

As previously mentioned, the magazines that were selected for this particular study were selected based on their 2006 circulation reportings from Magazine Publishers of America. There were six magazines coded in this study, with $10-12$ issues of each magazine examined, which yielded 67 total magazines (Health and Women's Health publish 10 issues yearly and Fitness publishes 11 issues). The unit of analysis for this study was the magazine cover story headline. Cover story headlines were selected for this study due to their reflection of content within the pages, as well as the indicated
importance placed on the stories selected as cover stories (McKay, 2000; McLoughlin, 2000; Reichert, 2005).

A coding system developed from previous studies and findings from the CDC was used for this study. The two coders independently coded the headlines found on the six studied magazines' covers and coded these headlines using the topics and categories in the Kogan et al. (2003) study as a guideline, as well as the leading causes of death facing women from the CDC (2005). The Kogan et al. study examined the relationship between health issues found in magazines with the leading causes of death. Unlike the current study, the Kogan et al. study utilized mostly general women's magazines for their sample. They coded their sample into 11 general categories ranging from diet and exercise for weight loss to sexually transmitted diseases to chronic problems. The current study used many of their categorical topics for coding, but also included the leading causes of death facing women in the coding scheme (see Appendix).

Coding Scheme
The three general health categories for the current study were leading causes of death, health concerns/issues, and other. By coding magazine cover story headlines into these three main categories, the researcher could determine what health topics were found on the sampled magazine covers, as well as their frequency (RQ 1). Also, separating the leading causes of death, health concerns/issues, and other into their own coded categories enabled the researcher to easily distinguish their representation in the sample (RQ 2). Finally, by coding each sampled magazines separately, the researcher was able to determine what health topics and concerns, especially the leading causes of death, were
represented on which magazine covers in the study in order to compare with the other magazines in the study (RQ 3).

When coding for leading causes of death, ten health topics were used (the ten leading causes of death among women): heart disease, cancer, stroke, chronic lower respiratory diseases, Alzheimer's disease, diabetes, unintentional injuries, influenza and pneumonia, kidney disease, and septicemia. To specify, chronic lower respiratory diseases included chronic bronchitis, emphysema, and asthma, unintentional injuries included motor vehicle traffic, poisoning, fire/burn, drowning, suffocation, falling, other transportation, and pedestrian, and septicemia includes blood poisoning (as described by the CDC, 2005). Also, when coding cancer as a cover story headline topic, it was noted as to which form of cancer was discussed, if specified: lung, breast, ovarian, endometrial, and/or cervical.

When coding for health concerns/issues, eight health topics were used (Kogan et al., 2003). They were diet and exercise for weight loss, diet and exercise for health, mental health, reproductive health, sexually transmitted diseases, substance use/abuse, violence, and chronic problems. The three other health topics used by Kogan et al. were excluded from this category in the present study. Heart problems and cancer were instead included in the leading causes of death category and other was given its own coding category. In order to understand what was considered part of each of these eight health topics, they were further disseminated: mental health consisted of depression and anxiety; reproductive health consisted of pregnancy and delivery and birth control; sexually transmitted diseases consisted of sexually transmitted diseases and HIV/AIDS; substance use/abuse consisted of over the counter drugs, alternative medicine, alcohol,
tobacco, prescription drugs, and street drugs; violence consisted of rape, domestic violence, homicide, and suicide; and chronic problems consisted of back/spine impairments, arthritis and rheumatism, osteoporosis, allergies, migraines/headaches, chronic fatigue syndrome, skin health/problems, and respiratory conditions.

Finally, those topics not included under either of the above coding schemes groups, the remaining headlines were coded as other. This group included topics not already covered by the CDC or past studies, as well as three suggestions as a result of the pilot screening, an emergent coding process. The topics eating disorders, relationships, hormone replacement therapy, menopause, cosmetic surgery, beauty and relationships were included based on findings from past studies. The addition of the topics quality of life, contests and unknown were a result of pilot screening by the two coders. The coders recognized the need for these in order to accurately code all cover story headlines found on the magazine covers. While most of these topics were considered self-explanatory, others were not. The topic quality of life consisted of headlines referencing happiness, energy, sleep, confidence, finances, life experiences, and motivation; beauty consisted of style and fashion, hair, and make-up; and unknown consisted of any headline that was left mysterious and gave the coder no real idea of the topic of the headline.

The data collected in this study are nominal data. Frequency summaries and crosstabulations, including Pearson chi-squares, were the statistical analyses conducted. Chi-square test of independence was performed on the $6 \times 2$ tables. Reported results include frequencies, percentages of occurrences, and the crosstabulation values and percentages.

## Intercoder Reliability

## Training of Coders

The use of two independent coders ensured inter-coder reliability for the study. The coders were each provided with the 67 magazines of the study and coding sheets that clearly labeled each individual magazine to be coded, as well as cover story headline topics. The coders were asked to take each cover story headline on each magazine cover and select the most appropriate health topic it represented on the coding sheet. The coders then made hash-marks to indicate the chosen topic for each headline. The coding sheets not only separated each magazine, but allowed the coders to record the topics for each month of the magazine into a separate row.

It was not without acknowledgment that some headlines could have been considered or coded into more than one provided topic (variable). In order to protect the mutual exclusivity of the coding process, each topic was only coded once, into only one category deemed by the coders' best judgment.

The headlines were coded by each of the coders, by their judgment, into the provided health topics on the coding sheet (see Appendix). The headlines were coded based on the topic addressed within the headline. The actual words provided on the coding sheet did not have to be present in order for the coder to select that topic as the coding for a headline. For example, if a headline were to include "blood poisoning" it could then be coded into the topic of "septicemia" that was provided on the coding sheet. Each of the possible 27 topics on the coding sheet were provided to each of the coders with a description, in order to assist in their coding efforts (see above coding scheme for detailed breakdown of each topic). Also, on the coding sheet, below the matrix for the
hash marks, were boxes indicating the topics and a breakdown of possible key words that could be included into each of the main 27 topics for coding. These decision rules were provided to each coder prior to pilot testing, which allowed them to test before complete coding for the study took place.

## Reliability Test

The coders completed a pilot screening of one sample of each of the six magazines selected, not used in the study, which resulted in the addition of three topics (quality of life, contests, and unknown). The use of a pilot study allowed the coders the opportunity to get familiar with the study and coding scheme to aid in the final coding. It also gave the coders the chance to ask questions and address any confusion.

To ensure intercoder reliability for this study, Ole Holsti's formula was utilized. The Holsti Method is described as $\left(2 M / N_{1}+N_{2}\right)$, whereas $M$ was the number of coding decisions agreed on and $N_{1}$ and $N_{2}$ represented the number of coding decisions made by each coder (Holsti, 1969). The two coders each coded all 67 magazine covers' headlines. Intercoder reliability was defined as the number of headlines that both coders placed into the same topic category. They each coded 523 cover story headlines, agreeing on 504 headlines (504(2)/(523+523)). This resulted in a percentage of agreement of $96.4 \%$. Only one coder's results were further analyzed for this study.

## CHAPTER 4

## FINDINGS OF THE STUDY

## Analysis of Data

A total of 67 women's health and fitness magazines' covers were analyzed. This resulted in a total of 523 cover story headlines coded. Of all the headlines coded, diet and exercise for weight loss was most often noted, at $38.6 \%$ (202) of the time. Beauty was the second most often coded headline topic, at $12 \%$ (63) of the time. Excluding those topics receiving zero headlines, the least coded topics were influenza and pneumonia and menopause, at $.2 \%$ (1) of the time each.

In order to substantiate the findings, the 27 topics (variables) used to code the headlines were collapsed into three main categories: leading causes of death, health concerns/issues, and other (described in Chapter 3). Overall, health concerns/issues category received the most headline topics coded, at $61.8 \%$ (323) of the time. Other received $35 \%$ (183) headlines, while the leading causes of death category received the least headlines coded, at $3.3 \%$ (17) of the time.

While results were found to not be statistically significant, it was earlier speculated that coverage of leading causes of death facing women would be present during their designated monthly observances. There were only three leading causes of death headlines coded in this study. Cancer was the most frequently of these coded. The month of October is ceremoniously known for promoting breast cancer awareness
("Health observances," 2009). Fitness, Health, Prevention, Self, and Shape each had one cancer-related headline on their October issues. Heart disease was the other leading cause of death coded that was found to be represented during its dedicated month of awareness, February ("Health observances," 2009). Both Fitness and Prevention had a cover story headline about heart disease during this month. The only other leading cause of death that received a headline was influenza, but this disease was not listed on the health observances calendar.

## Research Questions

Research question one asked what cover story headline topics were displayed on the studied magazines' covers and their frequency of coverage. This question sought to answer the quantity and variety of health topic coverage. The findings of this study suggest that the studies magazines did cover a variety of health topics.

To answer research question one, frequencies were calculated on each of the 27 topics (variables) and are represented in Table 1 (below).

## TABLE 1

## Frequency of Headline Topics

| Headline topic | $\%$ | N |
| :--- | :--- | :---: |
| Diet \& exercise for weight loss | 38.6 | $(202)$ |
| Beauty | 12 | $(63)$ |
| Quality of life | 11.5 | $(60)$ |
| Diet \& exercise for health | 11.3 | $(59)$ |
| Relationships | 4.2 | $(22)$ |
| Unknown | 4.2 | $(22)$ |
| Mental health | 3.8 | $(20)$ |
| Chronic problems | 3.6 | $(19)$ |
| Substance use/abuse | 3.6 | $(19)$ |
| Contests | 2.5 | $(13)$ |
| Cancer | 2.3 | $(12)$ |
| Heart disease | .8 | $(4)$ |
| Reproductive health | .8 | $(4)$ |
| Cosmetic surgery | .4 | $(2)$ |
| Influenza \& pneumonia | .2 | $(1)$ |
| Menopause | .2 | $(1)$ |
| Stroke | 0 | $(0)$ |
| Chronic lower respiratory disease | 0 | $(0)$ |
| Alzheimer's disease | 0 | $(0)$ |
| Diabetes | 0 | $(0)$ |
| Unintentional injuries | 0 | $(0)$ |
| Kidney disease | 0 | $(0)$ |
| Septicemia | 0 | $(0)$ |
| Sexually transmitted diseases | 0 | $(0)$ |
| Violence | 0 | $(0)$ |
| Eating disorders | 0 | $(0)$ |
| Hormone replacement therapy | 0 | $(0)$ |
| Total | 100 |  |

To further solidify the results of the frequencies, the individual coded topics that were found to be most frequently coded were crosstabulated with the magazines. Of the 27 crosstabulations, seven were determined to be statistically significant. Chi-square test of independence was performed on a 6 by 2 comparison.

The topics of heart disease and magazine had a significant association, $\chi^{2}(5$, $\mathrm{N}=523$ ) $=11.345, p<.05$. Prevention was most likely to have headlines for heart disease stories with $75 \%$ (3) of this topic. This finding must be interpreted with caution, as the results indicated a frequency under five, which is the minimum acceptable for chisquare analyses.

The topics of cancer and magazine also had a significant association, $\chi^{2}(5$, $\mathrm{N}=523$ ) $=16.297, p<.05$. Health was most likely to have headlines for cancer stories, with $58.3 \%$ (7) of this topic.

The topics diet and exercise for weight loss and magazine had a significant association, $\chi^{2}(5, \mathrm{~N}=523)=35.531, p<.001$. Shape and Fitness were just as likely to have headlines for diet and exercise for weight loss. Shape had these headlines $25.7 \%$ (52) and Fitness $22.3 \%$ (45) of the time.

Substance use/abuse and magazine also had a significant association, $\chi^{2}(5$, $\mathrm{N}=523)=25.948, p<.001$. Prevention was most likely to have headlines for substance use/abuse, with $57.9 \%$ (11) of the time.

Another significant association existed between the chronic problems topic and magazine, $\chi^{2}(5, \mathrm{~N}=523)=15.917, p<.05$. Health was most likely to include headlines for chronic problems, with $47.4 \%$ (9) of the topic.

The topics quality of life and magazine had a significant association, $\chi^{2}(5$, $\mathrm{N}=523)=22.415, p<.001$. Self was most likely to include headlines for quality of life stories, with $41.7 \%$ (25) of the time.

Finally, the topics relationships and magazine had a significant association, $\chi^{2}(5, \mathrm{~N}=523)=19.600, p<.05$. Self was most likely to have headlines for relationship stories, with $54.5 \%$ (12) of the time.

Research question two queried as to the frequency of headlines into the three main categories (leading causes of death, health concerns/issues, and other) on the six studies magazines' covers. This question aimed to determine the most common category represented overall. This study was particularly interested in this representation of the leading causes of death facing women. Results indicated an under-representation of these leading causes of death compared to the other categories.

Pearson chi-square test of independence was used again on a 6 by 2
comparison to statistically analyze the crosstabulations that were conducted. These consisted of leading causes of death, health concerns/issues, and other crosstabulated with magazine. All three crosstabulations were found to be statistically significant. Table 2 (below) shows the percentages of headlines in the three main categories for each of the six studies magazines.

TABLE 2
Percentages of Headlines in Three Main Categories

|  | Leading cause of death <br> $\%^{*}$ |  | $\mathrm{~N}^{* *}$ | Health concern/issue |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\%$ | N | Other |  |  |  |  |  |
| Magazine | 23.5 | $(4)$ | 18.3 | $(59)$ | $\%$ | N |  |
| Prevention | 5.9 | $(1)$ | 20.4 | $(66)$ | 12.6 | $(23)$ |  |
| Shape | 11.8 | $(2)$ | 18.6 | $(60)$ | 13.7 | $(25)$ |  |
| Fitness | 11.8 | $(2)$ | 12.4 | $(40)$ | 11.5 | $(21)$ |  |
| Self | 47.1 | $(8)$ | 16.7 | $(54)$ | 37.2 | $(68)$ |  |
| Health | 0 | $(0)$ | 13.6 | $(44)$ | 13.1 | $(24)$ |  |
| Women's Health |  |  |  |  | 12 | $(22)$ |  |
|  |  |  |  |  | $(323)$ | 100 |  |
| Total <br> $\quad(183)$ |  |  |  |  |  |  |  |

*Percentage within category.
**Observed number of headlines on each magazine.

A significant association existed between the leading causes of death category and magazine, $\chi^{2}(5, \mathrm{~N}=523)=15.043, p<.05$. Health was most likely to include headlines representing the leading causes of death facing women, with $47.1 \%$ (8) of the time. Women's Health was least likely to have leading causes of death headlines with zero coded into this category. The leading causes of death category and magazine crosstabulation resulted in more than $20 \%$ of cells with counts less than a frequency of five, therefore this category could not be adequately tested because of insufficient data.

The crosstabulation of health concerns/issues and magazine had a significant association, $\chi^{2}(5, N=523)=40.233, p<.001$. Shape had health concerns/issues headlines 20.4\% (66) of the time. Fitness and Prevention were also highly likely to include headlines in this category, with $18.6 \%$ (60) and $18.3 \%$ (59) of the time, respectively. Self was the least likely magazine to include health concerns/issues topics, with $12.4 \%(40)$ of the coded headlines.

A final significant association existed between the other category and magazine, $\chi^{2}(5, N=523)=45.249, p<.001$. Self was most likely to include headlines within the other category, with $37.2 \%$ (68) of the time.

Finally, research question three asked which of the six studies magazines included more leading causes of death cover story headlines than the others. This question aimed to provide some insight into which popular women's health and fitness magazines gave more coverage to the leading causes of death facing women. According to this study, leading causes of death headlines are generally under-represented.

Research question three was answered by crosstabulating the leading causes of death category with magazine, and then computing chi-squares test of independence with a 6 by 2 comparison. The results are show in Table 3 (below).

## TABLE 3

Percentage of Leading Causes of Death Headlines on Magazines' Covers

| Magazine | \% within magazine | \% of total headlines | $\mathrm{N}^{*}$ |
| :--- | :--- | :--- | :--- |
| Health | 9.3 | 1.5 | $(8)$ |
| Prevention | 4.7 | .8 | $(4)$ |
| Fitness | 2.4 | .4 | $(2)$ |
| Self | 1.8 | .4 | $(2)$ |
| Shape | 1.1 | .2 | $(1)$ |
| Women's Health | 0 | 0 | $(0)$ |
|  |  | 3.3 | $(17)$ |

*Observed number of leading causes of death headlines.

A significant association was found to exist between the leading causes of death category and magazine, $\chi^{2}(5, \mathrm{~N}=523)=15.043, p<.05$. The entire leading causes of death category received $3.3 \%$ (17) of the total coded headlines in the study. Health
represented the magazine with the most headlines for leading causes of death facing women, with $1.5 \%(8)$ of the time. As indicated above, the leading causes of death category and magazine crosstabulation resulted in frequencies under five, therefore a chisquare statistical test was not valid in reference to research question three. Due to insufficient data this question could not be adequately addressed.

## Summary of Data

## Similarities

As demonstrated, each of the magazines studied covered a variety of topics on their covers. Each magazine also predominately had cover story headlines concerning diet and exercise for weight loss. This topic was found to be the most popular headline topic for the study. Diet and exercise for health, mental health, chronic problems, quality of life, beauty and unknown were all topics that were discussed on each of the six studied magazines. The use of the 'unknown' topic was used by each of the six magazines. Perhaps this is an intrigue tactic used by magazines to lure the reader into the pages. None of the studied magazines had cover story headlines relating to stroke, chronic lower respiratory diseases, Alzheimer's disease, diabetes, unintentional injuries, kidney disease, septicemia, sexually transmitted diseases, violence, eating disorders, hormone replacement therapy or cosmetic surgery. Finally, for all six of the magazines, leading causes of death was the category that received the least about of coded cover story headlines.

## Differences

While there were many similarities, there were also many differences found concerning the magazines studied. Self was the only magazine that had other as the highest headline-receiving category. Nearly $62 \%$ (68) of the cover story headlines coded for Self were placed in the other category, with quality of life as the most frequent topic. On the other end of the spectrum, Health received twice as many leading causes of death headlines coded than the next magazine, Prevention. Health also was the only magazine to have a headline about influenza.

Heart disease is the leading cause of death facing women, yet it was only coded a total of four times in this study. Three of these were on Prevention, and only one on Fitness. None of the other magazines had headlines relating to this topic. Finally, the topic of menopause was only found in one headline, out of the 523 coded. Health was the magazine with the menopause headline. Health also was the magazine in the study with the most wide topic coverage represented, with 13 different topics coded. Women's Health received the least variety of topics coded, with only nine.

## CHAPTER 5

## DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

## Discussion

Overall, little commonality was found between the cover story headlines of the six studied magazines and the leading causes of death facing women. Rather, an overwhelming majority of the coded headlines were placed in the health concerns/issues category. While many of the magazines in the study did cover a variety of topics each month, they were generally superfluous and not accurately representative of the actual societal health issues (i.e. leading causes of death) facing women during the studied time period. Therefore, based on these findings, it can be said that women's health and fitness magazines are not accurately portraying health information to their vast readership.

Unlike expected, there was no more coverage of leading causes of death in the health and fitness magazines used in this study than previous studies involving general women's magazines found. Just as with these previous studies, the topics centered primarily on articles promoting weight loss, rather than health-sensitive articles. It was anticipated that for months that are notoriously known for promoting awareness of particular illnesses or diseases (e.g. Breast Cancer Awareness month), there would be more coverage of that topic. This was actually confirmed, although on a much smaller scale than predicted. Only two health topics (leading causes of death) were discussed
during their dedicated month, heart disease (two times in February) and cancer (five occurrences in October).

Also of interest was the coverage received in the other category, which represented a $35 \%$ frequency. The topic of beauty, which included style/fashion, hair, and makeup headlines received $12 \%$ of the total coded headlines. This is nearly as frequent as all the diseases coded combined. If the topic of diet and exercise for weight loss is also considered at this point (having received $38.6 \%$ of the total coded headlines), the findings would indicated that over $50 \%$ of the headlined coded in this study dealt with issues of physical appearance, supporting previous research findings (see Barnett, 2006; Davalos et al., 2007; Kogan, et al., 2003; Weston \& Ruggiero, 1986). This could indicate the magazines' push for content relating more toward physical appearance, rather than health benefits and information. This might also support the idea that perhaps these health and fitness magazines would be better suited in a lifestyle genre, rather than health. If the majority of the content relates to appearance, beauty and weight loss, then the magazines are not primarily focused on health alone.

On the other hand, this study only analyzed cover story headlines. As previously stated, magazines use their covers to sell their publication (McKay, 2000; McLoughlin, 2000). In doing so, the headlines reflected on their covers must pique the interest of the potential consumer. A magazine covered with headlines only discussing death and disease is not necessarily the best selling tool. While some readers may be interested, for their own preventative or informational reasons, others may not. The use of headlines about death and disease could also cause a bommerang effect to readers, or potential readers. This theory supports that people act to protect their sense of freedom,
therefore if cover story headlines are seemingly negative to the consumer, the magazines may not sell (Brehm \& Brehm, 1981). If the magazines make too strong of an attempt to change consumers' attitudes toward health topics, the consumer could counter by simply refusing to read the publication (Cohen, 2006). This may also be the reasoning behind the use of magazines' mysterious headlines ( $4.2 \%$ coded as unknown in this study). This gives the publication a way to draw in an audience without scaring them away by a headline blatantly referring to death and disease.

In many ways, these results are surprising. A magazine written to educate its readers on health and fitness issues would be expected to cover more stories related to health, such as the leading causes of death, than general women's magazines. That is not to say every month, every issue should be covered with only headlines relating to leading causes of death facing women, but these headlines might be more apparent and more frequently covered, specifically in the genre of health and fitness. As explained earlier, the press has a responsibility to the general welfare. Although doctors should serve as a primary point of contact when it comes to all things health related, that does not mean there are not media consumers out there that choose to rely more heavily on magazines for their health information. Magazines should not have the sole responsibility to educate the public on health risks, diseases and concerns, but when producing a monthly publication dedicated to health and fitness, a depiction of societal issues facing their readers might be expected.

Social responsibility theory is said to serve as a $20^{\text {th }}$ century guide for media practice, stating responsibility as a necessary component of a free press (Leweke, 1998). Given this notion, these health and fitness magazines have an ethical role and responsibly
to their readership to provide the more accurate and timely information. When in a study of 523 magazines' cover story headlines, only 17 of the coded headlines discussed the leading causes of death, this role is not being taken seriously. By excluding these predominant health concerns from their publications, the magazines are preventing their readers from receiving proper information.

As the results showed, the dominant health topic found on the covers of the studied magazines was diet and exercise for weight loss. Now, rather than continuing this cycle of quick-fix, weight loss articles, health and fitness magazines would benefit readers with a focus on ways to protect health against disease. Headlines reading, "Lose 10 pounds and fit into those skinny jeans," could become "Lose 10 pounds and lower you risk of heart disease." The magazines need to stop their incessant focus on external appearance and take a look at what's below their readers' surface. Educate magazine readers to protect their health before worrying about altering their physical appearance.

The writers of health and fitness magazines have a responsibility to their readers to provide the most accurate health information, according to social responsibility theory. Their accountability plays a critical role in the education and awareness of their readers understanding of many health concerns facing them during their lifetime. Although drastic changes may be difficult for the health and fitness magazines, there are some more modest changes that can be made. For example, Women's Health, as the only magazine without one mention of the leading causes of death facing women, could commit to adding at least one headline in the next year. As mentioned, it is not expected that these magazines only discuss leading causes of death, or even that there are cover story headlines on each month's cover reflecting them. It was just expected that there be
more coverage overall in magazines, particularly women's health and fitness magazines given the nature of their content.

Equally important, would be magazines' increased coverage of heart disease, as it is the leading killer of women. This exclusion of the disease in these publications may cause women to be naive about their risk of the disease, and think of it as only a man's disease. Women, or health and fitness magazine readers in general, need to have a better handle on their actual risks. As this study found, breast cancer, as found in previous studies, is still the most discussed health topic. Breast cancer is not the leading cause of death facing women, but given the amount of coverage the disease receives it is understandable why women would think it is.

## Limitations

One potential limitation of this study was the selection of only six popular women's health and fitness magazines. There are numerous other magazines of this genre available, but this study chose to focus on the six most popular alone. Another possible limitation would involve the month selection and the number of each magazine studied. This study utilized a one-year time period, from March 2007-February 2008, which yielded 10-12 copies of each magazine. Health and Women's Health publish 10 issues per year, Fitness publishes 11, while the remaining three magazines produce 12 issues. Yet another limitation of this study was the selection of health and fitness magazines, rather than magazines focusing solely on health issues. Given this point, it can be assumed that these magazines included more topics involving exercise and fitness than a magazine written strictly for health purposes.

The influence of ethnicity, and magazines directed at different ethnicities, also was not addressed in the current study. Headline topics concerning health may be different for women of different ethnicities and in different parts of the world (EdwardsHewitt \& Gray, 1993; Tiggemann \& Rueuetel, 2001). Another limitation of this study was the use of only magazine cover story headlines for content. Although these are expected to represent the most important topics affecting women, as well as the topics given the most in-depth coverage, there may still lie within the pages of the magazine articles on noted health issues and concerns facing women that were neglected due to the nature of this study. It is not to say that the magazines in this study completely neglected specific health issues, but rather maybe these topics were not selected to be presented on the covers. There may have been articles in the magazines that were not noted in this study due to this limitation.

One final limitation of this study was the chi-square test results, which showed low cell counts. With reference to research questions two and three the findings resulted in more than $20 \%$ of cells with counts less than a frequency of five, therefore this category could not be adequately tested because of insufficient data. Due to insufficient data these questions could not be adequately addressed and the results should be interpreted with caution.

## Conclusion

Previous research concerning media's coverage of health issues and its influence on the perception of health risks among women has explored various platforms, as well as various demographic variables. These studies have utilized a variety of
theories, including social learning, agenda-setting, media cultivation, social comparison, and uncertainty management. Many of these studies sought to determine women's knowledge of specific health issues and concerns (e.g. heart disease, breast cancer, menopause, and hormone replacement therapy), while also examining their information seeking behaviors (see Fox-Young, Sheehan, O'Conner, Cragg, \& Del Mar, 1999; Hass et al., 2005; Jones, Denham, \& Springston, 2007; Mosca et al., 2000; Wathen, 2006). It was suggested by many of these studies that these additional sources of information (those outside of traditional doctors, e.g. media) may influence their risk and understanding of these particular health issues and concerns (see Dutta-Bergman, 2005; O'Keefe, Boyd, \& Brown, 1998; Ramanadhan \& Viswanath, 2006).

Studies have found women to be very active information-seekers most of the time, with going outside of traditional sources to the Internet, magazines, or television for their health information (Dutta-Bergman, 2005; Mosca et al., 2000; O'Keefe, Boyd, \& Brown, 1998; Thomsen, 2002;). It was found that these media sources were not the only influencing factors of their perception and knowledge of risks and prevention of diseases and health concerns, however. Many studies also acknowledged and supported the fact that health consciousness and interpersonal and community communication were also positive relating factors concerning women's desire to seek additional health information (Dutta-Bergman, 2005; Tashiro, 2002). This increased media exposure can be associated to elevated perceptions of risk of disease (Fox-Young et al., 1999; Haas et al., 2005; Mosca et al., 2000). Overall, women do, in fact, consult a variety of sources as active information-seekers, and although doctors are the most sought after sources, women still
frequently utilized additional sources, with magazines as one of the most popular, after doctors.

Given the results of this current study, one might be skeptical of what it is women are reading in health and fitness magazines. If women rely on magazines as an active source of health information, they may be limiting their awareness of many potential health concerns they could face. Diet and exercise for weight loss articles far exceeded articles about diet and exercise for health, not to mention the leading causes of death facing women. While weight loss articles are expected when reading health and fitness magazines, it would be anticipated to be coupled with the health benefits as a result of weight loss, rather than weight loss as a stand-alone benefit. This appearancebased thinking could be the cause of unnecessary weight concerns among the magazines' female audiences. It would be best if readers of health and fitness magazines walked away with a newfound understanding of health and fitness as a lifestyle, not as a shortterm benefit. Perhaps these health and fitness magazines, would be better suited as lifestyle genre magazines, rather than being placed into the health genre.

This study was one of few that has examined only health and fitness magazines when determining the representation of leading causes of death and women's health concerns. The results, just as in previous studies of general women's magazines, strongly highlighted the under representation of the actual societal health concerns facing women. This study has formed a foundation to be built upon by future studies of health and fitness magazines. Future research would benefit from examining content of this genre of magazine, beyond the cover story headlines. Perhaps, there lies within the pages of these publications more information regarding the leading causes of death, prevention and
detection that is not represented on the covers. Evaluating the content and article coverage could result in completely different findings and show that these magazines do, in fact, offer much more coverage of the leading causes of death than shown on their covers.

It would also be interesting for future research to study men's health and fitness magazines to determine their representation of leading causes of death facing men. Would studying these magazines result in similar findings of women's health and fitness magazines? Also, a comparison study of men's versus women's health and fitness magazines could be extremely noteworthy. An extensive examination of both genres of magazines could result in some captivating and extremely useful information, for both the writers of the magazines, as well as their dedicated readers.

Equally important, future research should examine the representation of health issues in other media outlets. While magazines are an extremely popular resource for health information, studies involving health Web sites, television programs or radio shows would be valuable. Future research could benefit from increased knowledge of health information-seeking habits, as well as content of the sought-after health information. Perhaps a study on individual diseases and where consumers seek the most information for that specific health concern would be in order. This would allow the researcher to more accurately evaluate the presentation and quality of the information provided to the information-seeker.

Magazines are often the second sought after source, following doctors ("Women are unaware," 2003). That puts a lot of power in the hands of just a few popular magazines. There are millions of women reading these magazines each month to
help in their information searches, so it is important to continue studies of what these readers are exposed to on those pages. General magazines should not be responsible for giving the total health picture to readers, while that is presumably the role that health and fitness magazines fill. More studies investigating solely health and fitness magazines are needed to fully explore their content and reflection of health issues.

Issues concerning health should never be taken lightly. When it comes to the source of the information it is very important for that source to be both reliable and credible. As society continues to become more reliant on the media, it is imperative for those outlets to give an accurate portrayal of the information they are revealing to media consumers. With respect to magazines, it has been proven that they are not doing just that. In each of the studies involving popular women's magazines, not one proved to be a very reliable resource regarding health for its readers. These magazines have not been portraying the real health concerns facing women.


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