POWERFUL AND POWERLESS LANGUAGE IN HEALTH MEDIA:

AN EXAMINATION OF THE EFFECTS OF BIOLOGICAL SEX AND TOPIC

FOCUS ON LANGUAGE STYLES

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The Supervisory Committee certifies that this *disquisition* complies with North Dakota State
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ABSTRACT

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Powerless language has been shown to influence audience perceptions, and the media has been shown to influence health behaviors. However, little research has looked at powerless language in health media. This study expands current research regarding powerless language through an examination of written health media. A content analysis on the use of powerless language in health-related articles was conducted for 12 popular magazines over a one-year time span. Analysis compared differences in use of powerless language relative to three variables: biological sex of the author, the biological sex of the audience, and the magazine's overall topic focus. Female authors and health-focused magazines used more powerless language than male authors and generic-focused magazines. Powerless language was more often directed towards a female audience than a male audience. Implications of such findings and suggestions for future research are also discussed.

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A.M.F.

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CHAPTER ONE. INTRODUCTION

Health has become a major concern for people of all ages, genders, and races. Discussion of health permeates U.S. culture. Talk of health care, disease prevention or treatment and medical research fill news programs and publications and infiltrate daily conversation. The dissemination of health information is a main objective for the media on organizational, national, and global levels (Clarke & Everest, 2006; Nelkin, 1995; Parrott, 1995).

Health messages come from a variety of media. In fact, "many rely on mass media, as much as, or even more than health care providers for information about health, illness and disease" (Clarke & Everest, 2006, p. 2592). Half of the respondents in a 2003 survey indicated that media was an important source of health information (Schwitzer, 2009). People are no longer relying simply on previous experience or running immediately to the clinic every time they feel ill. Instead, people are using media sources to gather information about symptoms, diseases, and other health related topics (Hofstetter, Schultze, & Mulvihill, 1992).

Although people are using the media as a source of health information, the public is cautious with their trust of these sources (National Cancer Institute, 2007). Most media consumers feel messages delivered by the media regarding health are often conflicting and complicated, causing uncertainty for the public (Clarke & Everest, 2006; Wilson, 2007). Given that new "breakthrough" studies are reported every week, with conflicting findings and recommendations, it is not difficult to see how average consumers may get confused about healthcare issues.

Research has shown that media can have remarkable effects, both positive and negative, on health behaviors (Finnegan & Viswanath, 2002; Gibson, 2007; Lang & Yegiyan, 2008; Stryker, Solky, & Emmons, 2005; Walsh-Childers & Treise, 1998). However, some findings (Gibson; Walsh-Childers & Treise) point out that media effects may not always be as expected, "deliberate efforts to use the press to influence behavior do not necessarily have the effect anticipated" (Nelkin, 1995, p. 72). Studies have indicated that "a surprising number of messages create what are called 'boomerang effects'," meaning the actual effect of the message is in opposition to the desired effect (Lang & Yegiyan, p. 432). Erroneous and consequence-free messages can have detrimental effects on behavior, so too can uncertainty and inconsistency in media messages. Messages and information within the media regarding health may not be as clear and concise as some readers might like. Clarke and Everest (2006) found that "contradictions and confusions and a consequent sense of uncertainty" were major themes in media addressing health topics (p. 2596). Furthermore, the language of the media's health messages may be creating uncertainty or a lack of trust.

Uncertainty within a message can have a tremendous effect on how audiences perceive the message and source. The message and sender may be seen as less informed and less persuasive; thus, the consumer may be less likely to follow the advice and information given within the message (Carli, 1990; Grob & Allen, 1996; O'Barr & Atkins, 1980). It is important to assess what types of language and messages are delivered through the media in order to understand how these messages may affect consumers. One type of language that influences uncertainty is the use of powerless linguistic markers.

Powerless language is a style of communication that portrays a sense of uncertainty and lack of assertiveness (Carli, 1990; Clarke, 2004; Hosman & Siltanen, 2006). A powerless language styles is identified by the existence of linguistic markers, specifically hedges, hesitations, and tag questions (Areni & Sparks, 2005; Grob Meyers, & Schuh, 1997; Hosman & Siltanen; Lakoff, 2004; O'Barr & Atkins, 1980). A powerful language style is absent of these linguistic markers, thus language that is not powerless is deemed to be powerful. Powerful language conveys to an audience a sense of certainty, control, power, and assertiveness (Bradac & Mulac, 1984; Grob et al., 1997; Hosman & Siltanen).

Research has found mixed results regarding powerful and powerless language. Powerful language is often perceived as more credible and assertive, while powerless language creates and portrays uncertainty (Areni & Sparks, 2005; Blankenship & Holtgraves, 2005; Carli, 1990; Clarke, 2004; Hosman & Siltanen, 2006). However, there is evidence to support the notion that the opposite is true for scientific and health messages (Jensen, 2008; Parascandola, 2000). Research regarding powerless language in health media is quite limited. However, initial studies (Jensen; Parascandola) indicate that powerless language may actually increase credibility in this context. Jensen found that readers prefer more powerless language, specifically hedging, in scientific reporting. This may help to combat the commonly reported problem of health media overgeneralizing and oversimplifying scientific research (Jensen).

Powerless language, and the tentativeness it implies, is important in both scientific and health disciplines, as all scientific study and research has some limitations (Schwartz & Woloshin, 2004). However, with the limited research currently available, it

is difficult to know the full extent language plays in health media and, ultimately, on health behavior. More research is needed in this area to determine this role and how language is and can be used to properly promote healthy behavior. Given the mixed findings regarding powerless language and the notion that powerless language may actually be beneficial in scientific language, it is important to study this aspect of health communication further.

Clarke (2004) stated, however, that understanding how an audience reacts to a message and what the message actually is are two different foci. One must first understand the language of a message and what is being said, before examining how that message affects an audience. If language style plays a role in audience perceptions and behaviors, it must first be established that different sources are using different language styles. This has been done within limited contexts, but not within written health media. This project explores this avenue of research; it hopes to establish that media outlets do vary in language style relative to the biological sex of the author, the biological sex of the intended audience and the topic focus of the source. By establishing that media outlets differ in language styles, this project will provide a basis for the further study of powerless language within written health media.

<div align="center">Project Rationale</div>

The purpose of this project is two-fold. First, this project extends research regarding powerful and powerless language to new contexts. In particular, this project examines how powerless language is used in written health media. Secondly, this project hopes to expand the understanding of factors that affect the use of powerless language. Each of these objectives shall be explained in more detail below.

Powerless language has long been studied within the context of spoken, interpersonal interactions. As such, research regarding language style is limited to this context. Little is known about how powerless language is used, or the effect it has, beyond this understanding. Thus, it is necessary to examine powerful and powerless language in new ways.

Specifically, this project focuses on powerless language in written media. Little research has focused on powerless language in written communication or the media, let alone both (Jensen, 2008). As such, this project takes an exploratory look at how powerless language is used within one context of written media to begin to expand the current understanding of language style.

Furthermore, though the general consensus regarding powerless language is negative, there is evidence to support the notion that this is not true across every context. Research regarding powerless language has been very narrowly focused, concentrating on spoken, interpersonal interactions. Research has just started to explore powerless language in group interactions, the media, and other contexts. Powerless language has also traditionally been viewed as detrimental to a speaker, only recently have the beneficial aspects of such language been explored. Some research indicates that, within health and science, powerless language is not just beneficial it is necessary (Blankenship & Craig, 2007; Crismore & Vande Kopple, 1997; Grabe & Kaplan, 1997; Harres, 1998; Jensen, 2008; Meyer, 1997; Parascandola, 2000; Pellechia, 1997). This project will work to identify where, within the popular media, current research recommendations regarding the necessity of powerless language in health reporting are being followed.

Finally, many factors have been shown to affect the amount of powerless language used within communication. This project aims to expand upon the current understanding of these factors. Author sex, audience sex, and source topic focus are three variables identified as having a possible affect on the use of powerless language. By moving to written media messages this study can provide more evidence as to how much and in what way these factors affect powerless language use.

Summary and Overview of Chapters

This chapter identified the importance of studying public health communication and the language used within health reporting. Chapter two provides a review of literature regarding powerless and powerful language as well as health media. Provided within this review is a description of how the use of powerless language may vary depending on the biological sex of an author, the biological sex of the intended audience, and the overall focus of a media outlet. Chapter three describes the research methodology used in the study. Chapter four examines the results of the content analysis. Finally, chapter five provides an explanation of the findings and suggestions for future research.

CHAPTER TWO. REVIEW OF LITERATURE

Messages sent by the media shape opinions and influence actions. This is especially true in the realm of health reporting, as people rely more heavily on the media for health information than many other sources (Clarke, 2004; Finnegan & Viswanath, 2002; Gibson, 2007; Hofstetter et al., 1992; Jensen, 2008; Nelkin, 1995; Parrott, 1995). It is important then to examine closely the messages sent by the media concerning health information. One specific way to examine these messages is by focusing on language. The portion of the message under examination in this project is the language style or orientation. Language orientation has been shown to have an effect on audience's perceptions of a message and its sender.

This chapter will provide an overview of previous research on the topic as a foundation for the project. A review of literature regarding language orientation will be provided, followed by a review of how language orientation may affect health reporting. Research questions and the hypothesis that guide this study are also presented throughout the chapter.

Powerless and Powerful Language

Language has been shown to influence consumers' perceptions of a source's uncertainty and credibility (Clarke & Everest, 2006; Jensen, 2008; Schwitzer, 2009; Wilson, 2007). Two specific types of language style found to affect uncertainty and credibility are powerful and powerless language. Past research primarily concentrated on the use of powerful and powerless language in spoken dyadic or group communication. However, the findings of these studies (e.g. Areni & Sparks, 2005; Blankenship & Holtgraves, 2005; Bradac & Mulac, 1984; Durik, Britt, Reynolds, & Storey, 2008; Grob

& Allen, 1996; Hosman & Siltanen, 2006; Lakoff, 2004; O'Barr & Atkins, 1980) may have implications for written communication and print media as well. Therefore, literature regarding powerful language, powerless language and the implications of both on audience's perceptions of credibility and uncertainty will be reviewed.

Powerful Language

Powerful language is language that has a "relative absence of hedges, hesitations, and the like" (Hosman & Siltanen, 2006, p. 33). Powerful language is "generally fluent, terse, and direct" in comparison to powerless language (Bradac & Mulac, 1984, p. 307). The powerful language style is more assertive, dominant, certain, and straightforward relative to powerless language (Grob et al., 1997). Research (Bradac & Mulac; Grob et al.; Hosman & Siltanen) shows that powerful language conveys a sense of control over both the self and others. Audiences perceive speakers using powerful language as more credible because of the lack of uncertainty with which they speak (Grob et al.; Jensen, 2008). In addition, speakers who use powerful language are usually rated higher in competence and attractiveness as compared to speakers who use language of a powerless orientation (Bradac & Mulac). Some research has examined differing degrees of powerful language, but usually it is seen as language that is not powerless in nature.

Powerless Language

Powerless language conveys a lack of power, certainty, and control. Powerless language is characterized by certain linguistic markers, specifically hedges, hesitations and tag questions (Areni & Sparks, 2005; Grob et al., 1997; Hosman & Siltanen, 2006; O'Barr & Atkins, 1980). These linguistic markers exhibit tentativeness and hesitancy on the part of the speaker (Grob et al.). Powerless language is a means by which "a speaker

can avoid committing himself, and thereby avoid coming into conflict with the addressee" (Lakoff, 2004, p. 49). Powerless language is often perceived as being unsure of one's statements. Powerless language lacks the control and assertiveness of powerful language; it is more uncertain, tentative, and passive. Powerless language is often identified by specific linguistic markers.

Powerless Language Linguistic Markers

The linguistic markers for powerless language originally identified by Lakoff (2004) included empty adjectives, hedges, hesitations, hypercorrect grammar, and (super)polite forms. However, as research continued and the linguistic markers became more clearly defined and examined the list has changed. Generally, powerless language is defined as the abundance of three linguistic markers: hedges, hesitations, and tag questions. Below is a description of each individual linguistic marker.

Hedges. Hedges are meant to limit, soften or qualify statements. Hedges convey a tentativeness regarding the information being presented (Grob et al., 1997; Jensen, 2008). Hedges allow a speaker to distance himself or herself from the statement to avoid making a commitment to what is being said. Hedges, like all powerless language markers, "convey the sense that the speaker is uncertain about what he (or she) is saying, or cannot vouch for the accuracy of the statement" (Lakoff, 2004, p. 79). Hedges may also be referred to as disclaimers or qualifiers (Grob & Allen, 1996). Examples of hedges include *sort of, may, might, seems, kind of, a little,* or qualifying statements with *I guess* or *I think* (Grob et al.; Lakoff; O'Barr & Atkins, 1980).

Hesitations. In spoken communication, *hesitations* include both verbal and nonverbal markers. Nonverbal hesitations might include extended pauses, while verbal

hesitations include *"You know"* or *"I mean"* and similar phrases or fillers such as *"Um..."* or *"Ehh..."*, (Areni & Sparks, 2005). Hesitations delay or breakup the flow of a message and portray uncertainty. Hesitations are often referred to as fillers, meaningless in nature, yet an opportunity for the speaker to gather him or herself and buy time (O'Barr & Atkins, 1980). Given the nature of hesitations, it is likely that these markers are most apparent in spoken language and may seldom appear in print messages.

Tag questions. A third marker of powerless language is the tag question. *Tag questions* are statements phrased as questions in order to seek confirmation. A tag question is "midway between an outright statement and a yes-no question: it is less assertive than the former, but more confident than the latter" (Lakoff, 2004, p. 48). Tag questions are not meant to be outright questions; the speaker is instead looking for confirmation of an opinion or statement. Tag questions are often used when an individual lacks confidence or certainty in what is being said. An example of a tag question includes, "Sure is hot in here, isn't it?" rather than the statement, "Sure is hot in here." (Lakoff; O'Barr & Atkins, 1980). Here the speaker is distancing him or herself from the statement being made. By asking a question, the speaker is asking for confirmation. However, given that the statement is an opinion, there is no need for confirmation. A tag question detaches some of the ownership of the statement from the speaker, giving addressees leeway on how seriously to take the message (Lakoff; O'Barr & Atkins).

Research regarding powerless language often focuses on individual linguistic markers and/or specific contexts of communication (e.g. Areni & Sparks, 2005; Burrell & Koper, 1998; Blankenship & Holtgraves, 2005; Durik et al., 2008; Hosman & Siltanen, 2006; O'Barr & Atkins, 1980); findings regarding usage of powerless language as a

whole are somewhat mixed. Individual linguistic markers can have varying effects on

perceptions and "a high frequency of occurrence of one particular feature may not

necessarily be associated with a high frequency of another" (O'Barr & Atkins, p. 109).

However, the overall use of powerless language does greatly affect audiences'

evaluations of a speaker. Powerless language has been found, in most research, to result

in perceptions that the speaker is less credible, less dynamic, has less control, and is less

truthful (Burrell & Koper; Erickson, Lind, Johnson, & O'Barr, 1978; O'Barr & Atkins;

Parton, Siltanen, Hosman, & Langenderfer, 2002). In terms of evaluations and persuasive

abilities, powerless language has been shown to have a clear, negative effect (Areni &

Sparks; Blankenship & Holtgraves; Burrell & Koper; Grob et al., 1997). However, this

may not be the case in every context, as will be explored later.

Powerless Language and Biological Sex

The notion of powerless language started with the concept of women's language

(Lakoff, 2004). It was the argument of early scholars that language was a tool used to

keep women in submissive roles in society (Burrell & Koper, 1998; Grob & Allen, 1996;

Lakoff). Men's language was more powerful, exhibiting dominance and control in

society, whereas women used more polite and subservient language as reflections of their

societal roles. The adaptation of men and women's language styles was used to

discriminate against women; women did not know how to speak "properly" so they could

not be counted on to hold positions of power (Burrell & Koper; Lakoff). However,

current research shows that language orientation is more a reflection of an individual's

social status rather than gender (Blankenship & Holtgraves, 2005; Erickson et al., 1978;

O'Barr & Atkins, 1980). O'Barr and colleagues (Erickson et al.; O'Barr & Atkins)

contradicted the concept of "women's language." They instead suggest that such language is "neither characteristic of all women nor limited only to women" (O'Barr & Atkins, p. 102).

Rather, individuals with lower social power and control use more "women's language," which is now referred to as powerless language. It is widely held that the "applicability of syntactic rules is governed by social context - the positions in society of the speaker and addressee, with respect to each other, and the impression one seeks to make on the other" (Lakoff, 2004, p.47). The social position and social power that a speaker has play a greater role in determining the amount of powerful and powerless language used more than the biological sex of a speaker. The condition of lower social power is applicable for both men and women, making the term powerless more fitting as evidence shows that men, as well as women, use these linguistic markers (O'Barr & Atkins, 1980).

Even though powerless language is thought to be an effect of lower social positions, there is still evidence that women tend to use more powerless language than men (Carli, 1990; Crosby & Nyguist, 1977; Grob & Allen, 1996; McMillan, Clifton, McGrath, & Gale, 1977). These findings, however, are attributed to the fact that women tend to hold less social power and control relative to men (O'Barr & Atkins, 1980). However, there are variables that influence the amount of between powerless language used relative to biological sex. These variables include specific linguistic markers as well as audience sex and size.

Overall females use more powerless language than men, but research regarding specific powerless markers has provided mixed results. Concerning hedges, some studies

(Carli, 1990; Crosby & Nyguist, 1977) have found females to use more hedging language. However, other research (Mulac, Wiemann, Widenmann, & Gibson, 1988; Staley, 1982) has contradictory results, indicating males use more hedges. In terms of tag questions, research consistently indicates that females use more tag questions than males (Carli; Crosby & Nyguist; Grob & Allen, 1996; McMillan et al., 1977). While usage regarding specific powerless markers may vary, overall females do tend to use more powerless language than males (Carli, 1990; Crosby & Nyguist; Grob & Allen); however, even this fact is affected by the biological sex and size of the audience.

Research indicates that the biological sex and size of the audience may affect the amount and effects of powerful and powerless language. Studies (Carli, 1990; Grob & Allen, 1996) have indicated that in same- and mixed-sex dyads men speak more powerfully than women, consistent with general conceptions regarding powerless language. However, Carli found that the amount of powerless language a woman used varied depending upon the sex of the group. Carli found that women tended to use more language that is powerless when speaking to men compared to women. Therefore, when women speak to other women, they may use more powerful language than when addressing men. Furthermore, Grob et al. (1997) found that within group communication there was very little difference between men and women in terms of powerless language. They attest that group dynamics influence language more than the biological sex of an individual speaker. Thus, there are evident differences in the usage of powerless language in dyadic interactions compared to group interactions. These differences indicate that powerless language is not always the most prominent language orientation amongst females.

The use of powerless language, in terms of biological sex, is often studied through spoken communication, not print communication, and in the interpersonal context rather than mass media. This limits the knowledge of how biological sex affects powerless language. In the realm of public dialogue, it is difficult to determine the sole ownership of a message (Zehr, 1999). Messages delivered through the media often take on a variety of characteristics from multiple sources. As such, the biological sex of the author of a message may not have as large of an effect on the use of powerless language as previous studies have indicated. The use of powerless language in the media may be influenced by both the biological sex of the author and the intended audience. Since this area of research is largely undeveloped, the following research question is posed:

RQ$_1$: How does the biological sex of the author and the intended media audience affect the use of powerless language in articles regarding health?

Implications of Powerful and Powerless Language

The use of powerless language has been shown to have an adverse effect on evaluations of and reactions to a speaker. Research suggests audiences evaluate a speaker using powerless language as less credible, less competent, and less trustworthy (Bradac & Mulac, 1984; Burrell & Koper, 1998; Carli, 1990; Grob & Allen, 1996; Grob et al., 1997; Hosman & Siltanen, 2006; O'Barr & Atkins, 1980; Parton et al., 2002). Powerless markers, especially when used excessively, give the indication that a speaker lacks certainty and authority. Although language style may have a negative effect on reception and judgments of a speaker, simply altering one's language may not alleviate or help the situation. Carli noted that research indicates, "low status individuals who behave assertively risk the rejection of others" (p. 941). Therefore, individuals who are assumed

to have lower status or power in society risk negative perceptions if they use too much powerful language.

Despite the large foundation of research that identifies powerless language as a negative form of communication, there may be contexts where powerless language is beneficial (Blankenship & Holtgraves, 2005; Burrell & Koper, 1998; Carli, 1990; Harres, 1998; Jensen, 2008; Meyer, 1997). Women are often assumed to be of a lower status in society (Carli), thus their use of powerful language may have effects that are more adverse then the mere use of powerless language. In fact, research (Blankenship & Holtgraves; Carli) has found that women were actually more persuasive when speaking to a male audience using powerless language. Men also perceive a less assertive woman as more trustworthy and likable. Carli found that while women using tentative language were judged as less knowledgeable and competent, they were actually more influential with men. Carli suggests that this is because a woman who speaks assertively may violate expectations, thus losing influence.

The negative implications of powerless language are well supported in the context of spoken, interpersonal communication (e.g. Areni & Sparks, 2005; Bradac & Mulac, 1984; Durik et al, 2008; Erickson et al, 1978; Hosman & Siltanen, 2006; O'Barr & Atkins, 1980; Parton et al., 2002). However, little research (e.g. Crismore & Vande Kopple, 1997; Grabe & Kaplan, 1997; Jensen, 2008; Meyer, 1997; Shaughnessy, 1977) has yet to explore powerless language in written media communication. While it may be the case that powerless language, or certain types of powerless language, have detrimental effects in some written communication as well (Shaughnessy, 1977), the topic focus of the message may affect the amount of powerless language and the effects

such language have (Burrell & Koper, 1998; Crismore & Vande Kopple; Grabe & Kaplan; Jensen; Meyer). Certain topics and situations necessitate the use of powerless language; in those cases, powerless language is seen as more beneficial than powerful language (Blankenship & Craig, 2007; Jensen; Parascandola, 2000; Zehr, 1999). One context where powerless language is necessary and beneficial is health and science reporting.

<div align="center">Health in the Media</div>

The dissemination of health information is vital to the awareness, control, prevention, and treatment of illness and disease. The media has the means to disseminate vast amounts of information to the public quickly. As such, the media has become a major channel of communication in regards to health information. Health news and information are no longer confined to the physician's office. It now fills public discussion, news programs, newspapers, magazines, television programs, and the Internet (Parrott, 1995). Increased attention placed on health by the media is perhaps due to the fact that Americans are placing more emphasis on health issues. Because of the availability of convenient sources of information, "increasingly citizens are taking a more active part in their own health and health care, often on the basis of information gleaned from the mass media" (Clarke, 2004, p. 542). People are relying heavily on media outlets for information regarding their health (Hofstetter et al., 1992). Society is turning to television, Internet, magazines, newspapers, and other media outlets for information rather than seeking information from medical professionals. For many individuals, the only news information they are exposed to comes from the media; the media is their

primary source of information regarding health, illness, disease and fitness (Jensen, 2008; Nelkin, 1995; Pellechia, 1997).

Various researchers (e.g. Clarke & Everest, 2006; Finnegan & Viswanath, 2002; Gibson, 2007; Hofstetter et al., 1992; Lang & Yegiyan, 2008; Stryker et al., 2005) indicate that the media has the capabilities to have powerful effects on the public. Stryker et al. suggest, "evidence is accumulating that news media messages ... affect participation in prevention and detection behaviors" (p. 492). Media attention to health issues and research can have tremendous effects on behavior, even when information is exploratory (Nelkin, 1995). Individuals do not want to take the risk of not following the offered health recommendations.

The effects of the media can be seen in various research studies (e.g., Clarke & Everest, 2006; Gibson, 2007; Hofstetter et al., 1992; Lang & Yegiyan, 2008; Nelkin 1995); advancements in media technology both aid and hinder healthy lifestyle choices. "From a public health perspective, the miracles of communication technology and the evolving influence of the media in our lives pose both great promise and worrisome perils" (Finnegan & Viswanath, 2002, p. 365). The effects of the media, both positive and negative, are affected by uncertainty in the media's messages.

Uncertainty in Media Messages

Inaccurate and consequence-free messages have innately negative effects on health behavior; however, an inconsistency of messages in the media creates uncertainty which may also lead to negative health effects. Nelkin (1995) states that poor reporting by the media about health and scientific issues can "mislead and disempower a public" (p. 2). There has been evidence that the media does not satisfactorily report health issues.

In fact, research (Clarke & Everest, 2006) has shown that contradiction, confusion, and uncertainty are major themes in media addressing health topics. This causes mistrust and insecurity for the consumers of such media (Clarke & Everest; Einsiedel & Thorne, 1999; Nelkin; Wilson, 2007). The 2007 Health Information National Trends Survey (HINTS) found that while media was the most popular source for seeking recent health information, doctors and medical professionals remain the most trusted (National Cancer Institute, 2007). The HINTS study also indicates that of the media contexts identified (radio, Internet, television, and newspaper/magazines), almost half of the respondents had little to no trust in the health information provided by these sources.

The type of messages delivered by the media may affect the amount of trust an audience has in the media. Clarke and Everest's (2006) content analysis supports this idea, suggesting that the media promotes the idea that any and everything can cause illness and disease, yet any and everything can treat and prevent illness as well. Much of the media has moved to a "carcinogen-of-the-week" style of health reporting (Jensen, 2008). The media continuously highlight new studies and findings, so there is always new and conflicting information. Consumers are not sure what or who to believe.

Furthermore, the media works to sell the news in order to attract more consumers, a necessity in a commercial market. "The function of the press in society is to inform, but its role is to make money" (Liebling, 1961, p. 7). This often requires making somewhat dull stories more interesting. However, this can have a negative effect on health messages in the media (Klaidman, 1990). Jensen (2008) noted, "it has been suggested that nutritional backlash might be a byproduct of sensationalized and conflicting news media coverage" (p. 365). Media outlets also put more emphasis on news stories with a quick

turnaround that require little preparation time. One reporter stated, "there's more pressure to react quickly to something and there's not as much time to really figure it out" (Schwitzer, 2009, p. 9). Journalists are expected to get a high profile story. The focus has shifted to new breakthroughs and research; the quick pace of the media industry does not allow much time for reporters to get all of the facts about which they are reporting. Due to the pressure to generate a story, reporters often "omit contrary information or do not acknowledge the uncertainty that often surrounds new tests and treatments" in an attempt to "shorten, simplify, and produce a dramatic storyline" (Schwitzer, p. 9). The omission of some facts and limitations can transform the information and result in a misleading story (Pellechia, 1997). This often works against the goals of medical scientists and researchers and, ultimately, creates uncertainty for the consumer.

Much of the attention given to health issues through the radio and television is done in quick intervals. Headlines and major findings are addressed but little attention is given to the details (Brody, 1999). This does a disservice to the information being addressed, as "it is not possible in 30, 60, or even 90 seconds of air time to describe all the ifs, ands, and buts" that are needed for an audience to understand and appreciate the implications of the health information in their personal lives (Brody, p. 170). Print media allows for a more comprehensive dissemination of health information. Print media is unique in that it can give a more detailed account of medical advancements, including limitations. The job of the print media is to clarify and help put into perspective the information provided through other media channels (Brody). Newspapers, magazines, websites, and journals allow for more detailed and explicit language to be used and for more space and time to be devoted to meaningful and accurate reports of health issues.

However, even with the space allowed in print media, the message regarding health issues is still sometimes ambiguous. The language of a particular message itself, even with all of the facts, may create uncertainty for the audience. As noted earlier, the media can have a large effect on consumers, so it is important to assess what types of language and messages are being delivered through the media in order to eventually understand how these messages may affect consumers. As stated earlier, one type of language that has been shown to have some effect on certainty is powerless language.

Powerless Language in Health Media

There has been much debate over the use of uncertain or powerless language in health reporting. Some researchers "recommend avoiding ambiguous language in the design of health messages" (Parrott, 1995, p. 16). Other research provides evidence as to the benefits of powerless language (Blankenship & Craig, 2007; Crismore & Vande Kopple, 1997; Grabe & Kaplan, 1997; Harres, 1998; Jensen, 2008; Meyer, 1997; Parascandola, 2000; Pellechia, 1997). However, the current consensus is to limit the amount of powerless language used. Writers work to avoid the use of powerless linguistic markers because such language leaves room for doubt and portrays uncertainty. The thought is that the use of powerless language distracts attention from the health message (Parrott). However, an often-reported problem with health media is the overgeneralizations and simplifications journalists make regarding scientific research (Jensen; Pellechia; Zehr, 1999). This is because "medical journalists have a very difficult role: they translate complex messages under deadline into news that people can understand" (Schwartz & Woloshin, 2004, p. 226). To make the information more understandable, they often remove many of the caveats and limitations that are

considered powerless language. The removal of powerless language makes health reports seem more certain and simple than they actually are. This can create a variety of problems for consumers and medical professionals alike.

Moyer, Greener, Beauvais, and Salovey (1995) found that news media treat research speculation as fact, omit qualifications to study findings, and overgeneralize research findings. News media report frequently on scientific research studies that are tentative and have limited findings or are later harshly criticized by the research field. Hedging, qualifiers, and limitations are often eliminated from these reports, making the findings seem more significant than they truly are. This, in the end, has a negative effect on science as well as science journalists (Jensen, 2008; Parascandola, 2000). Molitor (1993) provided a number of examples of the negative effects of media misreporting. These include the assumption that an AIDS cure or vaccination is very near or that everything can lead to cancer. He summarizes that "media reports may be guilty of creating unnecessary fears and promoting false hopes" (Molitor, p. 211).

Although much of the extant research about powerless language suggests that it reduces credibility and creates uncertainty, there is evidence to suggest it plays a different role in health and science (Blankenship & Craig, 2007; Crismore & Vande Kopple, 1997; Grabe & Kaplan, 1997; Harres, 1998; Jensen, 2008; Meyer, 1997; Molitor, 1993; Moyer et al., 1995; Parascandola, 2000; Pellechia, 1997). The use of powerless language positively affects medical practitioners working to elicit and confirm medical information from patients (Blankenship & Craig; Harres). Using powerless language, doctors can decrease their social distance from the patient; patients in turn were more likely to

volunteer information (Harres). However, most studies have again focused on verbal, interpersonal communication or academic discourse, not on media communication.

Research conducted on written communication of science indicates that powerless language, specifically hedging, is a necessity (Crismore & Vande Kopple, 1997; Grabe & Kaplan, 1997; Jensen, 2008; Meyer, 1997). Overgeneralized reporting can have a negative impact on perceptions of credibility and certainty. Powerless language, and the tentativeness that it implies, is important in scientific and health reporting, as all studies and research have some limitations (Schwartz & Woloshin, 2004). However, studies (e.g., Crismore & Vande Kopple; Grabe & Kaplan; Meyer) have focused on health and science in the realm of academic discourse. Research regarding powerless language in health media is quite limited (e.g., Jensen, 2008; Zehr, 1999) and it is difficult to know the full extent language plays in health media. Research indicates that a lack of uncertainty in health media can have detrimental effects on consumers. However, given the nature of the media world and the pressures being put on journalists, it is possible the recommendations of this research are not being followed, especially in the realm of popular media.

Scientific researchers and medical professionals are aware of the necessity of uncertainty and limitations in health reporting; to general writers and journalists, however, the limitations may not be as important (Fahnestock, 1986; Jensen, 2008). Thus, it would make sense that media sources that employ science and medical staff, or those that focus specifically on health issues would use more powerless language.

H_1: In health related articles, magazines with a focus on health will use more powerless language than magazines with a generic focus.

Research has not yet addressed what specific markers of powerless language the media use when addressing health. It is important to analyze the different linguistic markers being used by both health-focused and generic-focused media outlets, in order to more fully understand how powerless language is used by written media outlets. Thus, the following research questions are proposed:

RQ$_2$: How does the overall topic focus of the magazine (i.e., health or generic) affect the use of specific powerless markers in articles regarding health?

RQ$_2$a: How does the overall topic focus of the magazine (i.e., health or generic) affect the use of hedges markers in articles regarding health?

RQ$_2$b: How does the overall topic focus of the magazine (i.e., health or generic) affect the use of hesitations markers in articles regarding health?

RQ$_2$c: How does the overall topic focus of the magazine (i.e., health or generic) affect the use of tag questions in articles regarding health?

All of the variables identified – the biological sex of the author, the biological sex of the audience, and the topic focus of the source – have been shown to affect the use of powerless language. However, given that little research has focused on powerless language in the media, little is known about how these variables interact to influence language styles in written media. As such, the following research questions are posed:

RQ$_3$: How do the biological sex of the author and the overall topic focus of the magazine (i.e., health or generic) affect the use of powerless language in health articles?

RQ$_4$: How do the biological sex of the intended audience and the overall topic focus of the magazine (i.e., health or generic) affect the use of powerless language in health articles?

CHAPTER THREE. METHODOLOGY

Research indicates that powerful and powerless language can have varying effects on message reception. Specifically, research suggests that powerless language conveys a sense of uncertainty, which is a necessity in scientific and health reporting (Jensen, 2008; Pellechia, 1997; Schwartz & Woloshin, 2004; Zehr, 1999). The purpose of this content analysis is to examine the use of powerless language by the media when disseminating health information through popular magazines.

Population and Sample

The current content analysis reviewed articles about health issues from magazines in order to compare the use of powerful and powerless language based on different variables. The messages delivered each month through magazines include a number of references to health information and research. This information may be the focus of a media outlet, the focus of an individual article, or simply a snippet on a page. However the information is delivered, it can play a role in health behavior and as such is important to analyze (Lang & Yegiyan, 2008; Parrott, 1995; Stryker et al., 2005).

Magazines were chosen as examples of print media sources because of the pertinence and permanence of magazines in U.S. culture; magazines can be found in widespread circulation across the nation (Clarke & Everest, 2006). Magazines are one of the most popular and widely used offline sources of health information in the United States (Cotton & Gupta, 2004; Dutta-Bergman, 2004). The magazines used for analysis concentrate either specifically on health topics or on a generic coverage of popular culture; they also targeted either a female or a male audience rather than mixed-sex audiences. Individual magazine selection was based upon two criteria, 1) the magazine

was identified by the Magazine Publishers of America (2009) as one of the highest circulating magazines within its genre, and 2) the magazine was available in full-text via the North Dakota State University or Concordia College library databases. An overview of each magazine is provided; this overview helps to identify each of the genres of magazines included in the analysis.

Magazine Selection

The following magazines were chosen for analysis: *Cosmopolitan, Marie Claire, Redbook, Women's Health, Shape, Prevention, Esquire, GQ: Gentleman's Quarterly, Details, Men's Health, Muscle & Fitness,* and *Men's Fitness.* From the background information collected, it is evident that the selected sample portrays each genre effectively and covers a wide array of targeted audiences.

Female Generic Outlets

Cosmopolitan, Marie Claire, and *Redbook* served as sources for articles with a female, generic focus. *Cosmopolitan* is one of the top selling women's lifestyle magazines in press today (Cosmopolitan, 2009). *Cosmopolitan* covers a variety of topics including romance, lifestyle, popular culture, health, well-being, fashion, and much more (Cosmopolitan). *Cosmopolitan* readers generally consist of females between the ages of 18 and 34, thus the income levels, working, and marital status of readers vary significantly (Cosmopolitan). *Marie Claire* is a women's fashion and entertainment magazine, but it appeals to all aspects of the female lifestyle (Marie Claire, 2009). *Marie Claire* readers are typically middle-class, 25 to 49 year old females (Marie Claire). *Redbook* was developed for women looking for a variety of information. Its focus encompasses all aspect of a woman's life, including fashion, beauty, health, money,

nutrition and relationship advice (Redbook, 2009). *Redbook* readership generally includes 30 to 49 year old women earning at least $75,000 per year (Redbook).

Female Health Outlets

Women's Health, Shape, and *Prevention* served as sources of articles with a female, health focus. *Women's Health* was created for women with a focus on being both physically and emotionally healthy (Women's Health, 2009). *Women's Health* readers are typically females between the ages of 25 and 54, who have or are attending college and earn at least $50,000 a year (Women's Health). *Shape* provides information for women on how to look and feel better, specifically targeting healthy lifestyles through diet and fitness (Shape, 2009). The readership of *Shape* is made up mainly of middle-class women between the ages of 25 and 49 (Shape). *Prevention* was developed to be an authoritative voice of information regarding health and medical information for women (Prevention, 2009). *Prevention* readership is comprised mainly of employed women over the age of 35, who are married, and earning at least $50,000 a year (Prevention).

Male Generic Outlets

Details, Esquire and *GQ: Gentlemen's Quarterly* served as sources for articles with a male, generic focus. *Details* covers a variety of topics of interest to the modern man including information on style, well-being, popular culture, and masculinity (Details, 2009). *Details* readers generally consist of males between the ages of 25 and 54, earning an average of $100,000 per year (Details). *Esquire* is typically a men's fashion and lifestyle magazine, but it appeals to all aspects of a man's life (Esquire, 2009). *Esquire* readers are typically 25-49 years old males earning at least $150,000 per year (Esquire). *GQ* was developed for men looking for information about style, entertainment and

culture (GQ, 2009). *GQ* readership is comprised of middle-class men, 25 to 49 years old (GQ).

Male Health Outlets

Men's Health, Muscle & Fitness, and *Men's Fitness* served as sources for articles with a male, health focus. *Men's Health* is a source of information for men regarding all aspects of health, including physical, emotional and mental health (Men's Health, 2009). *Men's Health* targets all men with the majority of their audience coming from middle-class, 25 to 49 year old males (Men's Health). *Muscle & Fitness* is targeted towards men working on nutrition and strength training (Muscle & Fitness, 2009). *Muscle & Fitness* readers tend to be middle-class men between the ages of 18 and 34 (Muscle & Fitness). *Men's Fitness* was developed for men looking for a variety of information, but concentrates most of its focus on fitness and health (Men's Fitness, 2009). The readership for *Men's Fitness* is generally comprised of 18 to 34 year old men earning at least $75,000 per year (Men's Fitness).

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Sampling

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A one-year time span, October 2008 to September 2009, was selected to represent each particular magazine. All articles regarding health, from each issue within this time span, were identified as part of the possible sample. An article was defined as a full-length piece, boxed highlight, or question and answer column (Johnston & Swanson, 2003). Bases on previous literature it was established that in order to be counted as a part o the sample, articles must be 75 words or longer and the articles focus must be related to health (Pellechia, 1997). Advertisements and letters to the editors were not included as

part of the sample. The average length of the articles was 651.33 words, ranging from 78 words to 2,547 words.

Only articles focusing on health information or research were included in the sample. Using the databases of North Dakota State University and Concordia College, each magazine's collection was accessed. A simple search was used to locate articles regarding health within the time span indicated. The term "health" was put into the search box and used to retrieve articles. Results were evaluated based on the criteria listed above in order to determine whether the article qualified for the sample. No topic exclusion criteria were set for references to specific health information. Health topics included exercise, nutrition, disease/illness treatment and prevention, hygiene, medical research, mental health and general health practice.

The sampling of articles from individual magazines resulted in a large number of eligible articles for the men's health, women's health, and women's generic categories. Within the men's health genre there were 133 articles identified as eligible for analysis; within the women's health there were 126 eligible articles and within the women's generic genre there were 96 eligible articles. As such, a random number generator produced a random sample of 40 articles within each of these categories. Only 21 articles found were eligible for the sample within the men's generic category; thus, all articles were used for analysis. A total of 141 articles were included in the sample.

Data Analysis

Within each category, an equal sampling from each magazine was ideal. However, through random sampling more articles were collected from some magazines compared to others. In total *Men's Health* accounted for 11 articles, *Muscle & Fitness* for

12 articles, *Men's Fitness* accounted for 17 articles, *Women's Health* for 9 articles, *Shape* accounted for 13 articles, *Prevention* for 18 articles, *Cosmopolitan* for 14 articles, *Redbook* for 14 articles, *Marie Claire* for 12 articles, *GQ* for 4 articles, *Esquire* for 7 articles and *Details* accounted for 10 articles. Each article was further broken down into units for analysis through unitization.

Unitization

In content analysis, the unit of analysis is the identified message or message component that serves as the sample upon which variables are measured and reported (Neuendorf, 2002). The unitization process is the means by which larger samples are broken up into these units of analysis. Units can be individual characters, words, phrases, themes, time periods, interactions, articles, episodes, or other forms of measurement (Krippendorff, 2004; Neuendorf). The population sample for this study consists of individual articles, which were further broken down into thought units for analysis. The average length of the articles was 49.83 thought units, ranging from 4 thought units to 246 thought units.

Content analysis of linguistic markers within written media often uses sentences or paragraphs as basic units of analysis (Matthes & Kohring, 2008). However, given the nature of the variables in this study, it is possible for one sentence to be both powerful and powerless in nature. As such, the unit of analysis here was individual thought units or clauses. Clauses, or thought units, were identified based on the absence or presence of key structural markers (Hatfield & Weider-Hatfield, 1978; Neuendorf, 2002). A thought unit was determined to be a statement that could, in essence, stand alone and remain a complete thought (Grob et al., 1997). In this study, a sentence may consist of multiple

units, but a unit was no longer than one sentence. Sentences with multiple independent clauses contained multiple units of analysis (Taboada & Zabala, 2008).

In order to determine intercoder reliability relative to unitization, the researcher and one trained coder coded 20% (28 articles) of the total sample. Intercoder reliability was achieved (coefficient of reliability = .903). All discrepancies between coders were discussed until consensus was reached. After reliability was established for unitization, the researcher examined the remaining articles to determine unitization. The last 20% (28 articles) of the data was tested for coder drift, and reliability was satisfactory. A total of 141 articles were used for analysis, resulting in 7,026 individual thought units.

Coding Scheme

The coding scheme used for this study included four variables. The first three variables describe the sample and articles: 1) biological sex of the author (male, female), 2) biological sex of the intended audience (male, female), and 3) the source's content focus (health, generic). Descriptive information regarding each article was also recorded to help with record keeping. Author gender was determined by using magazine websites and simple internet searches for biographical data. The final variable in the coding scheme concerns the orientation of language used within the article. This variable was established based on previous research regarding powerful and powerless language. Each unit of analysis was coded based on its powerless or powerful orientation. Individual linguistic markers were also coded for those units identified as powerless. Each of these variables is defined below.

Powerless Language

The use of powerless language is a means by which a source can deflect the ownership of a statement in order to avoid coming into conflict with an audience (Lakoff, 2004). Coding for powerless language followed the coding procedures described in previous literature (Areni & Sparks, 2005; Carli, 1990; Grob et al., 1997; Lakoff; O'Barr & Atkins, 1980). Powerless language was identified by looking for the presence of hedges, hesitations, and tag questions. These particular linguistic markers demonstrate uncertainty on the part of the author. Each linguistic marker is defined below.

Hedges. Hedge markers included words and phrases that would serve to moderate a statement. Examples of hedges include, but are not limited to, *may, like, might, could, sort of, kind of, seems, a little, possibly will, perhaps, maybe* or prefacing statements with *I guess, in my opinion, I think,* or some other variation of these markers (Carli, 1990; Grob et al., 1997; Lakoff, 2004; O'Barr & Atkins, 1980). The context of the statement is taken into consideration before identifying a hedge marker, as certain statements using these words (e.g., can, like) were not necessarily labeled as hedges. Examples of hedges from the sample for analysis include "the juice's potent anti-inflammatory powers could also help to deter arthritis and heart disease" (Green, 2009, p. 15) and "gyms are usually fairly recession-proof" (Pesta, 2009, p. 85).

Hesitations. Hesitations include pauses or breaks in communication. Hesitations in written communication include fillers, which are meaningless in nature, but take up space and time as the source of information moves on to the next point (O'Barr & Atkins, 1980). Hesitation markers include *you know* or *I mean* phrases and statements (Areni & Sparks, 2005). Hesitations in written language may also include linguistic symbols such

as dashes, parentheses, brackets, or ellipses. The context of the statement is taken into consideration before identifying a hesitation marker, as certain statements using hesitation phrases or symbols may not actually be hesitations. Examples of hesitations from the sample for analysis include "most people know saturated fats are bad…except they're not" (Brown, 2009, p. 274) and "I've avoided making for, um, fourteen years" (Lovell, 2009, p. 112).

Tag Questions. Tag questions are statements that are phrased as questions rather than declaratives. Using a tag question may include asking, *"It is hot in here, isn't it?"* rather than simply stating, *"It is hot in here"* (Lakoff, 2004; O'Barr & Atkins, 1980); in this instance "isn't it" would qualify as a tag question. A tag question conveys uncertainty; it indicates that the source is looking for clarification or reassurance (Lakoff). The context of the question is taken into consideration before identifying a tag question marker, as certain questions are intended to elicit answers and are not intended to be statements at all; thus, they would not be tag questions. An example of tag questions from the sample include "Because when it makes you leaner and more ripped, being manipulative doesn't sound so bad, does it?" (Stoppani & Wuebben, 2009).

Powerful Language

The nature of powerless and powerful language is such that a clear definition of one orientation lends to an understanding of both styles. Powerful language is the relative lack of powerless markers. Simply put, powerful language is everything that is not powerless language. While it may be true that there are forms of communication that are more powerful than others, for this analysis powerful language was simply viewed as one collective orientation.

Coder Training

The researcher developed a codebook (See Appendix A) based on previous literature. The codebook defined the coding process and variables coded. Coders were supplied with codebooks during coder training. Coders met prior to initial coding to go through the codebook and address questions relative to the variables. Coders practiced variable coding on articles not included in the population sample until reliability was satisfactory. The codebook and variable definitions were revised and updated as needed. When reliability was reached in training, coders independently coded 20% (28 articles) of the sample. Intercoder reliability was achieved (Cohen's Kappa = .931). Discrepancies amongst coders were discussed until consensus was reached. After reliability was established, the researcher coded all of the articles in the sample. Following analysis of the whole sample, reliability was tested on the last 20% (28 articles) to determine whether coder drift occurred. Reliability with this sample was satisfactory; coder drift was not a factor.

Following the coding of the sample, data were analyzed to address the hypothesis and research questions. The first research question addresses how the use of powerless language is affected by the biological sex of the author and the biological sex of the targeted audience. The first hypothesis and second research question look at how the amount of powerless language, generally and through specific linguistic markers, varied between health-focused magazines compared to magazines with a generic focus. The third research question addresses how the use of powerless language is affected by the interaction of the focus of the magazine and the biological sex of the author. The fourth research question addresses how the use of powerless language is affected by the

interaction of the focus of the magazine and the biological sex of the intended audience. All of the differences were tested using a series of chi-square tests. For significant chi-squares, Holm's Sequential Bonferroni was used for follow up testing to determine specific differences between categories. Analysis of these variables provides a more complete understanding of the use of powerless language in terms of both health reporting and the media.

CHAPTER FOUR. RESULTS

All articles included in the sample were coded based on the previously defined coding scheme. The research questions were addresses and the hypothesis was tested using a series of chi-square tests. Descriptive information and data analysis results are provided below.

In total, 141 articles were coded, resulting in 7,026 individual thought units. Male authors accounted for 42 articles (2,525 units), female authors for 87 articles (4,358 units), and no author was identifiable for 12 articles (143 units). Sources targeting a male audience accounted for 61 articles (3,042 units) while sources targeting a female audience accounted for 80 articles (3,984 units). In consideration of the target audience, males wrote 32 articles (1,988 units) for males and 10 articles (537 units) for females, while females wrote 61 articles (3,377 units) for females and 26 articles (981 units) for males. Articles were also distinguished relative to magazine topic focus. Health-focused magazines accounted for 80 articles (3,908 units), while generic-focused magazines accounted for 61 articles (3,118 units). Males wrote 29 articles for health-focused magazines (1,764 units) and 13 articles for generic-focused magazines (761 units). Females wrote 41 articles for health-focused magazines (2,045 units) and 46 articles for generic-focused magazines (2,313 units). Relative to the biological sex of the intended audience and topic focus, male/health magazines accounted for 40 articles (1,960 units), male/generic magazines for 21 articles (1,082 units). The female/health magazines accounted for 40 articles (1,948 units) and female/generic magazines for 40 articles (2,036 units).

RQ1: Biological Sex of the Author and Intended Audience

Research question one addressed the effects the biological sex of the author and the biological sex of the intended audience had on the use of powerless language. Of the 7,026 units of analysis, 6,404 units were identified as powerful and 622 units were identified as powerless in orientation. Male authors accounted for 2,525 total thought units, of which 146 (5.8%) were powerless, while female authors accounted for 4,358 total units, of which 450 (10.3%) were powerless. No author was identifiable for 12 articles (143 units); these units were not included in analysis of this research question. A chi-square test indicated that female authors used significantly more powerless language than male authors (χ^2 (1, N = 6,883) = 41.73, p < .001, V = .078).

Magazines targeting a female audience accounted for 3,984 thought units, of which 405 (10.2%) were powerless. Magazines targeting a male audience accounted for 3,042 total units, of which 217 (7.1%) were powerless. A chi-square test indicated that significantly more powerless language was present in articles targeted towards a female audience (χ^2 (1, N = 7,026) = 19.654, p < .001, V = .053). The sample indicates that females use more powerless language than males and that powerless language is used more often in articles directed towards females.

Female authors to female audiences accounted for 3,377 total thought units, 348 (10.3%) of which were powerless. Male authors to male audiences accounted for 1,988 total thought units, 112 (5.6%) of which were powerless. Female authors to male audiences accounted for 981 total thought units, 102 (6.4%) of which were powerless. Male authors to female audiences accounted for 537 total thought units, 34 (6.3%) of which were powerless. A chi-square test indicated that there was a significant difference

between the amounts of powerless markers used across the whole sample (χ^2 (3, N = 6,883) = 41.998, $p < .001$, $V = .078$). These results are summarized in Table 1.

Table 1

Frequency of Powerless Language based on Author and Audience Sex

Female Author		Male Author	
Female Audience	Male Audience	Female Audience	Male Audience
348 (10.3%) a	102 (10.4%) a	34 (6.3%) b	112 (5.6%) b

χ^2 (3, N = 6,883) = 41.998, $p < .001$, $V = .078$

Note: Percentages with no subscript in common differ at $p < .05$ using Holm's Sequential Bonferroni post hoc comparisons.

Follow up testing indicated that the frequency of powerless language in female-authored articles targeting female audiences was significantly higher than the frequency of powerless language in male-authored articles targeting both male audiences (χ^2 (1, N = 5,365) = 34.832, $p < .001$, $V = .081$) and female audiences (χ^2 (1, N = 3,914) = 8.306, $p = .004$, $V = .046$). Testing also indicated that the frequency of powerless language in female-authored articles targeting male audiences was significantly higher than the frequency of powerless of powerless language in male-authored articles targeting both males (χ^2 (1, N = 2,969) = 22.287, $p < .001$, $V = .087$) and females (χ^2 (1, N = 1,518) = 7.034, $p < .01$, $V = .068$). However, the frequency of powerless language did not differ significantly between female-authored articles targeting female and male audiences (χ^2 (1, N = 4,358) = .007, $p = .933$). There was also no significant difference between male-author articles targeting male audiences and female audiences (χ^2 (1, N = 2,525) = .378, $p = .539$). Overall, these results indicate that female-authored articles, targeting both males

and females, use significantly more powerless language than male-authored articles targeting both males and females.

H1 and RQ2: Health and Generic Focused Magazines

Hypothesis one proposed that magazines with a health focus would use more powerless language than magazines with a generic focus in articles regarding health. Of the 3,908 thought units identified in health-focused magazines, 409 (10.5%) were powerless in orientation. Of 3,118 thought units indentified in generic-focused magazines, 213 (6.8%) were powerless in orientation. A chi-square test supported the hypothesis, indicating that there was significantly more powerless language in health-focused magazines than in generic-focused magazines (χ^2 (1, $N = 7,026$) = 28.39, $p < .001$, $V = .064$).

Research question two addressed the usage of specific powerless markers in health and generic-focused magazines. Of the 622 units identified as powerless in orientation, 26 (4.2%) were tag questions, 7 (1.1%) were hesitations, and 589 (94.7%) were hedges. As suspected, tag questions and hesitations do not appear to be prominent in written media communication. Hedges were clearly the most dominant of the individual linguistic markers across the sample.

Due to the low frequencies of tag questions and hesitations, chi-square assumptions were violated. Descriptive data regarding tag questions and hesitations is provided, but tests were not run or reported. Of 26 tag questions identified in the sample, 8 (30.8%) were from health-focused magazines and 18 (69.2%) were from generic-focused magazines. Of the 7 hesitations identified in the sample, 2 (28.6%) were from health-focused magazines and 5 (71.4%) were from generic-focused magazines. Tests

were run to compare the use of hedges amongst the sample. Of 589 hedges identified in the sample, 399 (67.7%) were from health-focused magazines and 190 (32.3%) were from generic-focused magazines. A chi-square test indicated that there was a significant difference (χ^2 (1, N = 622) = 19.452, p < .001, V = .177) between the number of hedges used by health-focused and generic-focused magazines across the whole sample. Health-focused magazines used more hedging than generic-focused magazines.

RQ3: Biological Sex of the Author and Magazine's Focus

Research question three addressed how the biological sex of the author and a magazine's focus affect powerless language in articles regarding health. There are 6,287 powerful thought units and 596 powerless units with an identifiable author. No author was identifiable for 12 articles (143 units); these units were not included in the analysis of this research question. Female authors in health-focused magazines accounted for 2,045 total thought units, 271 (13.3%) of which were powerless. Female authors in generic-focused magazines accounted for 2,313 total thought units, 179 (7.7%) of which were powerless. Male authors in health-focused magazines accounted for 1,764 total thought units, 120 (6.8%) of which were powerless. Male authors in generic-focused magazines accounted for 761 total thought units, 26 (3.4%) of which were powerless. A chi-square testing the affect of author sex and magazine focus on powerless language usage indicated that there were significant differences in powerless language across the male-health, male-generic, female-health and female-generic articles (χ^2(3, N = 6,883) = 91.145, p < .001, V = .115). These results are summarized in Table 2.

Follow up testing indicated that the frequency of powerless language in female-authored articles in magazines with a health focus was significantly higher than the

frequency of powerless language in female-authored articles in generic-focused magazines (χ^2 (1, N = 4,358) = 35.625, p < .001, V = .090). Female-authored articles in health-focused magazines also used more powerless language than male-authored articles in both health-focused (χ^2 (1, N = 3,809) = 42.762, p < .001, V = .106) and generic-focused magazines (χ^2 (1, N = 2,806) = 56.687, p < .001,

Table 2

Frequency of Powerless Language based on Author Sex and Topic Focus

Female Author		Male Author	
Health Focus	Generic Focus	Health Focus	Generic Focus
271 (13.3%) a	179 (7.7%) b	120 (6.8%) b	26 (3.4%) c

$\chi^2(3, N$ = 6,883) = 91.145, p < .001, V = .115

Note: Percentages with no subscript in common differ at p < .05 using

Holm's Sequential Bonferroni post hoc comparisons.

V = .142). Male-authored articles in generic focused magazines also used less powerless language than female-authored articles in generic-focused magazines (χ^2 (1, N = 3,074) = 17.187, p < .001, V = .075) and less than male-authored articles in health-focused magazines (χ^2 (1, N = 2,525) = 11.19, p < .001, V = .067). There was no significant difference between female-authored articles in generic-focused magazines and male-authored articles in health-focused magazines (χ^2 (1, N = 4,077) = 1.291, p = .256).

RQ4: Biological Sex of Intended Audience and Magazine's Focus

Research question four addressed how the biological sex of the intended audience and the magazine's focus affect the use of powerless language in articles regarding health. Of the 7,026 thought units, 6,404 were powerful and 622 were powerless.

Magazines with a health focus targeting females accounted for 1,948 total thought units, 234 (12.0%) of which were powerless. Magazines with a generic focus targeting females accounted for 2,036 total thought units, 171 (8.4%) of which were powerless. Magazines with a health focus targeting males accounted for 1,960 total thought units, 175 (8.9%) of which were powerless. Magazines with a generic focus targeting males accounted for 1,082 total thought units, 42 (3.9%) of which were powerless. A chi-square testing the effect of intended audience sex and magazine focus on powerless language usage indicated that there were differences in powerless language across the male/health, male/generic, female/health and female/generic articles ($\chi^2(3, N = 7,026) = 57.770$, $p <$ .001, $V = .091$). These results are summarized in Table 3.

Table 3

Frequency of Powerless Language based on Audience Sex and Topic Focus

Female Audience		Male Audience	
Health Focus	Generic Focus	Health Focus	Generic Focus
234 (12.0%) a	171 (9.0%) b	175 (8.9%) b	42 (3.9%) c

$\chi^2(3, N = 7,026) = 57.770$, $p < .001$, $V = .091$

Note: Percentages with no subscript in common differ at $p < .05$ using Holm's Sequential Bonferroni post hoc comparisons.

Follow up testing indicated that the frequency of powerless language in female-targeted, health-focused magazines was significantly higher than the frequency of powerless language in female-targeted, generic-focused magazines ($\chi^2 (1, N = 3,984) = 14.234$, $p < .001$, $V = .060$). Female-targeted, health-focused magazines also used more powerless language than male-targeted, health-focused magazines ($\chi^2 (1, N = 3,908) =$

9.915, p = .002, V = .050) and male-targeted, generic-focused magazines (χ^2 (1, N = 3,030) = 55.543, p < .001, V = .135). Male-targeted, generic-focused magazines also used less powerless language than female-targeted, generic-focused magazines (χ^2 (1, N = 3,118) = 22.651, p < .001, V = .085) and less than male-targeted, health-focused magazines (χ^2 (1, N = 3,042) = 26.805, p < .001, V = .094). There was no significant difference between female-targeted, generic-focused magazines and male-targeted, health-focused magazines (χ^2 (1, N = 3,996) = .354, p = .552).

These results offer further insight to the understanding of powerless language. Specifically, this study extends the notions of powerless language to include written, health media. Specific findings and implications will be discussed further in the chapter five.

CHAPTER FIVE. DISCUSSION

The purpose of this study was to examine the use of powerless language in articles regarding health topics in print media, specifically magazines. Data analysis found significant differences for powerless language use relative to all tested variables: author sex, intended audience sex, and topic focus. Female authors use significantly more powerless language than male authors do. Powerless language is more frequently targeted towards female audiences than towards male audiences. Finally, health-focused magazines use more powerless language than generic-focused magazines. These findings directly support, and further extend, past research on powerless language. The following chapter discusses the implications of these findings and provides direction for future research.

Implications

Multiple implications are evident from this study. These implications can be categorized by their extension of past research on powerless language. First, findings of this study advance the notions of moderating variables of powerless language, including biological sex and topic focus. Furthermore, this study advances the comprehensive understanding of powerless language by examining language orientation in written media. Each of these implications shall be discussed in more detail below.

Moderating Variables of Powerless Language

One of the major contributions of this project is the support it provides for the moderating variables of powerless language. The findings support the idea that the biological sex of the author and the biological sex of the intended audience affect the amount of powerless language used. Furthermore, findings support the notion that

particular situations or topics, specifically health, have an effect on the amount of powerless language used. Each of these variables shall be discussed more extensively.

Biological Sex of Author and Audience

One major implication of this study is the extension of past research regarding the interaction of powerless language and biological sex. Past research indicates that females tend to use more powerless language than males (Carli, 1990; Crosby & Nyquist, 1977; Grob & Allen, 1996; McMillan et al., 1977). The findings of this study support this notion and extend the claim to include written communication as well as spoken. Female authors used more powerless language than male authors did, even with variables such as audience sex and magazine topic focus taken into consideration. It is important to note this finding considering that public dialogue is often influenced by a number of people, including authors, editors, and publishers (Zehr, 1999). There is a sense of multiple authorship in many written media channels, as such the differences across biological sex may be attributed more to the intended voice of the article than the actual voice of the author. For instance, articles that are meant to be for women or from a women's point of view, may use more powerless language because of how women are perceived to communicate. Conversely, articles intended to be from a male's point of view may use less powerless language. To this notion, this study also found that the biological sex of the intended audience plays a role in the use of powerless language. Powerless language was more often directed towards a female audience than a male audience.

It is interesting to note the interaction of author sex and audience sex and its effect on the amount of powerless language used. Past research indicates that males, regardless of the sex of the audience, tend to use less powerless language than women (Carli, 1990;

Grob & Allen; 1996). Findings of this project support this notion. However, research also indicates that females' use of powerless language varies depending on the sex of the audience (Carli; Grob & Allen). Carli summarizes that females may use higher frequencies of powerful language when speaking to females and more powerless language when speaking to males. The findings of this project, at least in terms of written communication, indicate otherwise.

In this study, females used more powerless language than males. However, female authors' use of powerless language did not vary depending on the biological sex of the audience. Nor did the amount of powerless language used by males vary with the biological sex of the intended audience. Audience sex did not influence the amount of powerless language use relative to author sex, but it was still shown to affect the use of powerless language. Findings indicate that females, specifically in conjunction with health-focused sources, are likely to receive more powerless language than male audiences. This is likely a characteristic of written media, specifically a reflection of the media's focus on the audience's language style.

Grob et al. (1997) found that when group size increased there were few differences between female and male speech in terms of powerless language. The group interaction, and it the increased audience size compared to dyadic interactions, meant that speakers' language changed to fit the audience. This may be an indication of why there were differences again when examining media sources. Grob et al. examined small group interactions, with face-to-face communication. The media context again changes the size of the audience and the format of the communication.

In written media, the role of the audience may become more dominant than in dyadic or small group interactions. The media is geared towards helping the audience to understand, as such the audience becomes paramount (Rogers, 1999). Media is written in the language of the audience (Bell, 1991). The magazines targeting a female audience used more powerless language as it is thought that females use more powerless language. Males are thought to be more comfortable with powerful language and thus use less powerless language, so articles targeting male audiences use less powerless language. In the media context, the audience's biological sex, because the audience is so large, again becomes a moderating variable of powerless language. Through this finding, the differences between media and interpersonal, as well as between written and spoken communication become prominent.

Both the biological sex of the author and the biological sex of the audience were shown in this study to affect the use of powerless language. Female authors use more powerless language than male authors do, and female audiences receive more powerless language than male audiences do. However, the findings do not indicate which plays the more dominant role. Powerless language amongst female authors did not vary according to audience sex, nor did the use of powerless language by male authors. Audience sex was shown as an influencing variable, but this would lend to the conclusion that female authors use more powerless language when writing for females than when writing for males, and this was not the case. Further research is needed in order to examine the extent to which each variable affects the use of powerless language.

Health and Generic-Focused Magazines

A second implication of this project is the evidence provided to support the notion that powerless language use is affected by magazine topic focus. Within academic discourse, powerless language has been shown to be a necessity to health and science disciplines (Crismore & Vande Kopple, 1997; Grabe & Kaplan, 1997; Meyer, 1997). Recent research has even begun to explore the benefits of powerless language in health media (Jensen, 2008; Parascandola, 2000); however, most research indicates that media outlets still fail to use adequate powerless language when reporting on health (Jensen; Moyer et al., 1995; Pellechia, 1997; Schwitzer, 2009). The findings of this study indicate that health-focused magazines are more in tune with the recommendations of the academic health disciplines than generic-focused magazines. Health-focused magazines used more powerless language than magazines of a generic focus. The reason for this difference may be multifaceted.

First, health-focused magazines are likely to employ (either full-time or as contributors) medical and health professionals. These individuals are more likely to see the benefit of powerless language relative to health news and thus are likely to use higher percentages of powerless language (Fahnestock, 1986; Jensen, 2008). As Jensen states, those who work within the discipline are likely to see the value of acknowledging limitations and recognize that doing so may increase perceived trustworthiness. Health-focused magazines realize the limitations of all information related to health and science, and realize the benefits of acknowledging those limitations. Generic magazines on the other hand, may still be in the mindset of many journalists attempting to streamline health information (Fahnestock; Jensen).

Secondly, health-focused magazines dedicate more time and space to health related topics than generic-focused magazines. When health topics are the primary focus there is more emphasis on getting the information accurate than selling a story; generic outlets on the other hand may be more concerned with other topics and may dedicate less time to getting the health information correct (Jensen, 2008; Liebling, 1961; Schwartz & Woloshin, 2004; Schwitzer, 2009). Furthermore, with more space dedicated to health topics, it is easier for health-focused magazines to leave caveats and limitations within a story; generic-focused magazines who budget less space for health topics may need to omit powerless language in order to fit more information in a smaller space. No matter the explanation, it seems that health-focused outlets are indeed more aligned with the powerless language recommendations of the health discipline than generic-focused magazines.

Author, Audience, and Topic Focus

This project provides indications of an interaction between biological sex and topic focus. Females writing for health-focused magazines used more powerless language than all other categories, while males writing for generic-focused magazines used less than all other categories. Health-focused magazines targeting female audiences used more powerless language than all other categories, while male-targeted, generic-focused magazines used less powerless language than all other categories. In all cases, higher degrees of powerless language continued to come from female authored, female targeted, health-focused magazines while the lower degrees of powerless language came from male authored, male targeted, generic-focused magazines.

This is an extension of findings discussed earlier that female centered and health-focused magazines do indeed use more powerless language than male centered and generic-focused magazines; as research continues the implications of this finding should be examined. There may be a distinction within health reporting between necessary powerless language and excessive powerless language. Given the effects of biological sex and topic focus on powerless language shown here, female targeted, female authored and health-focused magazines may err on the side of excessive powerless language. On the other hand, male focused, male authored, generic magazines may err on the side of insufficient powerless language. However, without research as to what effect powerless language in written media has on consumers it is impossible to know where the distinction between necessary and excessive use lays. It is possible that, even with the different amounts of use, all magazines still err on the side of insufficient powerless language. Further research is needed to determine the effects of powerless language within written health media to determine the distinction between the unwarranted use and the essential use of powerless language.

Powerless Language in Written Media

A second major implication of this project is the expansion of the study of powerless language to include written media communication. Much research on powerless language has focused on spoken, interpersonal communication (e.g., Areni & Sparks, 2005; Bradac & Mulac, 1984; Durik et al, 2008; Erickson et al, 1978; Hosman & Siltanen, 2006; O'Barr & Atkins, 1980; Parton et al., 2002), little is known about powerless language outside of that context. This study begins to explore powerless language in a new context. The findings indicate that while powerless language is present

in written communication, the definition of powerless language in written media may be different from that defined through spoken communication.

Specifically, the individual linguistic markers of powerless language are not evenly distributed through written communication. Hedges were by far the most prominent of the linguistic markers indentified; tag questions and hesitations rarely appeared. It may be that powerless language is exhibited differently in written communication than it has been in previous analysis of spoken communication.

Given the fact that language style has been studied primarily through spoken interactions, the characteristics of powerless language are clearly defined within spoken communication. Research findings are based on spoken conversations, not written communication. Some research on written communication has begun to look at individual markers, specifically hedges, and developed new definitions relative to written channels (Crismore & Vande Kopple, 1997; Grabe & Kaplan, 1997; Jensen, 2008; Meyer, 1997), but no research has examined powerless language as a whole within written communication. While this study shows support for the continued study of hedging, there is also evidence to support a reexamination of powerless language as a whole.

Through analysis, it was observed that some articles tended to used uncertain and vague language that did not fit the definitions of established linguistic markers. Consistent with previous literature (Clarke & Everest, 2006; Einsiedel & Thorne, 1999; Jensen, 2008; Nelkin, 1995; Wilson, 2007) these messages were vague, uncertain, confusing and at times contradictory. These messages did not fit the linguistic markers used for analysis and were coded as powerful even though they conveyed uncertainty. Written communication is likely to employ different linguistic structures then spoken

communication, as such the characteristics of powerless language would differ across channels.

This study indicates that tag questions and hesitations are not prominent in written media. This may be characteristic of written communication, a characteristic of media, or an interaction of the two. Either way, powerless language in written media takes on a different form than the powerless style currently identified and described. Given the importance of written media to health reporting (Brody, 1999), the difference should be further explored and understood.

Future Research and Limitations

These findings provide an insight as to how powerless language is used in written health media, but the area is still understudied. The connections between powerless language in written communication and spoken communication are quite clear in terms of senders and receivers, but in terms of topic focus, much remains unclear. Further research is needed to explore the area more fully and to address the limitations of the current project.

The current project chose to examine written media through an analysis of magazines. However, there may be differences across types of media. Newspapers, journals and the Internet may differ from magazines, yet all would be prominent examples of written media outlets. The findings of this study are merely an exploratory look at one particular form of written media, and should not be seen as a comprehensive overview of the field but rather as a starting point. More research, which includes various forms of written media, is needed in order to gain a more comprehensive understanding of how powerless language appears in health media. Such research would provide further

understanding of how powerless language is exhibited in this context and help to overcome some of the limitations evident in this study, including the limited sample of generic-focused magazines targeting a male audience.

This project analyzed articles related to all aspects of health. Jensen (2008) argues that different health topics, specifically cancer, may employ powerless language differently. It is possible that health topics more closely related to scientific research (i.e. disease, illness, treatments) may evoke more powerless language than those related to cosmetic health (i.e. dieting, exercise). Furthermore, based on the search procedures of this study some health topics and articles may have been overlooked. Future studies should examine the differences in powerless language across specific health topics to further understand how topic focus may affect the use of powerless language.

Finally, future research should begin to look at the effect powerless language in the media has on consumers. The past progression of research on powerless language has moved from observed frequencies to an examination of differing audience perceptions and behaviors. Research on powerless language in the media should be no different. The media is already shown to have tremendous effects on individuals' health behaviors (Gibson, 2007; Lang & Yegiyan, 2008; Molitor, 1993; Nelkin, 2005; Tian & Robinson, 2008; Walsh-Childers & Treise, 1998). It is important to address the role powerless language plays on the effects of the media. Such research could offer valuable insight as to why some health campaigns are successful, while others fail or fall victim to backlash effects (Gibson; Lang & Yegiyan; Nelkin; Walsh-Childers & Treise).

Conclusion

The media continues to play an important role in all aspects of communication, and health reporting is no exception. Thus, it is important to examine the messages sent by the media in order to begin to understand the future impacts such messages may have on audience opinions and behaviors. The goal of this study was to begin looking at one component of written health media messages.

This project examined the differences in powerless language use within written health media. Specifically, the study examined differences across three variables: biological sex of the author, biological sex of the intended audience, and magazine topic focus. Results identified significant differences in the amount of powerless language used relative to these variables. These findings both support and contradict previous literature on powerless language and provide evidence for the need of future research on the subject.

This study supports evidence indicating that powerless language is used more by women than men. However, the findings also show that author sex is not the only variable that influences the use of powerless language. Use of powerless language varied in relation to the biological sex of the target audience as well. Furthermore, findings regarding the effect of author sex in conjunction with audience sex contradicted those commonly found in examinations of spoken interactions (Carli, 1990; Grob & Allen, 1996; Grob et al., 1997).

Previous research indicates that within dyadic interactions females' use of powerless language changes relative to audience sex (Carli, 1990; Grob & Allen, 1996). This was not the case in this analysis. In addition, literature indicates that in small group

interactions males and females use similar amounts of powerless language (Grob et al., 1997). Again, findings of this study contradict such a notion. This is one example of the possible differences regarding powerless language between spoken and written communication and between interpersonal communication and mass media.

There was also an indication of differences between spoken and written communication in the conceptualization of powerless language. It appears as though written, health reporting may not use powerless language in the form of specific linguistic markers. Two linguistic markers, tag questions and hesitations, commonly identified as powerless markers in spoken interactions rarely appeared within analysis of written media. Hedging was a prominent linguistic marker. Written communication may use uncertain or vague language, which is not categorized into the linguistic markers previously defined. Powerless language needs to be examined more in varying formats and contexts in order to develop a fuller understanding of its presence within communication interactions.

Finally, one of the major outcomes of this study is the finding that there are indeed differences in use of powerless language across media outlets. Given that powerless language has been shown to have an effect on audience perceptions and behaviors, it is important to note that these differences exist. If the use of powerless language affects opinions and behaviors, it is likely that sources with different degrees of powerless language will affect audiences differently. The media has already been shown to have both positive and negative effects on health behavior and opinions (Gibson, 2007; Lang & Yegiyan, 2008; Molitor, 1993; Nelkin, 2995; Tian & Robinson, 2008; Walsh-Childers & Treise, 1998), perhaps some of the reason for the varying effects is due to the

amounts of powerless language used. This project established that differences exist, future research should focus on the effects those differences have on audiences.

It is the argument of this project that differences in powerless language use exist across media sources. These differences exist relative to the biological sex of the author, the biological sex of the intended audience and the overall focus of the source. Furthermore, the appearance of powerless language differs in written media as compared to spoken communication. These findings support the need for continued research regarding powerless language, particularly as it relates to health reporting and the media.

REFERENCES

Areni, C. S. & Sparks, J. R. (2005). Language power and persuasion. *Psychology and Marketing, 22,* 507-525.

Bell, A. (1991). Audience accomodation in the mass media. In H. Giles, J. Coupland, & N. Coupland (Eds.), *Contexts of accomodation* (pp. 69-102). New York: Cambridge University Press.

Blankenship, K. L. & Craig, T. Y. (2007). Language and persuasion: Tag questions as powerless speech or as interpreted in context. *Journal of Experimental Social Psychology, 43,* 112-118.

Blankenship, K. L. & Holtgraves, T. (2005). The role of different markers of linguistic powerlessness in persuasion. *Journal of Language and Social Psychology, 24,* 3-24.

Bradac, J. J. & Mulac, A. (1984). A molecular view of powerful and powerless speech styles: Attributional consequences of specific language features and communicator intentions. *Communication Monographs, 51,* 307-319.

Brody, J. (1999). Communicating cancer risk in print journalism. *Journal of the National Cancer Institute Monographs, 2,* 170-172.

Brown, J. (2009, June). Finding the good in SAT fats. *Muscle & Fitness, 70,* 274.

Burrell, N. A. & Koper, R. J. (1998). The efficacy of powerful/powerless language on attitudes and source credibility. In M. Allen & R. Preiss (Eds.), *Persuasion: Advances through meta-analysis* (pp. 203-215). Cresskill, NJ: Hampton Press, Inc.

Carli, L. L. (1990). Gender, language, and influence. *Journal of Personality and Social Psychology, 59*, 941-951.

Child, J. T., Pearson, J. C., & Amundson, N. G. (2007). Technology talk: Public speaking textbooks' coverage of information retrieval technology systems. *Communication Quarterly, 55*, 267-281

Clarke, J. N. (2004). A comparison of breast, testicular and prostate cancer in mass print media (1996-2001). *Social Science and Medicine, 59*, 541-551.

Clarke, J. N. & Everest, M. M. (2006). Cancer in the mass print media: Fear, uncertainty and the medical model. *Social Science and Medicine, 62*, 2591-2600.

Cosmopolitan (2009). *Cosmopolitan media kit.* Retrieved October 1, 2009 from http://www.cosmomediakit.com/r5/home.asp.

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

Crismore, A. & Vande Kopple, W. J. (1997). Hedges and readers: Effects on attitudes and learning. In R. Markkanen & H. Schroder (Eds.), *Hedging and discourse: Approachers to the analysis of a pragmatic phenomenon in academic texts* (pp. 83-114). Berlin: Walter de Gruyter.

Crosby, F. & Nyquist, L. (1977). The female register: An empirical study of Lakoff's hypothesis. *Language in Society, 6*, 313-322.

Details (2009). *Details media kit.* Retrieved October 1, 2009 from http://www.condenastmediakit.com/det/.

Durik, A. M., Britt, M. A., Reynolds, R., & Storey, J. (2008). The effects of hedges in persuasive arguments: A nuanced analysis of language. *Journal of Language and Social Psychology, 27*, 217-234.

Dutta-Bergman, M. J. (2004). Primary sources of health information: Comparisons in the domain of health attitudes, health cognitions, and health behaviors. *Health Communication, 16*, 273-288

Einsiedel, E. & Thorne, B. (1999). Public responses to uncertainty. In S. Friedman, S. Dunwoody, & C. L. Rogers (Eds.), *Communicating uncertainty: Media coverage of new and controversial science* (pp. 43-57). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Erickson, B., Lind, A. E., Johnson, G. C., & O'Barr, W. M. (1978). Speech style and impression formation in a court setting: The effects of "powerful" and "powerless" speech. Journal of Experimental Social Psychology, 14, 266-279.

Esquire (2009). *Esquire media kit.* Retrieved October 1, 2009 from http://www.esquiremediakit.com/r5/home.asp.

Fahnestock, J. (1986). Accommodating science: The rhetorical life of scientific facts. *Written Communication, 3*, 275-296.

Finnegan, J. R. & Viswanath, K. (2002). Communication theory and health behavior change: The media studies framework. In K. Glanz, B. K. Rimer, & F. M. Lewis (Eds.), *Health behavior and health education: Theory, research and practice* (pp. 361-388). San Francisco, CA: Jossey-Bass.

Gibson, T. A. (2007). Warning – The existing media system may be toxic to your health: Health communication and the politics of media reform. *Journal of Applied Communication Research, 35,* 125-132.

Grabe, W. & Kaplan, R. B. (1997). On the writing of science and the science of writing: Hedging in science text and elsewhere. In R. Markkanen & H. Schroder (Eds.), *Hedging and discourse: Approachers to the analysis of a pragmatic phenomenon in academic texts* (pp. 151-167). Berlin: Walter de Gruyter.

Green, N. (2009, September). This cheating pays. *Men's Fitness, 25,* 15.

Grob, L. M. & Allen, M. (1996). Sex differences in powerful/powerless language use: A meta-analytic review. Paper presented at Central States Communication Association Convention, St. Paul, MN.

Grob, L.M., Meyers, R. A., & Schuh, R. (1997). Powerful/poweless language use in group interactions: Sex differences or similarities? *Communication Quarterly, 45,* 282-303.

GQ (2009). *GQ media kit.* Retrieved October 1, 2009 from http://www.condenastmediakit.com/gq/.

Harres, A. (1998). "But basically, you're feeling well, aren't you?": Tag questions in medical consultations. *Health Communication, 10,* 111–123.

Hatfield, J. D. & Weider-Hatfield, D. (1978). The compartative utility of three types of behavioral units for interaction analysis. *Communication Monographs, 45,* 44-50.

Hofstetter, C. R., Schultze, W. A., & Mulvihill, M. M. (1992). Communication media, public health, and public affairs: Exposure in a multimedia community. *Health Communication, 4,* 259–271.

Hosman, L. A. & Siltanen, S. S. (2006). Powerful and powerless language forms: Their consequences for impression formation, attributions of control of self and control of others, cognitive responses, and message memory. *Journal of Language and Social Psychology, 25,* 33-46.

Jensen, J. D. (2008). Scientific uncertainty in news coverage of cancer research: Effects of hedging on scientist' and journalist' credibility. *Health Communication Research, 34,* 347-369.

Johnston, D. D. & Swanson, D. H. (2003). Undermining mothers: A content analysis of the representation of mothers in magazines. *Mass Communication and Society, 6,* 243-265.

Klaidman, S. (1990). Roles and responsibilities of journalists. In C. Atkins & L. Wallock (Eds.), *Mass communication and public health* (pp. 60-70). Newbury Park, CA: SAGE Publications.

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology.* Thousand Oaks, CA: Sage Publications, Inc.

Lakoff, R. T. (2004). Language and woman's place. In M. Bucholtz (Ed.), *Language and woman's place: Text and commentaries* (pp. 31-118). New York, NY: Oxford University Press.

Lang, A. & Yegiyan, N. S. (2008). Understanding the interactive effects of emotional appeal and claim strength in health message. *Journal of Broadcasting and Electronic Media, 52,* 432-447.

Liebling, A. J. (1961). *The press.* New York: Ballantine.

Lovell, J. (2009, January). Stop hiding from your work. *GQ, 79,* 110-112.

Magazine Publishers of America (2008). *Fact sheet: Average circulation.* Retrieved

    October 1, 2009 from http://www.magazine.org/ASSETS/

    6EBD2900844D4EF29C152DB4ADE4688D/FY2008AllCIRC.xls

Matthes, J. & Kohring, M. (2008). The content analysis of media frames: Toward

    improving reliability and validity. *Journal of Communication, 58,* 258-279.

Marie Claire (2009). *Marie Claire media kit.* Retrieved October 1, 2009 from

    http://www.marieclairemk.com/r5/home.asp.

McMillan, J. R., Clifton, A. K., McGrath, D., & Gale, W. S. (1977). Women's language:

    Uncertainty or interpersonal sensitivity and emotionality? *Sex Roles, 3,* 545-559.

Men's Fitness (2009). *Men's Fitness media kit.* Retrieved October 1, 2009 from

    http://www.americanmediainc.com/mediakits/mens_fitness/kit_home.htm.

Men's Health (2009). *Men's Health print media kit.* Retrieved October 1, 2009 from

    http://www.menshealth.com/mediakit/.

Meyer, P. G. (1997). Hedging strategies in written academic discourse: Strengthening the

    argument by weakening the claim. In R. Markkanen & H. Schroder (Eds.),

    Hedging and discourse: Approachers to the analysis of a pragmatic phenomenon

    in academic texts (pp. 21-41). Berlin: Walter de Gruyter.

Molitor, F. (1993). Accuracy in science news reporting by newspapers: The case of

    aspirin for the prevention of heart attacks. *Health Communication, 5,* 209-224.

Moyer, A., Greener, S., Beauvais, J., & Salovey, P. (1995). Accuracy of health research

    reported in the popular press: Breast cancer and mammography. *Health*

    Communication, 7, 147-161.

Mulac, A., Wiemann, J. M., Widenmann, S. J., & Gibson, T. W. (1988). Male/female language differences and effects in same-sex and mixed-sex dyads: The gender-linked language effect. *Communication Monographs, 55,* 315-335.

Muscle & Fitness (2009). *Muscle & Fitness media kit 2009.* Retrieved October 1, 2009 from http://www.americanmediainc.com/mediakits/mandf/kit_online.htm.

National Cancer Institute (2007). *HINTS: Health Information National Trends Survey.* Retrieved July 6, 2009 from http://hints.cancer.gov/questions/section.jsp ?section=Health+Communication

Nelkin, D. (1995). *Selling science: How the press cover science and technology.* New York: W.H. Freeman and Company.

Neuendorf, K. A. (2002). *The content analysis guidebook.* Thousand Oaks, CA: SAGE Publications.

O'Barr, W. M. & Atkins, B. (1980). "Women's language" or "powerless language"? In S. McConnell-Ginet, R. Borker, & N. Furman (Eds.), *Women and language in literature and society* (pp. 93-110). New York: Praeger Publishers.

Parascandola, M. (2000). Health in the news: What happens when researchers and journalists collide. *Research Practitioner, 1,* 1-29.

Parrott, R. L. (1995). Motivation to attend health messages. In E. Maibach & R. L. Parrott (Eds.), *Designing health messages: Approaches from communication theory and public health practice* (pp. 7-23). Thousand Oaks, CA: SAGE Publications.

Parton, S. R., Siltanen, S. A., Hosman, L. A., & Langenderfer, J. (2002). Employment interview outcomes and speech style effects. *Journal of Language and Social Psychology, 21,* 144-161.

Pellechia, M. G. (1997). Trends in science coverate: A content analysis of three US newspapers. *Public Understanding of Science, 6,* 49-68.

Pesta, A.(2009, June). Got the recession blues? Pass the fries. *Marie Claire, 16,* 85.

Prevention (2009). *Prevention media kit.* Retrieved October 1, 2009 from http://www.prevention.com/mediakit/index.shtml.

Redbook (2009). *Redbook media kit.* Retrieved October 29, 2009 from http://www.redbookmediakit.com/r5/home.asp.

Rogers, C. L. (1999). The importance of understanding audiences. In S. Friedman, S. Dunwoody, & C. L. Rogers (Eds.), *Communicating uncertainty: Media coverage of new and controversial science* (pp. 179-200). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Schwartz, L. M. & Woloshin, S. (2004). The media matter: A call for straightforward medical reporting. *Annals of Internal Medicine, 140,* 226-228.

Schwitzer, G. (2009). *The state of health journalism in the U.S..* Menlo Park, CA: Kaiser Family Foundation. Publication #7858, available at www.kff.org.

Shape (2009). *Shape media kit.* Retrieved October 1, 2009 from http://www.americanmediainc.com/mediakits/shape/kit_online.htm.

Shaughnessy, M. P. (1977). *Errors and expectations: A guide for the teacher of basic writing.* New York: Oxford University Press.

Staley, C. M. (1982). Sex-related differences in the style of children's language. *Journal of Psycholinguistic Research, 11,* 141-158.

Stoppani, J. & Wuebben, J. (2009, May). Eating full circle. *Muscle & Fitness, 70,* 120-126.

Stryker, J. E., Solky, B. A., & Emmons, K. M. (2005). A content analysis of news coverage of skin cancer prevention and detection, 1976 to 2003. *Archives of Dermatology, 141,* 491-496.

Taboada, M. & Zabala, L. H. (2008). Deciding on units of analysis within Centering Theory. *Corpus Linguistics and Linguistic Theory, 4,* 63-108.

Tian, Y. & Robinson, J. D. (2008). Media use and health information seeking: An empirical test of complementarity theory. *Health Communication, 23,* 184-190.

Walsh-Childers, K. & Treise, D. (1998). Mass media and health issues. *History of the Mass Media in the United States: An Encyclopedia,* 354-357.

Wilson, B. J. (2007). Designing media messages about health and nutrition: What strategies are most effective? *Journal of Nutrition Education and Behavior, 39,* S13-S19.

Women's Health (2009). *Women's Health media kit.* Retrieved October 1, 2009 from http://www.womenshealthmag.com/mediakit.

Zehr, S. C. (1999). Scientists' representations of uncertainty. In S. Friedman, S. Dunwoody, & C. L. Rogers (Eds.), *Communicating uncertainty: Media coverage of new and controversial science* (pp. 3-21). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

APPENDIX A. POWERLESS LANGUAGE IN HEALTH MEDIA CODEBOOK

This codebook has been developed to help in the process of coding magazine articles related to health topics. Each variable to be coded is defined within this document based on its use in the present study. Coders are to refer to these and only these definitions while coding the provided samples. Other definitions of the variables by exist, but those definitions do not apply to this coding scheme.

Instructions

This is a study of how language is used within print media outlet to address health issues. The study is looking for how much powerless language is used by differing media outlets to address health issues. The coders' first task is to read the articles and identify appropriate units of analysis within each article. From there, coders will reread the articles and identify units as either powerless or powerful in nature. Identification of the language used within units will be recorded on the provided coding form. There are also some descriptive and demographic variables that will be coded for about each article.

Section one of this codebook deals with the process of unitization of the sample. The second section contains a list of the variables to be tested in this study and a definition of each variable. The definitions provided are what coders should use to understand the variables throughout the study. Be sure to familiarize yourself with the variables and their definitions. These may not be the understanding of the variables that are used most frequently, but are the definitions to be used within this project. The final section will address specific instructions for filling out the coding form.

Section One. Unitization Coding

The first step in the coding process will be the unitization of the sample population. Coders will independently code 20% of the sample and discuss disagreements until acceptable reliability is achieved. Guidelines and definitions relative to the unitization process are included below. Unitization codes will not be marked on a coding form, rather markings should be made on a copy of the sample in order to best identify individual units.

Sample: Articles regarding health from the identified magazines between October 2008 and September 2009

Unit of Analysis: Individual thought units or clauses within each article

Thought Unit: An idea or statement that could stand alone based on structure; one sentence may include multiple thought units but a thought unit can be no longer than one sentence

Section Two. Variable Definitions

Demographic and descriptive variables listed will be identified and coded for by the researcher based on background information regarding the sample and prior unitization coding.

ID Number: Number assigned to the article by the researcher, Numbers range from 1-141

Magazine Title: 1. Men's Health

2. Men's Fitness

3. Muscle & Fitness

4. Women's Health

5. Shape

6. Prevention

7. Cosmopolitan

8. Redbook

9. Marie Claire

10. GQ: Gentleman's Quarterly

11. Esquire

12. Details

Gender Focus: Magazines have either a female or a male target audience (see the key below)

1. Female

2. Male

Topic Focus: Magazines have either a generic or health focus (see the key below)

1. Health

2. Generic

Magazine Categorization Key

	Female Audience	**Male Audience**
Generic Focus	*Cosmopolitan* *Marie Claire* *Redbook*	*Details* *Esquire* *GQ*
Health Focus	*Women's Health* *Shape* *Prevention*	*Men's Health* *Men's Fitness* *Muscle and Fitness*

Date of Issue: Publication or issue date of the magazine in which the article appears; month and year to be recorded

Article Title: Copied directly from the article copy

Author Sex: Sex of the article's author(s) to be determined as either female or male

     1. Female

     2. Male

Units of Analysis: Number of units within articles to be determined through unitization coding by trained coders prior to variable coding

Language Style

Language orientation variables will be coded independently by trained coders. Use the examples and definitions provided below to determine language orientation within each unit.

1. **Powerful**: All language that is not powerless in orientation will be coded as powerful. Powerful units will be absent of the markers identified below.

2. **Powerless**: Conveys a lack of power and control; clause consists of hedges, hesitations and tag questions (defined below). This type of language will exhibit uncertainty and weakness on the part of the speaker; gives the impression of being unsure of statements being made.

Individual linguistic markers will be identified for powerless thought units.

0. Not Applicable

1. Tag Question: Statements phrased as questions

Questions presented in a question and answer column will not

be coded as tag questions

Rhetorical questions may, for the most part, be considered tag

questions if there is a statement found within the question

2. Hesitations: *you know, I mean*

Dashes (--), parentheses, brackets, and ellipses (...) can often

be indicators of hesitation markers. However, they should only

be counted as hesitations when the information within the

symbols is off topic, clarification information should not be

counted as a hesitation

3. Hedges: *may, might, could, sort of, kind of, seems, a little, possibly will,*

perhaps, maybe, I guess, In my opinion, I think

The context of the statement must be taken into consideration

when identify hedges, as certain hedge markers are also used in

powerful statements