Abstract

News media coverage of health topics has been shown to influence health behaviors and perceptions of health and safety risks (Combs & Slovic, 1979; Finnegan & Viswanath, 2002). Therefore, news media coverage of current health research could help provide the public with accurate, up to date health information with which individuals will be more capable of making informed health decisions. News media coverage of health research is routinely generated through the efforts of public relations professionals from academic journals and research institutions (Woloshin & Schwartz, 2002). As such, the effectiveness of public relations efforts, namely press releases, for health research may have major implications for public health outcomes. The current work first presents an exploratory study, a focus group of science communication public relations professionals held to gain an understanding of the decision making processes regarding the promotion of research publications through press releases. Currently, limited research is available to public relations professionals relative to press release characteristic effectiveness for promoting scientific work. Considering that over 500,000 Americans die from cancer and another 300,000 die from issues related to obesity each year (CDC, 2012; U.S. DHHS, 2001), the present work examines press releases promoting research on these health topics. Specifically, the press releases are utilized to test a proposed modified gatekeeping model, evaluating the effectiveness of press release characteristics in garnering journalist interest and news media coverage. Drawing on four theoretical
perspectives, the present content analysis investigated the impact of six key press release characteristics on journalist interest and news media coverage. The impact of these characteristics is discussed.
Dedication

For my wonderful family, hilarious friends, and my darling, Hanif, for all the love and support I could have ever asked for and more. I could not have done this without you.
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# Table of Contents

Abstract ................................................................................................................................. ii
Dedication ............................................................................................................................. iv
Acknowledgements ........................................................................................................... v
Vita ........................................................................................................................................ vii
List of Tables ....................................................................................................................... x
List of Figures ...................................................................................................................... xi

Chapter 1: Introduction and Overview .............................................................................. 1
  Public Access to Health Research through News Media .................................................... 1
  The Role of Public Relations Professionals in the Flow of Information ............................. 2
  Overview ........................................................................................................................... 3

Chapter 2: Exploratory Study ............................................................................................. 5
  Method ............................................................................................................................... 6
  Findings ............................................................................................................................ 7
  Discussion ......................................................................................................................... 14

Chapter 3: Theoretical Review and Predictions ................................................................. 18
  Flow of Information to the Public ..................................................................................... 19
  Key Characteristics Impacting Public Relations Decisions on Research Promotion .......... 23
  Proposed Modified Gatekeeping Model ........................................................................... 30

Chapter 4: Method ............................................................................................................. 35
  Main Study Methods and Measures ................................................................................. 35
  Sample ............................................................................................................................. 36
  Data Collection and Unit of Analysis ................................................................................ 36
  Coding Categories ........................................................................................................... 37
  Outcome Variables .......................................................................................................... 39

Chapter 5: Results ............................................................................................................. 41
  Main Study Results ........................................................................................................... 41
List of Tables

Table 1. Reliability ........................................................................................................73

Table 2. Key Characteristics .......................................................................................... 75
List of Figures

Figure 1. Topic Guide .............................................................................................................. 76

Figure 2. Modified Gatekeeping Model ...................................................................................... 77

Figure 3. Key Characteristics ..................................................................................................... 78

Figure 4. Frequency of News Values ............................................................................................ 79

Figure 5. Frequency of Health Subtopics ..................................................................................... 80
Chapter 1: Introduction and Overview

Public Access to Health Research through News Media

Health is a highly attended to news topic in the United States. Considering the top scientific research fields covered in the news media, medicine and health dominates science news coverage (Badenschier & Wormer, 2012). Moreover, health news is ranked the sixth most-popular news topic, and close to one-fifth of Americans say they follow health news closely (Pew Research Center for the People & the Press, 2008). The consumption of news coverage on health topics has been shown to influence perceptions of health and safety risks (Combs & Slovic, 1979; Lichtenstein, Slovic, Fischoff, Layman, & Combs, 1978), health behaviors (Corbett & Mori, 1999; Finnegan & Viswanath, 2002; Wallack & Dorfman, 1996), and public policy about health risks (Yanovitsky, 2002). Noting this impact, there has been a call for more accurate health information to be made available to the public. With news coverage of health research being routinely generated through the efforts of public relations professionals from academic journals and research institutions (De Semir, Ribas, & Revuelta, 1998; Kiernan, 2014; Woloshin & Schwartz, 2002), the onus to more successfully disseminate current health research may fall heavily on their shoulders. Therefore, the effectiveness of public relations efforts health research can have major implications for news media coverage of health information, and ultimately, public health outcomes. In the field of science
communication, there has been a recent focus on translational research, concerned with the flow of information from bench to bedside, or from the lab to the application setting (McBride, et al., 2010). More specifically, within the fields of health communication and public health, much research has focused on the health messages disseminated to the public through media and the impact of such messages on health behavior (Calloway, Jorgensen, Sarailya, & Tsui, 2006; Davidson & Wallack, 2004; Snyder, et al., 2004). While both issues are clearly important, much of the media content being examined in such research may not have been available to the public without the work of public relations professionals.

**The Role of Public Relations Professionals in the Flow of Information**

While journalists and public relations professionals agree that public relations efforts influence the news, they disagree regarding the extent that public relations professionals impact the flow of information (Sallot, Steinfatt, & Salween, 1998). However, there are certain news topic areas in which it should be expected that public relations efforts exert more influence over the flow of information than other news areas. For example, journalists’ reliance on sources has been shown to be exacerbated by the technical nature of health and medical news (Tanner, 2004). Therefore, within the field of health and science news, there is a unique combination of journalist reliance on public relations professionals for scientific research news and the public’s dependency on the news media for their scientific knowledge. As such, public relations professionals working for university and research institutions can be understood as integral stewards in the promotion of health research to the media and the public.
Worth noting, the effectiveness of science communication public relations professionals impacts more than the public’s access and attitudes to current health research findings, but also the legitimacy and support for scientific research by the public broadly. As a result of the importance of news media coverage of scientific research on the legitimation of science and grant funding, public relations professionals and researchers are more aware of the impact of researchers communicating with the media about their research (see Chapter 2) and are more encouraged to do so (Schäfer, 2012). In fact, some research institutions have established professional interfaces specifically for media demands (Peter et al., 2008a; 2008b). While some public relations scholarship has sought to identify best practices within the field across the board (Froehlich & Rüdiger, 2006; Grunig, 2013; Smudde & Courtright, 2012), current literature fails to provide guidance specific to science and health communication public relations professionals, even while noting the special pressure these public relations professionals face (Tanner, 2004).

**Overview**

The present dissertation has three objectives. The first objective is to interrogate the decision-making processes of science communication public relations professionals to gain a better understanding of their “best practices” for promoting health research to the news media. Key factors that influence promotion decisions are identified. The second objective is to contribute to the limited scholarship considering the impact of public relations professionals in the dissemination of mediated messages about health research. The third objective is to identify key characteristics of press releases that contribute to increased journalist interest and news media coverage. A modified gatekeeping model is
developed and tested. These three overarching objectives ultimately serve as a guide to determining the press release characteristics that increase the likelihood of journalist interest and news media coverage, which science communication public relations professionals could implement in their promotion of health research. The findings from the present work, therefore, will particularly be helpful for those public relations professionals focused on serving a public health mission.

The five sections of the dissertation include: (1) an exploratory study focusing on the decision-making processes of science communication public relations professionals, (2) an overview of the important theoretical frameworks that are relevant to the processes and effects of news-journalism, a literature review of theories identifying key message characteristics related to the dissemination of health messages in the news media, an introduction of the modified gatekeeping model, and predictions for impacts of the theoretically relevant message characteristics on journalist interest and news media coverage, (3) an explanation of the main study’s methods and measures that are used to examine the predictions proposed in section two, (4) a presentation of the results from analyses testing the predictions, and (5) a summary and discussion of the findings and conclusions that reflect on this work and suggest directions for future research.
Chapter 2: Exploratory Study

The agenda-setting function of the mass media is well recognized in communication literature (McCombs & Shaw, 1972). This function suggests that topics that are covered frequently and prominently within the media will be more salient to the general public; in this manner, the media ‘sets the agenda’ of public discourse. If the public is more likely to be concerned with topics covered in the media than topics that are not covered in the media, then the choice of what topics to cover has great implications for the public’s knowledge and concern over different topic. Such decisions can be understood through the ‘gatekeeping’ perspective (Shoemaker, 1991). While some research has looked into gatekeeping occurring at the media outlet level (Cassidy, 2006; Shoemaker, Eichholz, Kim, & Wrigley, 2001), less is known about the decisions made that determine which stories become available for mass media distribution. For news coverage of scientific research, the channels through which a story travels begin with research findings and go to scholarly publications, then press releases, news coverage, and finally to the public (Shoemaker & Vos, 2009). Therefore, public relations professionals can be understood as key ‘gatekeepers’ in this process.

The present exploratory investigation addresses the gap in literature on the decision-making processes of these key gatekeepers. Through a focus group interview with scientific research communications professionals, the intent is to gain a better
understanding of how public relations decisions are made. Specifically, the focus group centered on decisions about promoting various research publications through the use of press releases and what issues are taken into account when making these decisions. The current study suggests that various personal characteristics impact their decision making about what scientific research projects they promote through press releases.

As stated above, the purpose of this exploratory study is to gain an understanding of the decision making processes in which public relations professionals engage when considering writing press releases promoting scientific research publications and what key issues may affect said decisions. Guiding this study are three key research questions.

RQ1: How are research publications selected for promotion through the use of press releases?

RQ2: How are decisions made around what research findings to highlight within press releases?

RQ3: What other factors influence which research publications receive promotion through press releases?

Method

The public relations personnel in the department of Research and Innovations Communication at The Ohio State University were contacted and invited to participate in a focus group interview via an e-mailed recruitment letter (Appendix B). The sampling was both purposive and convenient. The scheduling of the focus group interview accommodated the participants’ work schedules. The interview was scheduled for an
hour and a half, and the researcher traveled to the participants’ work place for the purposes of the interview. The interview took place in a meeting room commonly used by the participants for work meetings. Detailed written notes were taken during the focus group interview after obtaining verbal consent from the participants.

Prior to beginning the interview, participants read and were verbally briefed on the purpose of the focus group. The value of focus group interviews as a means of generating discussion and obtaining information was detailed, and the participants were encouraged to build on one another’s ideas throughout the discussion. The interview guide was introduced so that the participants were aware of the range of topics that would be explored (Figure 1). Anonymity was assured, and participants were asked to provide pseudonyms for the purposes of note-taking. All participants verbally consented to participate and were sent a summary of the conclusions (Consent form, Appendix C). The focus group interview was conducted by one researcher, using an approved script (Appendix D). After the interview concluding, the participants were debriefed (Appendix E). Detailed notes were taken during the interview and were shared with collaborating researchers. Emergent themes were identified based on the focus group interview notes.

**Findings**

Three public relations professionals participated in the focus group interview. Two of the three were women, and all were Caucasian. All three reported to have Master’s degrees in Journalism; additionally, one reported to have completed a certification in scientific reporting.
All the participants were actively engaged in the discussion, and often enthusiastically added on to another participant’s points. The interview lasted 85 minutes and could have easily continued but was brought to a close to stay within reasonable limits of what was intended and to respect the work schedules of the participants. To conclude the discussion, the participants were if there were any other points they considered relevant to the discussion that they had not previously made through answering the six questions from the topic guide. The following results summarize the responses, organized by major themes. Themes are listed and then illustrated with verbatim quotations from the interview (in italics.)

The discussion from the focus group suggests that there a variety of concerns that impact scientific research public relations professionals’ decision making process relative to what research publication to promote through the use of press releases. Three key concerns that emerged from the focus group interview are (1) perceived inherent interest in the topic, (2) the “prestige factor,” that is, how the research represents the research institution overall, and (3) personal predictions of how much news media coverage a press release will garner. There three concerns should be understood as working in relation to each other.

**Inherent Interest.** The first overarching concern that the participants expressed as key to determining if a publication should be promoted through a press release was if they perceived the study findings or study topic to be inherently interesting. Through the discussion, participants listed four main characteristics of the publications for which they choose to write press releases: (1) if the study was considered thought-provoking *(…if its interesting on its face, Participant 1)*, (2) if it in some way solves a problem *(Often in the*
intro, I will see something about a specific problem— if it solves a specific problem that’s always a good sign for me, Participant 2), (3) if there is eye-catching imagery within the study (…if there is imagery, like in nanotechnology, there are cool photos sometimes, Participant 3), and (4) if it impacts human health directly (I like all human health concerns, doesn’t have to be disease related; I like food/nutrition a lot too, Participant 2.)

Through discussion, all four of these characteristics were identified to be related to whether or not the participants felt a research study was ‘interesting.’

Key to their decision-making processes relative to this concern, the participants unanimously agreed that they ‘trust their instincts’ on whether or not the research would garner news media coverage (We have all been doing this for decades, we have developed instincts, Participant 2), based on if they believe the topic and findings to be inherently interesting (If its inherently interesting to me, I think it’s probably a good paper, Participant 3).

To determine the level of inherent interest a research study has, the participants suggested they ask themselves a couple of different questions:

Is this something that would of interest to a lot of people or is just something that researchers in that field will find interesting? Participant 1

Would the average person care about it - would my parents be interested in the topic?

Participant 2

If they determined the study would only be of interest to other researchers in a specific academic field, then they would not move forward with a press release because other researchers would already have access to the study through academic journals.
**Prestige factor.** The second overarching concern that the participants expressed as key to determining if a publication should be promoted through a press release was something they labelled the “prestige factor.” Through the discussion, there were a couple of different ways in which they stated they determined if a press release on the research publication would demonstrate the prestige of the research and/or research institution.

First, the participants stated that a major prestige-related concern is if the article has been published in a high-profile journal, as this looks good for both the individual research study and the university overall.

> *If its in a really high-profile journal, I care less about if its going to pique the interest of the public- it should be covered simply because its in “Nature,” for example,* Participant 2

The participants stated that another influence on what research gets covered is the university itself. Sometimes, they are told the administration wants something highlighted through a press release, such as a new researcher or research space.

> *Working at a university, there are sometimes political considerations- something that the administration wants to highlight, some researcher they think is really big, but we haven’t covered yet,* Participant 1

All the participants agreed that there are sometimes political considerations to take into account, generally dealing with representing the university, mainly dealing with the reputation of the university as a powerful research institution.

> *For example, I recently wrote a press release on a discovery of the 22\textsuperscript{nd} amino acid- its not like people really care, but it’s a HUGE scientific discovery, and the*
university should be known for its finding even if there isn’t a huge public impact, Participant 2.

**Predictions about media coverage.** The third overarching concern that the participants expressed as key to determining if a publication should be promoted through a press release was their personal predictions relative to subsequent media coverage a press release would garner. All three of the participants also stated that they try to predict the amount of news media coverage research articles will receive, based on what they believe the media like to report on (… media really likes social science stories that confirm conventional wisdom, Participant 1).

*If it’s not a really high profile journal, then I am more concerned about media coverage. I try to predict how far it will go.* Participant 3

Clearly, this concern is directly tied to the first concern, whether or not the participants deem the research study to be ‘inherently interesting.’

Related to this concern, the participants noted that media coverage of academic studies seems to be more important to the researchers and the institution now than ever before. They acknowledged that the visibility of research in the media is linked to the prestige factor, such that more media coverage of quality research being conducted here impacts grant decisions and hiring/promotion decisions (*I think profs/researchers are now more attuned to what media coverage can do for them. For example, promotion, tenure, grant applications, Participant 1*). With the noted increase desire from researchers themselves to have their research covered in the media, the participants noted that researchers have caught on that certain writing styles within the research articles will impact promotion and coverage (*The articles need to be written in an accessible style, get
to the important parts early... the researchers can write in a way that makes it obvious they want media coverage, Participant 3). Moreover, the participants suggested that the researchers who want media coverage of their study also have to be willing to interact with the media (When researchers are interested in interacting with the media, they are more likely to return calls, give better interviews, and gain a better rapport with journalists, Participant 1). The participants noted that they feel that, as public relations professionals, they have the ability to help researchers view working with the media more positively (You can help change their attitude, if they are a good communicator, they may enjoy it more, Participant 2.)

**Other main points of discussion.** The first 20 minutes of the focus group was devoted to discussing how the participants find research articles to promote. The participants all had their own preferred path for searching for research articles to promote through the use of press releases; however, all three paths were used by all participants to some extent. These paths included looking in top-tier academic journals for publications for research conducted by researchers at the university, using online academic databases (such as ISI database and arxib.org) to find new publications, and email correspondence about research publications with the researchers themselves.

All participants highlighted that email notifications of new research have become more common in the recent past. All participants noted that they have received notifications of new or upcoming research through emails from researchers, newswire websites, and the academic journals themselves. One participant added that finding research to promote is much easier now due to web access to research and researchers seemingly wanting news media coverage of their research more so now than in the past.
Another major point in the focus group discussion was related to selecting the findings to highlight in a press release once a research article had been selected for promotion. Two main pathways for selecting the findings to highlight within the press releases were shared by the participants. First, the participants said they look at the journal article itself for clear, easy-to-understand statistics. The two sections they gravitate toward are the abstract and the discussion section.

*I use the abstracts as a guide.* Participant 3

*Another way is to go to the discussion, or implications, section of the paper. I usually go there right after the abstract because researchers go into what their findings really mean. I usually highlight what is in that section.* Participant 1

The other main pathway the participants mentioned is discussion with the researchers about the research articles. They stated that they tend to ask the researchers to point out anything in particular they find interesting about the findings.

*I ask the researcher. What’s the most important/interesting graph? What interests you about this?* Participant 2

*I usually end my interviews with “Is there anything I forgot? What is the main point of all of this for you?” that helps me know the important pieces of the paper.* Participant 1

Of major import to the present dissertation, the participants continually noted that the decisions they make are informed by their professional instincts (*I know in my gut if the public is going to find a research study interesting or not,* Participant 2). However, in the answering of the focus group questions, the participants discovered that their instincts may lead them to make different decisions about which studies to cover and how to cover
them. In general, they use different pathways for finding research articles to cover in the first place, and once they have found research articles, they considered different study topics to be more or less interesting and weighed the three overarching concerns (inherent interest, prestige factor, and predictions of media coverage) very differently.

Discussion

The results of this exploratory study suggest that there a variety of concerns that impact scientific research public relations professionals’ decision making process relative to what research publication to promote through the use of press releases. Three key concerns that emerged from the focus group interview are (1) perceived inherent interest in the topic, (2) the “prestige factor,” that is, how the research represents the research institution overall, and (3) personal predictions of how much news media coverage a press release will garner.

The first concern, perceived inherent interest in the topic, is to be understood as the extent to which the public relations professionals believe a research article would be of interest to the general public. Usually, they are not likely to promote a research article that is only of interest to a very specific group of researchers and academics, as they will likely have already have access to that information through the journal publication. This speaks to two extant news values (see Chapter 3), the relevance value (Harcup & O’Neill, 2001) and the interest to reader value (Arnoff, 1975). However, it is not always necessary that a research article be understood to be of great interest to the general public. Sometimes, public relations professionals admit to choosing to promote research that they simply find interesting themselves.
The second concern, the “prestige factor,” is to be understood as to the extent to which the public relations professionals believe a research article represents the university as a valuable research institution. Decisions to write press releases due to the “prestige factor” are subject to political pressure from university officials in a way that decisions made based on the other concerns may not be. Additionally, this concern is impacted by the journal in which a research article is published. Research articles published in high-impact journals are going to be understood to have greater prestige than research articles in lesser known, lesser cited journals. This concern speaks to the news value of ‘depicting the subject in favorable light,’ which Arnoff (1975) suggests is a value that impacts decisions made by public relations professionals much more than those of journalists.

Finally, the concern related to personal predictions of news media coverage is to be understood as a feeling that the public relations professionals have about the likelihood a press release on a research article will be of interest to journalists. These predictions are explained to be based on a ‘gut instinct,’ and their confidence in their instincts comes from their years of experience. While these feelings may be based on a subconscious awareness of certain news values, the public relations professionals appear to be unaware of the factors that impact news media coverage. As veteran television reporter John Sergeant described choosing which stories to report, “journalists rely on instinct rather than logic,” (as cited in O’Neill & Harcup, 2009, p. 161), it appears that public relations professionals decision-making processes are may be equally dependent on gut feelings.
Of course, these concerns should be understood as working in relation with one another. While it may be the ideal situation if a research article were high in all three concerns, it is neither likely to happen nor necessary in order for the article to get promoted through the use of a press release. The public relations professionals shared that they would sometimes promote a research article because they found it interesting and/or it was published in a high-impact journal without really considering whether or not it would garner much news media coverage. Additionally, they have promoted an article solely for the prestige factor or because they felt the topic would receive a lot of news media coverage.

Through a thorough discussion of six pointed, topic questions and an additional wrap-up question, the participants went through the steps they take and issues they consider when determining whether or not to promote a research article with a press release. Although all the participants had been working in the same department together for many years, there were many differences in how they selected research to promote and what they perceived to be important to getting news media coverage. The public relations professionals in this study all stated that they relied heavily on their instincts to make decisions about promoting research articles; however, they were surprised to discover through the discussion that their instincts were not as similar as they had assumed. The participants were enthusiastic about the topic of the discussion, stating that they hardly ever discuss their processes with each other and did not generally step back to think about why they made the decisions they made relative to writing press releases.

While all the participants work for the same university, this should not be seen as a severe limitation. With over 7,000 peer-reviewed research articles being published by
affiliated researchers each year, this university is a preeminent research institution (J. Grabmeier, personal communication, October 21, 2013). Moreover, research coming out of this university consistently receives news media coverage through major national and international news channels. Therefore, the scientific research public relations work being done at this university is understood to be the ‘best practices’ of comparable universities and research institutions. Additionally, these findings may also be helpful for researchers who are interested in receiving news media coverage for their research.

The present exploratory study addresses the gap in gatekeeping literature on the decision-making processes of public relations professionals through a focus group interview. The results suggest that the public relations professional should be considered a key gatekeeper. Further, the results of this study suggest that while public relations professionals have implicit theories they rely on to make decisions about which research articles to cover and how to cover them, those implicit theories are varied by the individual professional. As such, there is a need for systematically tested guidelines to inform this decision-making process. Thus, the modified gatekeeping model is presented and tested in the main study (see Chapters 3-5) with this integral gatekeeper in mind.
Chapter 3: Theoretical Review and Predictions

Health communication research demonstrates that consuming news media messages about health topics influences numerous health beliefs and behaviors (Combs & Slovic, 1979; Corbett & Mori, 1999; Finnegan & Viswanath, 2002; Wallack & Dorfman, 1996). For example, newspaper coverage of causes of death—the over reporting of violent causes and underreporting disease-related causes—has been linked to people’s perceptions related to causes of death (Combs & Slovic, 1979). Additionally, news media coverage of a specific health concern has been shown to impact funding for research related to the issue and the public engaging in testing and preventative behaviors related to the issue (Corbett & Mori, 1999). Noting this impact, there has been a call to disseminate health and safety information that is accurate, accessible, and actionable to ensure that the public is able to make informed health decisions based on current research and recommendations from health researchers (U.S. ODPHP, 2010).

To determine how to effectively answer this call, it is necessary to investigate the flow of information from research institutions, those on the cutting-edge of health research, to the public. Publishing research articles in academic journals is the most common form of dissemination of new research, especially for the science and medical fields (Bjork, Roos, & Lauri, 2009). However, the public at large does not have access to academic journal publications. In fact, most people acquire information about scientific
research findings mainly from mass media sources (Schäfer, 2012). As such, the flow of information from research institutions to media outlets is of upmost importance to the current investigation. A couple of communication theories provide frameworks for illustrating the flow of information from research institutions, through the media, and to the public. In following section, major theories of news flow are reviewed.

**Flow of Information to the Public**

**Agenda setting.** Agenda setting refers to the ability of the news media to impact how important the public understands an issue to be through the amount of coverage it garners. Introduced by McCombs and Shaw (1972), agenda setting is based on two assumptions: (1) the press does not reflect reality, it filters and, in doing so, its representation of reality is distorted, and (2) media concentration on a few issues leads the public to perceive those issues to be more important than issues not receiving media coverage. Thus, much agenda setting scholarship has focused on topical salience transfer, from the media to the public. Additionally, Rogers and Dearing (1988) presented a more nuanced understanding of agenda setting, now labeled *agenda building* or *policy agenda setting*, which involves not only the active role of media organizations, but also the participation of policymakers and the public. Furthermore, Kosicki (1993) introduced the concept of *media agenda setting*, considering factors, such as institutional roles and processes, which may influence the content that makes it to the public through media outlets.

Much scholarly debate has occurred relative to whether or not framing (see below) should be understood in conjunction with agenda-setting. McCombs and Shaw
(1997) referred to framing as *second-level agenda-setting*. As the way in which an issue is discussed in the media will make certain aspects of the issue salient, this could be understood as a secondary level of salience transfer occurring. However, Scheufele and Tweksbury (2007) argued that framing is an applicability model and differs significantly from agenda setting, an accessibility-based model. Agenda setting occurs through the cognitive process accessibility; research has shown that the news media can make certain issues more salient and accessible through frequent and prominent coverage of the issue (Weaver, 2007). Therefore, extensive news coverage of certain health topics may increase the salience of those topics over other health topics. For example, extant research has shown that coverage of a particular health issue, such as home health care versus nursing home care, can influence perceptions of importance of the issue (Cook et al., 1983). Additionally, a strong relationship between television coverage on breast cancer and breast cancer incidence has been demonstrated, indicating that media attention to breast cancer increased the salience of this health threat and encouraged women to schedule doctor’s appointments and mammograms (Corbett & Mori, 1999). With such real health outcomes at stake, it is imperative to understand the process through which certain health topics make their way to the public through the media.

As previously discussed, public relations professionals working for university and research institutions are key to the promotion of such research to the media and the public due to the general public’s lack of access to research publications. While agenda-setting provides clear predictions for how the content within media messages impact the public mindset, the framework does not provide guidance related to those who make the content
selections. With this in mind, the gatekeeping model can highlight the important role that those making the selections, including public relations professionals, play.

**Gatekeeping.** Gatekeeping is one of the longest enduring mass media theories in the field of communication. Lewin’s (1943) gatekeeping process, originally developed in relation to social change, was first applied to news-journalism by White (1950). Gatekeeping describes the process through which information is filtered for dissemination. In relation to news-journalism, the basic idea of gatekeeping is that there is selectivity in how many news items are presented and how those news items are presented (Shoemaker, 1991). Lewin (1943) identified five key aspects of the gatekeeping process: (1) information moves step by step through channels; the number of channels vary and the amount of time information is in each channel can vary, (2) information must pass a “gate” to move from one channel to the next, (3) forces govern channels, (4) there may be several channels that lead to the same result, and (5) different actors may control the channels and act as “gatekeepers” at different times. Therefore, gatekeeping is understood to occur at all levels of the media structure. Additionally, the forces in gatekeeping are understood to be working at multiple levels; specifically, there are both individual forces and routine forces influencing the gatekeeping process (Cassidy, 2006). For news coverage of scientific research, the channels through which a story travels begin with research findings and go to scholarly publications, then press releases, news coverage, and finally to the public (Kiernan, 2014; Shoemaker & Vos, 2009). With that in mind, both public relations professionals and reporters can be understood as ‘gatekeepers’ at different points in this process.
In terms of the quantity of news messages, gatekeeping describes a series of decision points. News items will either be halted or continue through the process as they pass along news channels, winnowing a multitude of news story options to a select few by the time the stories reach the public (Shoemaker, Eichholz, Kim, & Wrigley, 2001). Therefore, decisions made by journalists are influenced by the decisions made at the previous gate, by public relations professionals. In addition to the quantity of news messages, gatekeeping has also been connected to how messages are shaped and handled, as well as when they are disseminated to the public (Donohue, Tichenor, & Olien, 1972). As such, gatekeeping outlines a selection process which results in news coverage output that is biased systematically based on organizational factors, news norms, and audience preferences (Soroka, 2012). While an established prospective, the current understanding of the process does not examine gatekeepers as decision-makers. The present study aims to move beyond the current understanding of gatekeeping, considering it to be a decision making process.

Current scholarship acknowledges that public relations professionals do exert influence on the flow of information through the news media (Sallot, Steinfatt, & Salween, 1998). However, minimal research has been conducted on the key role that public relations professionals play in the production of news (Cameron, Sallot, & Curtin, 1997; Sachmans, 1976; Turk, 1986), and an extensive review of the literature suggests that this role has yet to be examined within the context of the gatekeeping model. The present dissertation seeks to fill this gap in the literature, considering public relations professionals to be key gatekeepers in the flow of health research information to the public through the news media.
Key Characteristics Impacting Public Relations Decisions on Research Promotion

Now that the gatekeeping model’s theoretical perspective has been described and the important role that public relations professionals play in the gatekeeping process for scientific research has been established (see Chapter 2), suggestions are put forth as to what message characteristics in press releases could increase the likelihood of journalist interest and news media coverage. Several theories provide a solid framework for public relations professionals to use to better understand what message characteristics may increase the likelihood that individuals will attend to the message. With the present study’s focus on health, the selected theories are domain specific, decision-making theories related to health. Building off the literature on framing and news values, concepts from evolutionary psychology theory, basic drives, and terror management theory can help determine impacts on the gatekeeping process. As such, a modified gatekeeping model is proposed which integrates the impact of public relations professionals and press release characteristics of press releases on the flow of health research information to the public. Once the model is tested and trends are identified, those concepts serving as message characteristics that increase journalist interest and news media coverage can be implemented by public relations professionals in the development of press release materials. Therefore, the identified characteristics could be added to health communication public relations professionals’ best practices, increasing the influence of public relations professionals as gatekeepers and their ability to set the public agenda around certain health research topics. While not all public relations professionals promoting health research may have been trained in public health, the findings from the present study would be most important for those whose work is directly
related to public health goals. In the following section, important theoretical frameworks relevant to the processes and effects of news-journalism, including framing and news values, and reviewed. Building off of this, evolutionary psychology theory, basic drives and terror management theory are discussed, informing the development of the proposed modified gatekeeping model.

**Framing.** In relation to how news messages are shaped, framing is based on the assumption that the ways in which a news message is characterized can have an influence on audiences’ understanding of the message (Scheufele & Tewksbury, 2007). Prospect theory (Kahneman & Tverskey, 1979) put forth a framing postulate, stating that information presented in terms of either losses or gains influences decisions made relative to the message differently. Framing was developed further by Entman (1993). Entman’s definition of framing identifies four key aspects: the promotion of (1) a particular problem definition, (2) causal diagnosis, (3) moral evaluation, and (4) treatment recommendation. Messages may not always feature all four aspects; however, the omission or over-emphasis of an aspect may affect the context of the information. Frames, therefore, can influence public opinion by stressing specific aspects of an issue, making those aspects seem more relevant than they may seem under an alternative frame (Nelson, Clawson, & Oxley, 1997).

Episodic and thematic frames are often pitted against each other in framing research (Gross, 2008; Hoeken & Hustinx, 2007; Iyengar, 1991; Iyengar, 1996; Major, 2009). Episodic frames feature a case study of a person or group of people suffering from a social condition, whereas thematic frames feature statistics about the scope of a
problem and link the problem to other social trends (Niederdeppe, Shapiro, & Porticella, 2011). This research suggests that episodic frames result in internal responsibility attributions and thematic frames result in external responsibility attributions. According to the transtheoretical model of health behavior (Prochaska & Velicer, 1997), the impact of an episodic or thematic frame is likely to vary based on where the reader is along the stages of change.

In addition to episodic/thematic frames, it is likely that gain/loss frames and efficacy frames are relevant for how health news messages affect responsibility attributions and efficacy beliefs. Experimental research investigating the impact of framing on attributions of responsibility has found that frames also impact thoughts and recall (Valkenburg, Semetko, & de Vreese, 1999) and selective exposure choices (Zillmann, Chen, Knobloch, & Callison, 2004). The effects of attribution-influence may be wide-reaching as public understanding of who or what is to blame for a societal problem can then affect how problems may be handled, what solutions are likely to be supported, and how individuals dealing with the problem may be treated.

Much research examines how health news framing may affect what readers take away from the message, including learning outcomes (Jensen, 2011) and attributions of responsibility (Coleman, Thorson, & Wilkins, 2011; Niederdeppe, Shapiro, & Porticella, 2011). Extant research along these lines has linked framing with underlying psychological processing (Entman, 1993; Iyengar, 1991; Nelson, Clawson, and Oxley, 1997). Nelson, Clawson, and Oxley (1997) demonstrated applicability to be a more useful psychological concept to explain how framing impacts existing cognitive
structures than accessibility. Framing endows a news story with certain values and facts, giving those characteristics greater relevance than they may have had in a different frame. The highlighted values and facts are then linked to pre-existing schemas. Therefore, it is likely that the more an audience knows about an issue, the greater the framing effects.

**News values.** News values, introduced by Galtung and Ruge (1965), are the criteria that determine how much prominence a news story is given by a media outlet. Simply put, news values determine how ‘newsworthy’ an event or story is. The main premise of the news values approach is that the more an event contains these features, the more likely it would be reported in the news. The main three hypotheses that correspond with these factors are: (1) the more factors an event satisfies, the more likely it becomes news, (2) factors tend to exclude each other, such that it is unlikely for one story too feature many news factors, and (3) events that satisfy none or very few factors will not become news.

In the seminal news values study, a taxonomy of news values with twelve factors that affect newsworthiness were suggested: frequency, threshold, unambiguity, meaningfulness, consonance, unexpectedness, continuity, composition, reference to elite nations, reference to elite persons, reference to persons, and reference to something negative (Galtung & Ruge, 1965). This taxonomy has been modified throughout the years (Arnoff, 1975; Harcup & O’Neill, 2001). Arnoff (1975) suggested five news values that are shared by both journalists and public relations professionals: accuracy, interest to the reader, usefulness to the reader, completeness, and depicting the subject in a favorable light. Harcup and O’Neill’s (2001) taxonomy included 10 factors: the power
elite, celebrity, entertainment, surprise, bad news, good news, magnitude, relevance, follow-up, and newspaper agenda.

Over the past several decades, the concept of news values has been used in analysis of news media content, particularly of coverage of political and foreign affairs. However, at the same time, it has been suggested that these values may not be appropriate for understanding the selection of scientific research for news media coverage (Badenschier & Wormer, 2012). Based on extant literature on news values, therefore, it is unclear if one should expect for health research news topics that incorporate the established news value factors to generate more news coverage than health research that does not.

Evolutionary psychology (discussed below; Cosmides & Tooby, 1989) has been employed to help explain why some of the factors in taxonomies of news values would have a higher news value than other factors. For example, insight from evolutionary psychology would suggest that negative news may have a higher news value than positive news due to the evolutionary importance of attending and responding to threats (Shoemaker, 1996). Additionally, Grabe (2011) argued that negative news messages may be more appealing to men’s preferences, which could account for the gender gap in news consumption. However, extant literature on the theoretical underpinnings of news values is limited, and much research on news values is atheoretical. The present work seeks to move beyond the implicit theories news editors suggest are involved in the production of the news through testing characteristics developed from context-appropriate theories.
**Evolutionary psychology and basic drives.** Evolutionary psychology argues that the human mind and body have evolved in similar ways, such that many psychological traits are adaptations that have evolved to solve recurrent problems in past human environments (Cosmides & Tooby, 1989; Malamuth, Heavy, & Linz, 1993). Additionally, Buss (1991) suggested that biological evolution may have affected the mind in a variety of ways. Just as evolutionary theory has integrated the field of biology, evolutionary psychologists argue that, evolutionary psychology can provide a foundational, metatheoretical framework that integrates the entire field of psychology (Cosmides & Tooby, 1989; Malamuth, Heavey, & Linz, 1993). Research based in evolutionary psychology has found support for the theory in relation to predictions about perceptions of sexual attractiveness, partner choice, and parental investment (Barber, 1995; Buss & Schmidt, 1993; Bjorklund & Pellegrini, 2000). Additionally, within the health context specifically, evolutionary psychology has been used to explain the avoidance of health threats (such as, fear of snakes to avoid poison) and the plenty of preferences (for example, a preference for foods high in fats and sugar as a function of maintaining adequate caloric intake), (Buss, 1995). Evolutionary psychology suggests that in low-arousing settings, humans are more likely to approach than avoid (Buss, 1991). While health, in general, may be considering moderately or highly arousing, within the context of press releases and news media coverage on health research findings, it is anticipated that arousal levels will be low.

Literature on basic drives (Campbell & Misanin, 1969; Finger & Mook; 1971; Hull, 1943) conceptualizes a drive as a need that activates behavior that is aimed at a goal or incentive. Hull (1943) pointed to four types of drives: hunger, thirst, sex, and escape
from pain. Basic drives have been connected to intrinsic motivations to understand universal, basic human desires (Reiss, 2004). Unlike intrinsic motivations; however, basic drives are essential to our survival (either, an individual’s survival or the survival of the human race). When considered in conjunction with evolutionary psychology, it is clear that certain topics (eg, sex, food/water consumption, and mortality threats) are essential to human survival. Additionally, humans have a desire to learn about the world around them as a practical safety maneuver. Novelty seeking behavior can be understood as an expression of this desire and contributes to an individual’s understanding of the way the world works, and in turn, how to survive in the world (Gray, 1987). Therefore, as evolutionary psychology assumes survival as a goal, it is likely that news messages featuring information about these topics will be considered relevant and important.

**Terror management theory.** Terror management theory (Greenberg, Pyszczynski, & Solomon, 1986; Solomon, Greenberg, & Pyszczynski, 1991) deals with the basic psychological conflict between the desire to live and the self-awareness that death is inevitable. The TMT perspective is complementary to evolutionary psychology (Landau, Solomon, Pyszczynski, & Greenberg, 2007). TMT is derived from Becker’s (1973) argument that human action is generally taken to avoid or ignore mortality salience. Jessop and Wade (2008) tested TMT hypotheses in relation to public health campaign messages about binge drinking, and found that messages featuring mortality-related risks increased mortality salience and did not reduce participants’ willingness to binge drink. Therefore, it is also likely that health news messages which make human mortality salient may be avoided or ignored by media gatekeepers and, subsequently, media consumers.
The terror management health model (TMHM; Goldenberg & Ardnt, 2008) integrates health psychology and terror management theory and explains to health implications as a function of conscious and nonconscious death thought activation and a variety of moderating factors. Clearly, issues regarding health have the potential to induce thoughts about death to varying degrees. The TMHM highlights a single construct as crucial to understanding the implications of and psychological mechanisms behind in terror management theory, the consciousness of death. Implicit threats are understood as more distal threats (for example, smoking causes cancer); whereas explicit threats, such as death threats, may seem more impending. Therefore, it is expected that while individuals are likely to avoid messages with explicit threats, there may be situations in which individuals would approach messages with threats, specifically implicit threats. Particularly, and of key importance to the current paper, the TMHM points to efficacy as a key moderating variable on the impacts of mortality salience, such that individuals would be much more likely to approach than avoid a message with an implicit threat that includes a high efficacy feature.

**Proposed Modified Gatekeeping Model**

Building off of the above theoretical frameworks, a modified gatekeeping model has been developed, illustrating the flow of health research from scientific publication to news coverage, which takes into consideration both the mediating effect of public relations professionals and the moderating effect of specific press release characteristics. By modifying the accepted gatekeeping process model for scientific research (Shoemaker & Vos, 2009) to include these two key elements, the proposed modified gatekeeping model (Figure 2) provides a more nuanced look at the forces that impact the ultimate
news coverage of health research articles. For parsimony of the model, press releases and
newswire content have been consolidated into one “gate.” While there may be a time lag
between the release of press releases and newswire content, newswires push out research
institutions’ and journals’ press releases; therefore, there should be no conceptual
difference between removing the noise of this additional channel.

In the model, public relations professionals mediate the relationship between
scientific publications and press release/newswire content about those publications.
Additionally, certain characteristics of the public relations professionals moderate the
relationship between scientific publications and the impact of public relations
professionals on press releases/newswire content. Furthermore, and of upmost
importance to the present study, the content of press releases moderates the relationship
between press releases/newswire content and news coverage of scientific research.
Finally, the model acknowledges that the characteristics of future press releases also
influence the decision-making processes that public relations professionals go through
when determining what research to promote. Figure 3 provides a more detailed
illustration of the relationship between these two “gates.”

The characteristics of press releases that moderate news coverage of health
research are informed by evolutionary psychology, basic drives, and terror management
theory. Specifically, based on basic drives and evolutionary psychology, the inclusion of
sex differences (for example, how a health issue differs between women and men), sex-
related topics (for example, sex organs, sexual desires, choosing a sexual partner), food
consumption (for example, how food consumption provides health benefits), marked
novel information (for example, a study being the first of its kind) will all increase the likelihood of journalist interest and news coverage. Therefore the following predictions are put forth:

**H1:** Press releases featuring the sex differences characteristic will garner greater (a) journalist interest and (b) news media coverage than press releases without this characteristic.

**H2:** Press releases featuring the sex-related topic characteristic will garner greater (a) journalist interest and (b) news media coverage than press releases without this characteristic.

**H3:** Press releases featuring the food consumption characteristic will garner greater (a) journalist interest and (b) news media coverage than press releases without this characteristic.

**H4:** Press releases featuring the novelty characteristic will garner greater (a) journalist interest and (b) news media coverage than press releases without this characteristic.

Additionally, based on the terror management health model, that the inclusion of threat-related information has the potential to either increase or reduce the likelihood of news coverage, moderated by efficacious terms, such as ‘you will’ or ‘people will.’ Therefore, the following predictions are put forth:
H5: Press releases featuring the threat/mortality characteristic will garner less (a) journalist interest and (b) news media coverage than press releases without this characteristic.

H6: The effect of the threat/morality characteristic on journalist interest and news media coverage will be moderated by efficacious terms.

Also, the safety/vitality characteristic was included to explore if implicit messages related to survival/death-avoidance increase mortality salience, and therefore, reduce the likelihood of journalist interest and news media coverage, or if messages related to safety/vitality can discuss evolutionary desire to survive in a positive light, and therefore, increase the likelihood of journalist interest and news media coverage. Additionally, it is possible that the simple thought that these threats to survival are being researched by scientists may reduce anxiety. As such, the following research question is put forth:

RQ1: To what extent does the inclusion of the safety/vitality characteristic in press releases impact (a) journalist interest and (b) news media coverage?

Additionally, the following research questions are put forth to examine the relationship between journalist interest and news media coverage:

RQ2: What is the correlation between journalist interest and news media coverage?

RQ3: Does journalist interest mediate the relationships between the six key characteristics and news media coverage?
The testing of the proposed modified gatekeeping model has implications for both applied health communication professionals and theoretical advancement. First, determining characteristics of press releases that attract journalists and increase news media coverage have obvious implications for public relations professionals. In terms of theoretical advancement, the integration of tenets from evolutionary psychology, basic drives, and terror management theory in a gatekeeping model is novel. This model tests the applicability of such theories in news-journalism contexts, specifically in terms of increased journalist interest and increased news media coverage. Finally, the inclusion of the safety/vitality characteristic in the model explores the nuances of messages that increase mortality salience. Again, exploring the relationship between messages about safety/vitality and mortality salience could have implications for applied health communication professionals.
Chapter 4: Method

Main Study Methods and Measures

Overview. Berelson (1952) defined the content analysis as “a research technique for the objective, systematic, and quantitative description of the manifest content of communication,” (p. 18). The definition was been updated to include not just message content, but also message handling (Budd, Thorp, & Donohew, 1967). Two primary research goals for conducting content analyses are describing characteristics of messages and to make inferences about the effects of messages (Holsti, 1969). Therefore, a content analysis of press releases coming from The Ohio State University’s communication department about OSU health research, specifically cancer and obesity research, was conducted. Using cancer and obesity as the research topics provides a sample that focuses on major public health concerns (Landis, Murray, Bolden, & Wingo, 1999; WHO, 2000). Being two major public health concerns, cancer and obesity are also rich research areas, generating much media attention (Barry, Jarlenski, Grob, Schlesinger, & Gollust, 2011; Jensen, 2008; Saguy & Almeling, 2008; Slater, Hayes, Reinke, Long, & Bettinghaus, 2009; Slater, Long, Bettinghaus, & Reinke, 2008). As such, data from the content analysis was linked to journalist interest and news media coverage data to test the modified gatekeeping model proposed in Chapter 3.
Sample

Two-hundred-fourteen press releases coming from The Ohio State University’s Research and Innovation communication department released over a ten-year span (between October 1, 2003 and September 31, 2012) on cancer (n= 171) and obesity (n=43) research conducted by researchers affiliated with The Ohio State University were coded. Overall, the majority (79.9%) of the press releases focused on cancer research, while only 20.1% of the press releases focused on obesity research. As there were relatively few press releases on obesity, this topic was excluded from further analyses in order to rule out topic-specific, confounding influences. This focus on the cancer topic only will help with disentangling the impacts of the content characteristics more cleanly, as topic might generally interact with them.

Data Collection and Unit of Analysis

The press releases were coded by one undergraduate research assistant and the primary investigator using the pre-developed coding scheme and codebook (see Appendix F and G). Before coding press releases from the sample, they were trained using press releases from the OSU Research and Innovation communication department on cancer and obesity research from outside the October 2003-September 2012 timeframe. Training included practice coding sessions in which the coders would individually code the practice press releases and then meet to discuss coding and points of disagreement to reach clarification, develop clearer coding guidelines, and gain consensus on the way to code the issue moving forward. Once coder trainer was complete, 13.8% of the actual sample was used to test interrater reliability. The material for the coding reliability included 15 press releases on cancer research (released
September 2011- September 2012) and 15 press releases on obesity research (released October 2010 – September 2012). Using this subsample, the coders reached acceptable levels of interrater reliability, a Krippendorff’s alpha (Hayes & Krippendorff, 2007) of .80 or above, for all the coding categories. The rest of the sample was then divided between the two coders. Interrater reliability was checked at two other points during the coding process. After 30 press releases were coded by each coder, an additional, yet separate 13.8% of the sample was used to check reliability. This process was repeated after another round of analyzing 30 press releases each (see Table 1 for complete reliability description). At both points, the coders maintained acceptable levels of interrater reliability for all the coding categories. With the press release headline, lead paragraph and body as the units of analysis, the coding scheme was developed to establish the inclusion of the six key characteristics. Each press release could be coded as featuring multiple characteristics.

Coding Categories

Only coding categories that were ultimately used in the analyses are described in the following section.

Length of press release. The length was coded for each press release (α = .99). For each press release, the coders determined the number of words in the entire press release, including headline and leading paragraph (\(M = 807.4, SD = 189.32\)).

Date of release. The date the press release was made available to journalists was coded (α = .99). Additionally, the year the press release was released was recorded
separately (α = .99), as was the day of the week the press release was made available to journalists (α = .99).

**Characteristics.** Six different standards, listed in Table 2, were coded when they were explicitly expressed through text. For example, press releases featuring information about men being better off or more at risk than women for a health issue (and vice versa) were coded as featuring the sex differences characteristic, as well as press releases which mentioned there were sex differences but didn’t explain them. Additionally, press release featuring information about dating/being a more attractive mate, sex, reproduction/pregnancy/child bearing, and parenting/child reading were coded as featuring the sex characteristic. Acceptable reliability was achieved for all the characteristics, with Krippendorf’s alpha ranging between .85 and 1.00. As shown in Table 1, these characteristics were coded for the headline, lead paragraph, and body levels.

**News frames.** Five common news frames, gain vs. loss, individual vs. societal responsibility, conflict vs. controversy, human interest, and unusualness, were coded for the headline, lead paragraph, and body levels of the press releases. Acceptable reliability was achieved for all of the news frames, with Krippendorf’s alpha ranging between .84 and 1.00.

**Health subtopics.** Three common health subtopics, prevention, risk factors, and treatment, were captured for the headline, lead paragraph, and body levels of the press releases. Acceptable reliability was achieved for all of the health subtopics, with Krippendorf’s alpha ranging between .90 and 1.00.
Outcome Variables

To examine the effectiveness of press releases, the data from the content analysis are connected to journalists’ attention and news coverage data. This data set was collected through the use of newswire websites (Newswise and Eurekalert) and LexisNexis, respectively.

Journalist Interest. Journalists’ interest was captured through an innovative technique, utilizing newswire websites. The variable was quantified by the number of views (or ‘clicks’) each press release received through the newswire websites, Newswise ($M = 1996.58$, $SD = 1218.25$) and EurekAlert ($M = 1144.76$, $SD = 1049.08$). The two variables were summed to create one journalist interest outcome variable ($M = 2838.42$, $SD = 1697.8$). Access to both the newswire websites was granted through the OSU Research and Innovations communications department. Through access to the Newswise website, journalist interest was identified through a readily available ‘views’ variable on the corresponding press release webpage. Additionally, for EurekAlert, monthly reports featuring journalist view data were generated through the newswire website. As press releases may have been viewed over a series of months, views of the press releases were summed across the months they appeared in the reports.

News Media Coverage. News media coverage was quantified by the number of news articles on the press release available via LexisNexis ($M = 2.04$, $SD = 3.33$), which is standard practice for research requiring the retrieval of news media coverage date (Bomlitz & Brezis, 2008; Kornstein & Byrne, 2007; Smith, Ellenberg, Bell, & Rubin, 2008; Weaver & Bimber, 2008). To determine what news media coverage to include in
the analysis, the date of the publication (within a month of the press release embargo date), the use of topic key terms, the inclusion of the term “Ohio State University” or some variation (i.e., Ohio State or OSU), and/or the inclusion of the researcher’s name was be considered. To determine key terms, coders noted three to four key terms during the coding process that they deemed would aid in selecting news media coverage of the press releases. To be included in the analysis, news media coverage was linked to the press release on at least three of the four above criteria. To ensure reliability of news media coverage selection, 10.3% of the press releases were utilized by the main researcher and a research assistant. Using the above criteria, news media coverage selection had an acceptable level of interrater reliability ($\alpha = .98$).
Chapter 5: Results

Main Study Results

Data were analyzed using SPSS (version 21) and the PROCESS Macro (Hayes, 2013). PROCESS is a macro that allows for the testing of mediation and moderation paths simultaneously. In the following section, frequencies of news frames and health subtopics are presented in the preliminary analyses. Next, a stepwise multiple regression and a test of the interaction between efficacious terms and a key characteristics on journalist interest and news media coverage are utilized in the hypotheses testing. Then, a correlation and tests of the indirect effect of journalist interest on the relationship between key press release characteristics and news media coverage between are performed for the last two research questions. Finally, two additional stepwise multiple regression tests are presented in the post-hoc analyses.

Preliminary Analyses

Frequency of news frames. For an illustration of the frequencies described in detail below, see Figure 4.

Gain vs. loss frame. Of the press releases, 70.2 % featured a gain vs. loss frame in their headline. More specifically, 45.1% employed a gain frame, while 25.1% employed a loss frame. At the lead paragraph level, 72.5% of press releases featured a gain vs. loss
frame. More specifically, 48% featured a gain frame, while 24.5% featured a loss frame. At the body level, 70.8% of the press releases featured a gain vs. loss frame. More specifically, 49.2% featured a gain frame, while 21.6% featured a loss frame.

**Individual vs. societal responsibility frame.** Considering the individual vs. societal responsibility frame, 17.5% of the press releases utilized this frame in their headlines. More specifically, 11.1% were framed in terms of individual responsibility, whereas 6.4% were framed in terms of societal responsibility. Within the lead paragraph, 19.3% of press releases utilized this frame. More specifically, 11.7% were framed in terms of individual responsibility, whereas 7.6% were framed in terms of societal responsibility. Finally, 28.1% of the press releases featured this frame at within the body level. More specifically, 18.7% were framed in terms of individual responsibility, whereas 9.4% were framed in terms of societal responsibility.

**Conflict frame.** For the conflict frame, 1.8% of the press releases featured this frame in their headline, 2.3% featured the conflict frame in the lead paragraph, and 5.3% featured the conflict frame in the body.

**Human interest frame.** For the human interest frame, 2.3% of the press releases featured this frame in their headline, 2.9% featured the human interest frame in the lead paragraph, and 4.1% featured the human interest frame in the body.

**Unusualness frame.** For the unusualness frame, 5.8% of the press releases featured this frame in their headline, 6.4% featured the unusualness frame in their lead paragraph, and 6.4% featured the human interest frame in the body.
**Frequency of health subtopics.** For an illustration of the frequencies described in detail below, see Figure 5.

**Prevention.** Of the press releases, 18.1% mentioned the prevention subtopic in the headline, 22.2% mentioned prevention in the lead paragraph, and 46.8% mentioned prevention in the body.

**Risk.** Of the press releases, 6% of press releases mentioned risk in the headline, 41.5% mentioned risk in the lead paragraph, and 69% mentioned risk in the body.

**Treatment.** Of the press releases, 31% of the press releases mentioned treatment in the headline, 33.9% mentioned treatment in the lead paragraph, and 55.6% mentioned treatment in the body.

**Impacts on Journalist Interest and News Media Coverage**

**Hypotheses testing.** Sums of the dichotomous variables denoting the presence of each key characteristic in the headline, lead paragraph, and body were produced for the various characteristics and utilized to test hypotheses using stepwise multiple regression tests. A stepwise multiple regression was run to predict journalist interest and news media coverage from featuring the key characteristics (sex differences, sex/reproduction, food consumption, novelty, threat/mortality, and safety/vitality). In the overall model, two of the key characteristics, sex differences and food consumption, explained a significant proportion of variance in journalist interest, $R^2 = 0.06$, $F(2, 163)= 4.76, p = .10$. Additionally, one of the key characteristics, food consumption, explained a significant proportion of variance in news media coverage, $R^2 = .11$, $F(1, 169)= 20.36, p < .001$. 
**Sex differences characteristic (H1).** The first hypothesis suggests that interest and coverage of press releases would differ depending on whether or not the press release featured the sex difference characteristic. Specifically, the hypothesis proposed that press releases featuring the sex difference characteristic will garner greater journalist interest on newswire websites (H1a) and news media coverage (H1b) than press releases that do not feature this characteristic. There was a significant effect of the sex difference characteristic on journalist interest, $b = .17$, $t(136) = 2.2$, $p = .03$. There was no effect of the sex differences characteristic on news media coverage ($p = .08$). Therefore, H1a was supported, while H1b was not supported.

**Sex/reproduction characteristic (H2).** The second hypothesis suggests that interest and coverage of press releases would differ depending on whether or not the press releases featured the sex/reproduction characteristic. Specifically, the hypothesis proposed that press releases featuring the sex/reproduction characteristic will garner greater journalist interest on newswire websites (H2a) and news media coverage (H2b) than press releases that do not feature this characteristic. There was no significant effect of the sex/reproduction characteristic on journalist interest ($p = .13$) or on news media coverage ($p = .76$). Therefore, H2 was not supported.

**Food consumption characteristic (H3).** The third hypothesis suggests that interest and coverage of press releases would differ depending on whether or not the press releases featured the food consumption characteristic. Specifically, the hypothesis proposed that press releases featuring the food consumption characteristic will garner greater journalist interest on newswire websites (H3a) and news media coverage (H3b)
than press release that do not feature this characteristic. There was a significant effect of the food consumption characteristic on journalist interest, $b = .18$, $t(163) = 2.3$, $p = .02$. Additionally, there was a significant effect of the food consumption characteristic on news media coverage, $b = .33$, $t(169) = 4.5$, $p < .001$. Therefore, H3a and H3b were supported.

**Novelty characteristic (H4).** The fourth hypothesis suggests that interest and coverage of press releases would differ depending on whether or not the press releases featured the novelty characteristic. Specifically, the hypothesis proposed that press releases featuring the novelty characteristic will garner greater journalist interest on newswire websites (H4a) and news media coverage (H4b) than press releases that do not feature this characteristic. There was no significant effect of the novelty characteristic on journalist interest ($p = .69$) or on news media coverage ($p = .16$). Therefore, H4 was not supported.

**Threat/mortality characteristic (H5).** To test the fifth hypothesis, the threat/mortality characteristic was dummy-coded to determine the effects of implicit and explicit threats. The hypothesis suggests that interest and coverage of press releases would differ depending on whether or not the press releases featured the threat/mortality characteristic. Specifically, the hypothesis proposed that press releases featuring the threat/mortality characteristic will garner less journalist interest on newswire websites (H5a) and news media coverage (H5b) than press releases that do not feature this characteristic. There was no significant effect of the threat/mortality characteristic on journalist interest (for implicit threats, $p = .58$; for explicit threats, $p = .70$) or on news
media coverage (for implicit threats, \( p = .24 \), for explicit threats, \( p = .31 \)). Therefore, H5 was not supported.

**Efficacious Terms (H6).** The sixth hypothesis suggests that the effect of the threat/morality characteristic on journalist interest and news media coverage will be moderated by efficacious terms. Using the PROCESS Macro (Hayes, 2013) the interaction was tested at all three levels, headline, lead paragraph, and press release body, for both journalist interest and news media coverage. There was no significant interaction effect at any level (ns). Therefore, H6 was not supported.

**Addressing the Research Questions**

**Safety/vitality characteristic (RQ1).** The first research question inquires to what extent the inclusion of the safety/vitality characteristic in press releases impacts (RQ1a) journalist interest and (RQ1b) news media coverage. There was no significant effect of the safety/ vitality characteristic on journalist interest (\( p = .55 \)) or news media coverage (\( p = .9 \))

**Journalist interest and news media coverage (RQ2).** The second research question investigates the relationship between journalist interest and news media coverage. There was no significant correlation between journalist interest and news media coverage, \( r(166) = -.01, p = .89 \).

**Mediation analyses of press release characteristics on news media coverage (RQ3).** The third research question inquires to the extent journalist interest mediates the relationship between the key press release characteristics and news media coverage. Using the PROCESS Macro (Hayes, 2013), six mediation analyses with bootstrapping
(Preacher & Hayes, 2008) examined these relationships by using the various key press release characteristics as the dependent variables. Overall, the results of the mediation models were non-significant.

**Sex differences.** The first mediation analysis used a dummy coded variable – lack of presence of the sex difference characteristic = 0, presence of the sex difference characteristic = 1 – to examine the impact of this characteristic. The included mediator was journalist interest. The mediator had no significant effect on the news media coverage, (coefficient = -.04, 95% BCIa [bias-corrected and accelerated] = [ -0.58, 0.18]).

**Sex/reproduction.** The second mediation analysis used a dummy coded variable – lack of presence of the sex/reproduction characteristic = 0, presence of the sex/reproduction characteristic = 1 – to examine the impact of this characteristic. The included mediator was journalist interest. The mediator had no significant effect on the news media coverage, (coefficient .01, 95% BCIa = [-.11, .27]).

**Food consumption.** The third mediation analysis used a dummy coded variable – lack of presence of the food consumption characteristic = 0, presence of the food consumption characteristics = 1 – to examine the impact of this characteristic. The included mediator was journalist interest. The mediator had no significant effect on the news media coverage, (coefficient = -.06, 95% BCIa = [.39, .07]).

**Novelty.** The fourth mediation analysis used a dummy coded variable – lack of presence of the novelty characteristic = 0, presence of novelty characteristic = 1 – to examine the impact of this characteristic. The included mediator was journalist interest.
The mediator had no significant effect on the news media coverage, (coefficient = .002, 95% BCIa = [-.10, .07]).

**Threat/mortality.** The fifth mediation analysis used a dummy coded variable – lack of presence of the threat/mortality characteristic = 0, presence of the threat/mortality characteristic = 1 – to examine the impact of this characteristic. The included mediator was journalist interest. The mediator had no significant effect on the news media coverage, (coefficient = .001, 95% BCIa = [-.80, .09]).

**Safety/vitality.** The sixth mediation analysis used a dummy coded variable – lack of presence of the safety/vitality characteristic = 0, presence of the safety/vitality characteristic = 1 – to examine the impact of this characteristic. The included mediator was journalist interest. The mediator had no significant effect on the news media coverage, (coefficient = .02, 95% BCIa = [-.22, .12]).

**Post-Hoc Analyses**

The initial analyses lead to some additional questions. A series of post-hoc analyses were conducted to attempt to better understand the features of press releases that may lead to journalist interest and news media coverage. Sums of the dichotomous variables denoting the presence of each of the news frames in the headline, lead paragraph, and body for the various frames and of each of the health subtopics in the headline, lead paragraph, and body for the various subtopics were utilized in separate stepwise multiple regression tests. The stepwise multiple regression tests were run to predict journalist interest and news media coverage from featuring the news frames and health subtopics.
**News frames.** There was no significant effect of any of the news frames on journalist interest (ns) or no news media coverage (ns).

**Health subtopics.** There was a significant effect of one of the health subtopics, prevention, on journalist interest, \( b = -.27, \ t(164) = -3.6, \ p < .001 \). Prevention also explained a significant proportion of variance in journalist interest, \( R^2 = 0.07, F(1, 164) = 13.08, \ p < .001 \). Additionally, there was a significant effect of the prevention subtopic on news media coverage, \( b = -.53, \ t(169) = -2.6, \ p = .01 \). The prevention subtopic also explained a significant proportion of variance in news media coverage, \( R^2 = .03, F(1, 169) = 6.91, \ p = .01 \).
Chapter 6: Discussion and Conclusions

Summary of Results

The primary purpose of the main study was to propose and test the modified gatekeeping model, examining the characteristics of health research press releases that impact journalist interest and news media coverage. Key characteristics drawn from evolutionary psychology, basic drives, and terror management theory were tested to determine their impact on the flow from press release to newswire websites and news media outlets. Overall, the data did not support most of the hypotheses; however, two of the characteristics were found to have a significant impact and additional unexpected significant results were found.

The first set of findings from H1–H6 and RQ1 examined the impact of the six key characteristics added to the modified gatekeeping model (see Figure 3). H1 suggested that press releases on health research topics featuring the sex differences characteristic (such as, women are more at risk than men or women are showing more positive results with a treatment) would result in increased (a) journalist interest and (b) news media coverage. H1 was partially supported, as press releases on health research topic featuring the sex differences characteristics did garner more journalist interest than press releases
that did not feature this key characteristic. However, news media coverage did not differ depending on the sex difference characteristic.

The second hypothesis (H2) suggested that press releases on health research topics featuring the sex/reproduction characteristic (such as, issues related to sexual intercourse, childbearing, or childrearing) would result in increased (a) journalist interest and (b) news media coverage. Both propositions were not supported, revealing that neither journalist interest nor news media coverage differed depending on the sex/reproduction characteristic.

The third hypothesis (H3) suggested that press releases on health research topics featuring the food consumption characteristic (such as, issues related to foods or diets that were good or bad for one’s health) would result in increased (a) journalist interest and (b) news media coverage. Both propositions were supported. Press releases on health research topics featuring the food consumption characteristic did garner more journalist interest and more news media coverage than press releases that did not feature this key characteristic.

The fourth hypothesis (H4) suggested that press releases on health research topics featuring the novelty characteristic (such as, new medications or a study being the first of its kind) would result in increased (a) journalist interest and (b) news media coverage. Both propositions were not supported, revealing that neither journalist interest nor news media coverage differed depending on the novelty characteristic.

The fifth and sixth hypotheses (H5 and H6) dealt with the threat/mortality characteristic. H5 suggested that press releases featuring the mortality threat
characteristic (such as issues related to terminal illness outcomes or death rates) would result in decreased (a) journalist interest and (b) news media coverage. H6 suggested that the impact of the threat/mortality characteristic would be moderated by the inclusion of efficacious terms. Neither hypothesis was supported, revealing that neither journalist interest nor news media coverage differed depending on the threat/mortality characteristic.

Additionally, RQ1 sought to explore the impact of implicit messages related to survival/death-avoidance, considering the safety/vitality characteristic. No differences were found for (a) journalist interest or (b) news media coverage depending on the safety/vitality characteristic.

The last two research questions (RQ2 & 3) inquired about the impact of journalist interest on news media coverage. The two outcome variables were not correlated. Additionally, six mediation analyses considered the indirect effect of the various key characteristics on media coverage through journalist interest, and the results of the mediation tests were non-significant.

Post-hoc analyses were conducted, considering the impact of featuring news frames and health subtopics in press releases on health research topics on journalist interest and news media coverage. Neither journalist interest nor news media coverage differed depending on any of the news frames. However, press releases featuring the prevention health subtopic did garner significantly less journalist interest and news media coverage than press releases not featuring the prevention health subtopic.
Discussion of Findings and Ideas for Future Research

The overall goal of the dissertation was to develop and test a modified gatekeeping model. By speaking with science communication public relations professionals at The Ohio State University and examining press releases coming from OSU on research conducted by researchers affiliated with OSU, the samples provided information about practices at an exemplary university research institution. Findings from the exploratory focus group study could then be understood as insight into the “best practices” of a successful research university, which would then be implemented by the public relations professionals at other research institutions. Additionally, the findings from the main study could be understood as recommendations for what type of information to include and avoid in public relations efforts, including press releases, to garner greater journalist interest and news media coverage.

As discussed in Chapter 2, the exploratory focus group highlighted that public relations professionals often make decisions about which research studies to promote based on their expert intuition regarding the perceived inherent interest in the topic and predictions for media coverage. Therefore, there are no concrete guidelines in place for the process of selecting research studies for promotion through press releases. As such, the public relations professionals’ decision making process may benefit from the findings from the main study, which provide suggestions for including and avoiding certain characteristics and health subtopics. That being said, the public relations professionals clearly have implicit theories guiding their selections of certain research publications over others. While they may have struggled to articulate such implicit theories, the better they are at selecting research publications for promotion, the less variability there would
have been in the news media coverage. Future research should collect information on who wrote the press releases, to determine if certain public relations professionals are more successfully than others at predicting news media coverage and crafting press releases that garner journalist interest and news media coverage. Additionally, future research should consider both the research publications being promoted and the research publications not being selected by public relations professionals.

The modified gatekeeping model included six characteristics informed by literature on evolutionary psychology, basic drives, and terror management theory: sex differences, sex/reproduction, food consumption, novelty, threats/mortality, and safety/vitality. Of these characteristics, only sex differences and food consumption were shown to impact journalist interest, and only food consumption was shown to impact news media coverage. Both of these characteristics were added to the model from literature on evolutionary psychology and basic drives, suggesting that people are highly motivated to attend to issues directly related to their survival. However, the other characteristics coming from this literature, sex/reproduction and novelty, did not predict journalist or news media coverage. This may be connected to the subject area of the press releases examined, cancer research. Although affective tone was not captured in the content analysis, it is possible that press releases featuring the sex differences and food consumption characteristics may generally have a more positive tone than those featuring the sex/reproduction and novelty characteristics. For example, press releases featuring the food consumption characteristic were generally positive, highlighting the positive impacts of certain foods on health outcomes, whereas press releases featuring the sex/reproduction characteristic often highlighted the negative impacts of health issues on
relationships. Future research should examine the impact of the six key characteristics in
the flow from press release to news media coverage for other health research topics.
Additionally, future research should consider the impact of the affective tone of the press
release to determine if certain characteristics are connected to certain tones and if,
overall, press releases with more positive tones are garnering more journalist interest and
news media coverage.

While there were no significant effects found for the novelty characteristics on
journalist interest or news media coverage, this may be due to the conceptualization of
the characteristics. Within this study, novelty was coded for mentions of a new research
method, findings that were against a line of research, or a new medication or treatment
plan. However, this is likely not getting at the core of novelty as a news value; instead,
novelty is likely to be that curious or surprising bit of information that one can’t wait to
share with friends or family after hearing. Future work should consider
reconceptualizing the novelty characteristic, more along the lines of a story that is
surprising (see Berlyne, 1960) or piques the readers’ curiosity or interest (see Silvia,
2005).

Neither of the characteristics coming from the terror management theory
literature, threat/mortality and safety/vitality, were shown to have an effect on the
outcome variables. Interestingly, a related health subtopic, prevention, was shown to
reduce journalist interest and news media coverage. This suggests that messages about
how to avoid threats more broadly than what was captured by the safety/vitality
characteristic are decreasing the likelihood of a press release piquing the interest of
journalists and making it to the public through the news media. This is a major, very alarming finding, particularly in relation to public health efforts, which tend to stress the importance of prevention messages. Future research should examine differences within the prevention messages, to determine if there are any interaction effects with certain message characteristics, such as particular frames.

Overall, the findings from the main study suggest that the public is more likely to have access to news media stories about cancer research when the messages feature information about sex differences and food consumption. Moreover, the public is less likely to have access to news media messages about cancer research featuring prevention information. This finding may be of particular interest to health communication and public health research, which often focus on prevention as a key aspect of communicating to the public about health and reducing health risks. Future research should consider the choices that gatekeepers, including journalists and editors, are making in relation to the health messages the public will have access to, and whether the general public would make the same selections.

**Study Strengths and Limitations**

The current study tested a modified gatekeeping model, assuming an influence of previous gates on those that come after. However, there was not a correlation between journalist interest and news media coverage. Moreover, journalist interest was not a significant mediator on the relationships between the various key press release characteristics suggested in the model and subsequent news media coverage. This may, in part, be due to the limited amount of news media coverage captured through
LexisNexis. While all the press releases garnered journalist interest through the newswire websites (often thousands of clicks), it was much less common for press release to garner news media coverage. LexisNexis is a well-vetted method for capturing news media coverage data (Bomlitz & Brezis, 2008; Kornstein & Byrne, 2007; Smith, Ellenberg, Bell, & Rubin, 2008; Weaver & Bimber, 2008). However, it may have limited this study in capturing the coverage of these press releases across the whole media landscape as it only provides data for traditional news sources and does not effectively capture coverage on internet sources. Unfortunately, at this time, there is no well-established database that does effectively capture news media coverage across the whole media landscape.

As suggested in the discussion of the findings, the current study only examined press releases on cancer research. A more diverse sample relative to health topics should be examined to determine variations in the effectiveness of the various key characteristics across different health research topics. Moreover, with the present study’s focus on health, the selected theories used to develop the key characteristics were domain specific, decision-making theories related to health. As such, another scientific domain may need to use other decision-making theories. Future research interesting in determining key characteristics for press releases within other domains should consider this concern in the application of the modified gatekeeping model.

A significant strength of the main study was the sample size and time span. Examining one-hundred-seventy-one press releases on cancer research, the sample size is substantially larger than previous literature on examining the relationship between press
releases and news coverage (De Semir, Ribas, & Revuelta, 1998; Saguy & Almeling, 2008), and spanned ten years’ worth of science communication public relations professionals’ promotion of cancer research. With such a sizeable sample of press releases, the findings of the current work are better suited to speak to trends the in the flow of information than studies examining fewer press releases over shorter periods of time. Additionally, this data set can be used in the future to examine differences across the time span, as it is possible that the interest in certain types of stories related to cancer research has come in and out of media coverage in trends.

An additional strength of the examination is the interrater reliability. Initially, the coders reached acceptable levels of interrater reliability, a Krippendorf’s alpha of .80 or above, for all the coding categories. The interrater reliability was then tested again at two other points in the coding process, ensuring that reliability was maintained. Such rigor to ensuring reliability is not common in the content analysis methodology, as it is standard to not test interrater reliability again once it has been reached at the beginning of the process (Lombard, Snyder-Dutch, & Bracken, 2002).

The method of obtaining journalist interest data is another main strength of the current study. Through access to the Newswise website, journalist interest was identified through a readily available ‘views’ variable on the corresponding press release webpage. For EurekAlert, monthly reports featuring journalist view data were generated through the newswire website, and views of the press releases were summed across the months they appeared in the reports. The use of newswire websites to obtain journalist interest
data is an innovative and novel approach for studies examining the relationship between press releases and news media coverage.

Overall, the current dissertation laid substantial groundwork for the development of a modified gatekeeping model for science and health research news. The key role of public relations professionals in the flow of information from research institution to the public was highlighted. Additionally, two press release characteristics were found to increase journalist interest, and one characteristic was found to also increase news media coverage. Moreover, a health subtopic was found to decrease journalist interest and news media coverage. These findings should be considered in the development of guidelines for science communication public relations professionals, in an attempt to increase their influence on the flow of research information to the public. In turn, public relations professionals may be better equipped to do their part in answering the call for more accurate health information to be made available to the public.
References


McBride, C.M., Bowen, D., Brody, L.C., Condit, C.M., Croyle, R.T., Gwinn, M., Khoury, M.J., Koehly, L.M., Korf, B.R., Marteau, T.M., McLeroy, K., Patrick, 66


Appendix A

Tables and Figures
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Table 1. Reliability

Table 1 continued.

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Table 2

*Key characteristics*

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1. Please walk me through the decision-making process you do when you are considering writing a press release for a publication.
2. Specifically, how are publications selected for press release promotion? Are their multiple ways?
3. Are their common characteristics that you see across the publications you choose to write press releases for?
4. How do you select the findings to highlight within the press releases you write?
5. How do you select which authors to quote in the press releases when publications are written by multiple authors?
6. Are there any other factors that you take into consideration when making decisions about what publications to cover and what findings to highlight?

Figure 1. Topic Guide: Questions for interviews with OSU Research and Innovations Communications Department public relations professionals
Figure 2. Modified Gatekeeping Model: Model of public relations professionals’ and press release characteristics’ impact on news coverage of health research
Figure 3. Key Characteristics: Model of press release characteristics which moderate news coverage of health research
Figure 4: Frequency of News Frames
Figure 5: Frequency of Health Subtopics
Appendix B

Recruitment Email

This research project is interested in the issues and concerns that affect the decision making process relative to what research publications will receive promotion through the use of press releases. As a scientific research communications professional, you are being asked to participate in this study. To participate, you will be asked to participate in a 60 minute session. You will be asked to come into the lab to participate in a group interview with 1-2 other participants. When you come into the lab, you and your peers will be asked questions about your decision making process relative to what research publications will receive promotion through the use of press releases.

No identifying information will be recorded or connected to your responses in order to maintain your anonymity.

You can choose not to participate without penalty. If you agree to participate, you can withdraw from the study at any time, and there will be no penalty. If you have any questions, please email the lead investigator, Laura Willis, at willis.241@osu.edu. Also, for questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

This study does not begin until February 15, 2013.

Please respond to this email if you are able and interested in participating. Interviews will be set up based on participant availability.

Thank you for your consideration.
Appendix C

Consent Form

Dear Participant,

We are writing to enlist your help in a study designed to understand how scientific research is selected for press release and media promotion. This research is being conducted by Laura Willis and Dr. Silvia Knobloch-Westerwick from the School of Communication at The Ohio State University.

We kindly request that you participate in this interview, which may include some group discussion. Interviews are expected to take no more than 60 minutes.

If you have questions about this research project you may call Laura Willis at (937) 509-2011. If you have questions about your rights as a research participant, please call the Office of Responsible Research Practices at (614) 688-4792. You may request a copy of this form for your records.

By entering the interview room, you are consenting to participate in this study. By participating in the interview you acknowledge being aware of the above information and agree to participate in this study. You may ask to exit the focus group at any time. **Your responses in the interview will be kept confidential and inside the room you will be asked to use a pseudonym.**

Thank you for your help with this important project.

Cordially,

Laura Willis

Silvia Knobloch-Westerwick, Ph.D.
Appendix D

Focus Group Interview Script

In this study, we are interested in the issues and concerns that affect your decision making process relative to what research publications will receive promotion through the use of press releases. Please take a minute and think of recent press releases you have written and scientific research publications for which you decided to not write press releases.

The purpose of this group interview is to get a better understanding of the characteristics of scientific publications which make it more likely to promote them through press releases and the characteristics of scientific publications that you choose to highlight in said press releases. Our ultimate goal is to use the information gathered here today to gain a better understanding of the decision making process that leads to the coverage of certain scientific research publications in the mass media.

How the interview will work…

- This is part of a research problem; want your perception and opinions
- Everyone talks
- We are interested in all viewpoints
- There are no right or wrong viewpoints. If you have a different opinion, I want to hear it.
- Please give your honest thoughts

Researcher note-taking, assurance of privacy, request for confidentiality

- The researcher will be in the room taking notes on what participants are saying in response to the questions.
- The researcher will remind the participants that what they say during the focus group will not be connected to their identity at any point and are asked to not talk about what they do/talk about during the interview once it is over. Confidentiality cannot be assured in group settings except on the part of the researcher. That is,
• group members cannot be forced to ensure the confidentiality of other participants’ answers. The researcher will ask interview participants to respect the privacy of others but cannot enforce it. The researcher will not disclose identities and any reports generated as a result of this study will use only group averages and paraphrased wording, but due to the nature of the group setting he/she cannot guarantee complete confidentiality.

Role of the researcher

• Put issues out there
• Ask specific questions
• Take notes

Ground rules

• Stay on topic
• Talk one at a time
• Do not criticize others ideas

Introductions: tell me the pseudonym you’d like to go by, your educational background, and examples of both (1) a recent press release you wrote on a research publication and (2) a research publication for which you chose not to write a press release. Once we have gone around the room, I will begin to ask you specific questions, I would like to hear all of your viewpoints on the questions, regardless if you agree or disagree with the others in the room.

1. Please walk me through the decision-making process you do when you are considering writing a press release for a publication.
2. Specifically, how are publications selected for press release promotion? Are their multiple ways?
3. Are their common characteristics that you see across the publications you choose to write press releases for?
4. How do you select the findings to highlight within the press releases you write?
5. How do you select which authors to quote in the press releases when publications are written by multiple authors?
6. Are there any other factors that you take into consideration when making decisions about what publications to cover and what findings to highlight?

Review assurance of privacy and request for confidentiality
• The moderator will remind the participants that what they say during the interview will not be connected to their identity at any point and are asked to not talk about what they do/talk about during the interview once it is over.

Thank you, again, for your participation.
Appendix E

Debriefing

Obviously, the decisions you make about which research publications to write press releases about are important as press releases affect which research publications are covered by the media. We are interested in the issues and concerns that affect your decision making process relative to what research publications will receive promotion through the use of press releases. The questions that you were asked are a part of the process for identifying characteristics of research publications that make the more or less likely to receive media coverage.

Ultimately, the project is interested in various factors that influence what research makes it the public through mass media distribution. This project is part of a larger project exploring characteristics of scientific research that influence media coverage.

If you have any questions about the project, or would like to know the results of the project, contact Laura Willis at willis.241@osu.edu.

Thank you.
### Appendix F

**Coding Scheme**

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<td>2-3 key identifying words</td>
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Appendix G

Codebook

Press Release Codebook

This codebook was created to help guide you through the coding process. For each column in the excel spreadsheet, there is a corresponding bullet point here. The information next to each point will help you to better understand what the column is looking for and how to appropriately code for it.

Press Releases

Basic Info

- Coder Code – You will be assigned a coder code; unless there are two coders with the same initials, your coder code will be the initials from your first and last name. For example, if my name were Elizabeth Stanton, my coder code would be ES.

- Press Release Code – Each press release has already been given a predetermined code. You will not need to edit this column.

- Press Release URL – This is a link to a copy of the press release. This is how you will access the press releases you are coding. You will not need to edit this column.

- Release Date – This is the date that the press release was made public. You will not need to edit this column.

- Month – This is the month in which the press release was made public. You will not need to edit this column.
• Date of week – This is the day of the week the press release was made public. Use the date in the Release Date column/on the press release and http://scphillips.com/units/dayform.html to determine the day of the week.

• Please type out the month, so for 2/25/1999, type February 2, 1999. Sunday = 1, Monday = 2, Tuesday = 3, Wednesday = 4, Thursday = 5, Friday = 6, Saturday = 7.

• Views on Newswise – This is the number of times the press release was viewed by members of the newswire program, Newswise. You will not need to edit this column.

• Views on EurekAlert – This is the number of times the press release was viewed by members of the newswire program, EurekAlert. You will not need to edit this column.

• Word Count – This should show how many words are in the body of the press release. Please use a word processing system to determine the word count. Copy and paste the text beginning after “COLUMBUS, Ohio ---“ Your response will be a number.

• Researcher Mentioned – This should show if a researcher (or researchers) was mentioned. Yes = 1, No = 2, More than one researcher is mentioned = 3

• Researcher Gender – This should show the gender(s) (represented) of the researcher (or researchers) mentioned. This is discerned by their name. (If multiple researchers are mentioned, but they are all the same gender, this will be marked as a 1 or a 2.) Male = 1, Female = 2, Ambiguous = 3, More than one; mixed gender = 4; No researcher mentioned = 5

• Researcher Quoted – This should show if a researcher (or researchers) was directly quoted. Yes = 1, No = 2, More than one researcher is quoted = 3

• Quoted Researcher Gender – This should show the gender(s) (represented) of the researcher (or researchers) quoted. This is discerned by their name. Male = 1, Female = 2, Ambiguous = 3, More than one; mixed gender = 3; No researcher quoted = 4
• Explicit Mention of Gender – This should show if the gender of the researcher is stated explicitly. For example, an explicit mention of gender would be something like “Dr. Smith is the first woman to win this award…” (He/she is not an explicit mention of gender, but may help you discern the gender of someone’s whose name is ambiguous to you)
Yes = 1, No = 2

• Researcher Personal Information Included – This should show if any information not related to the researcher’s professional life is mentioned. For example, a mention of personal information would be, “Dr. Smith, the father of two young boys…” (This does NOT include mentions of where they work, awards they have won for their research or anything else that may be included on a resume. This is stuff outside of work/who they are as a researcher)
Yes = 1, No = 2

Characteristics

• Sex Differences – This should show if there is a mention of sex differences. For example, this would include a discussion in how a medication works differently for men and women, how men may suffer from an issue more frequently than women, or something to that effect.
Yes = 1, No = 2
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• If there is a mention of a sex difference, what is it? (If you have a response to this, you must have a one in the column before)
(No sex difference = 0, Males better than Females = 1, Females better than Males = 2, Males more than Females = 3, Females more than Males = 4, Differences acknowledged (not described) = 5, Other = 6
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• If other, please write in.
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release
• Sex/Reproduction – This should show if there is a mention of sex, reproduction, or childrearing. For example, this would include discussions of genitalia, sexual attractiveness, and attempts and reproduction and childrearing.
  Yes = 1, No = 2
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• If there is a mention of sex/reproduction, what is it? *(If you have a response to this, you must have a one in the column before)*
  None = 0, Dating/being a more attractive mate = 1, Sex = 2, Reproduction/pregnancy/child bearing = 3, Parenting/child rearing = 4, Other = 5
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• If other, please write in.
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• Food Consumption – This should show if there is a mention of eating or drinking. For example, this would include discussions of specific foods, diet plans, or appetite suppressants.
  Yes = 1, No = 2
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• Threats/Mortality – This should show if there is a mention of threats or risks to one’s life. For example, this would include discussions of mortality rates, causes of death, or dying in general. This includes both implicit and explicit threats.
  *(Mentions of “death” “dying” are red flags for explicit mentions of threat/mortality)*
  Yes = 1, No = 2
  o In the headline
  o In the lead paragraph
  o In the body of the press release

• If there is a threat, what type is it?
No threat = 0, Implicit threat = 1 (think, “X causes heart disease), Explicit threat = 2 (think, 50% of those diagnosed with X cancer will die within 1 year of diagnosis)
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• If there is a threat, are there an efficacy message presented (how to reduce or eliminate the threat?)
  No = 0, Yes = 1
  o In the headline
  o In the lead paragraph
  o In the body of the press release

• Safety/Vitality – This should show if there is a mention of how to make one’s life safer or healthier. This would include discussions of injury prevention, preventative medications, or life satisfaction scores.
  Yes = 1, No = 2
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• Novelty - This should show if there is a mention of something being novel. For example, this would include discussions of NEW medications or treatment plans, or if a research study if the first of its kind. (Saying “findings from a new study” doesn’t count as novelty, because almost all of these are press releases are on new studies. This is if what they did in the study or what they found is totally new)
  Yes = 1, No = 2
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

Frames

• Gain/Loss Frame – This should show if there is a gain or loss frame present. Gain and loss should be understood in relation to the discussion of outcomes; for example, lives lost or saved, disease patients treated or not treated. (Is the press release framed as an overarching gain or loss)
  (Gain = 1, Loss = 2, Not applicable = 3)
  o In the headline
• Individual/Society Frame – This should show if there is an individual or society frame present. Individual and society frames should be understood in relation to who is presented to be ‘responsible’ for a situation; for example, is obesity shown to be the obese individual’s responsibility or are societal factors shown to be responsible?
   o (Individual = 1, Society = 2, Not applicable = 3)
     o In the headline
     o In the lead paragraph (first paragraph)
     o In the body of the press release

• Conflict Frame – This should show if a conflict frame is present. A conflict frame should be understood as representing a story in terms of a conflict or controversy between opposing interest groups. (*Explicit mention of conflict or controversy*)
  Yes = 1, No = 2
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• Human Interest Frame – This should show if there is a human interest frame present. A human interest frame should be understood as bringing a human face to a story, telling an individual’s story.
  Yes = 1, No = 2
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• Unusualness Frame - This should show if the unusualness frame is present. This frame should be understood as highlighting that something about the story is surprising or unexpected.
  Yes = 1, No = 2
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

**Health Subtopic**
• Prevention – This should show if prevention is mentioned at any point.
  Yes = 1, No = 2
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• Risk Factors – This should show if a risk factor(s) is mentioned at any point.
  Yes = 1, No = 2
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• Treatment – This should show if a form of treatment is mentioned at any point.
  Yes = 1, No = 2
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

Other concerns
• Type of cancer – FOR CANCER PRESS RELEASES ONLY – This should show the type of cancer being discussed.
  Not applicable = 0, Skin = 1, Lung = 2, Prostate = 3, Breast = 4, Colorectal = 5, Kidney/Renal = 6, Bladder = 7, Non-Hodgkin's lymphoma = 8, Thyroid = 9, Endometrial =10, Cancer in general = 11, Multiple cancers = 12, Other = 13
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• If other, please write in.
  o In the headline
  o In the lead paragraph (first paragraph)
  o In the body of the press release

• Specific population – Age. This should show, if this study focuses on a specific age population, what population. (If it says ‘adults’, this is considered general population and should be coded as 0)
  None = 0, Pediatrics = 1, Elderly/geriatrics = 2
  o In the headline
- In the lead paragraph (first paragraph)
- In the body of the press release

- Secondary age population (if needed)
  None = 0, Pediatrics = 1, Elderly/geriatrics = 2
  - In the headline
  - In the lead paragraph (first paragraph)
  - In the body of the press release

- Specific population – Gender. This should show, if this study focuses on a specific gender population, what population.
  None = 0, Women = 1, Men = 2, Transgender population = 3
  - In the headline
  - In the lead paragraph (first paragraph)
  - In the body of the press release

- Secondary gender population (if needed)
  None = 0, Women = 1, Men = 2, Transgender population = 3
  - In the headline
  - In the lead paragraph (first paragraph)
  - In the body of the press release

- Specific population – Race/ethnicity. This should show, if this study focuses on a specific racial/ethnic population, what population.
  None = 0, White = 1, Black = 2, Latino/Hispanic = 3, Asian = 4, Other ethnicity = 5
  - In the headline
  - In the lead paragraph (first paragraph)
  - In the body of the press release

- Secondary race/ethnicity population (if needed)
  None = 0, White = 1, Black = 2, Latino/Hispanic = 3, Asian = 4, Other ethnicity = 5
  - In the headline
  - In the lead paragraph (first paragraph)
  - In the body of the press release
Key words – Please enter 2-3 three key words from the press release. Separate the key words/phrases by commas. (*Don’t write weight, obesity, cancer or OSU/”Ohio State”*)