FROM AWARENESS TO ADVOCACY: UNDERSTANDING COMMUNICATION ABOUT CANCER AND NONPROFIT SUPPORT

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ABSTRACT
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From Awareness to Advocacy:
Understanding Communication about Cancer and Nonprofit Support
(Under the direction of Lois Boynton, Ph.D.)

This dissertation explores public communication about and support for nonprofit health organizations by studying a specific community fundraising event, Relay For Life, benefiting the American Cancer Society. Using an online survey of undergraduates at the University of North Carolina at Chapel Hill (N=514), this research has two major focuses. First, it seeks to explore the concepts of media advocacy and framing as they are changing with the media environment. Second, it employs two theories, the situational theory of publics and the theory of reasoned action, to explore communication and participation behaviors related to the health issue and organization.

Results show which sources are used most frequently for information seeking and processing about cancer and UNC Relay For Life, and responses reveal salient public perceptions of these issues. Multiple analyses then show how problem and constraint recognition, involvement with the health issue, attitudes, and subjective norms influence information seeking and processing and behavioral intentions, which seem to represent a continuum of nonprofit support. Suggestions are made for exploring a new working model combining these variables and a proposed Theory of Situational Support that might help explain communication and participation behaviors related to nonprofit health organizations and events or initiatives that require public support. Theoretical, methodological, and practical implications are discussed.
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CHAPTER 1: INTRODUCTION

In 2009, U.S. nonprofit organizations received more than $303 billion in donations. Approximately $22 billion of that went to health organizations, providing support for nonprofit health facilities, specific diseases, disorders, or conditions, and scientific research for medical prevention and treatment options or cures (Giving USA Foundation, 2010). Nonprofit health organizations are vital in our society, providing "the necessary funding for biomedical research, free from federal, state and institutional politics, to not only save lives and improve health, but also lower health care costs" (Kiessling, 2008, p. 5). Simply put, nonprofit health organizations and health-related philanthropy save lives (Falk, 2005).

Donations to nonprofit organizations have declined in recent years. Contributions to the largest nonprofit organizations decreased by 11 percent in 2009, the largest drop the industry has seen in 20 years (The Chronicle of Philanthropy, 2010). If history and giving during past recessions provide any indication of what the industry can expect, donations to nonprofits may not reach pre-recession levels again until at least 2012 (Francis, 2009). For nonprofit health organizations, in particular, there is additional uncertainty surrounding public and private funding because of the recent passage of government health care reform (National Council of Nonprofits, 2010).

Nonprofit health organizations provide not only treatment, but also important support programs for patients and their families. They fund vital research that may not be conducted otherwise, and they engage in advocacy efforts that help change social,
economic, political, and environmental factors affecting health. Wallack, Dorfman, Jernigan, and Themba (1993) described these factors as the “upstream” elements that influence the health of people “downstream.” Recent research suggests that these broad, upstream efforts to improve public health may be more effective than those focused on health behavior change of individuals downstream, and communication campaigns should focus on larger social, political, and economic conditions to create healthier environments (Cho & Salmon, 2007; Niederdeppe, 2009). In other words, upstream influences need to be connected to downstream conditions in order to improve public health. Nonprofit health organizations help make these connections, illuminating causes for problems through advocacy and communication, and raising funds to provide research, treatment, and other solutions for important health problems.

Advocacy and fundraising are two ways nonprofit organizations work to improve public health. Both concepts, and the various strategies involved in each, are essential to carry out nonprofit organizations' missions and serve constituents' needs. Of course, communication with various publics is essential to advocacy and fundraising efforts. Without mobilizing key stakeholders, advocacy and fundraising would not be possible, and nonprofit organizations’ efforts to improve public health would be fruitless. Media advocacy involves utilizing media and other communication channels to mobilize stakeholders and activate forces in a social system to make positive changes regarding public health (Wallack, et al., 1993). Yet media have changed tremendously in recent years, including incorporating 24-hour news cycles, an increase in the number of blogs and online news sources, and the rise of social media outlets like Facebook and Twitter, all of which have affected media advocacy, public relations, and health communication.
At the 2009 CDC-sponsored Conference on Health Communication, Marketing and Media, there was a general consensus that all health organizations should use social media to communicate with constituents, but there were also the resounding questions of: How and Why? What are these efforts doing for health organizations and their various stakeholders? In a *New York Times* article, an expert on nonprofit Internet solutions commented on people moving beyond “following” or “liking” things on social media: “It’s still not clear whether or not followers translate to volunteers and donors…. But people that are more engaged with nonprofits are most likely to become a donor or support them in another way” (Wortham, 2010, p. B3). Hence the challenge for nonprofits is to not only determine their involvement in social media, but also how these media might be used with other communication channels to encourage constituents to contribute, participate or otherwise get involved with organizations and issues because of their relationships with others and/or their experiences with particular issues. However, our understanding of these interdependent processes and different publics’ awareness, attitudes, communication activities, and associated behaviors is still somewhat limited.

The purpose of this study is to explore stakeholder awareness, attitudes, and involvement related to one nonprofit health organization’s communication, fundraising, and advocacy efforts. Significant research had been conducted on these concepts, involving multiple theories and methods. This study employs the situational theory of publics, the theory of reasoned action, media advocacy and framing to explore communication and participation behaviors related to Relay For Life benefiting the American Cancer Society using an online survey of students at the University of North Carolina at Chapel Hill. The literature review provides an overview of these theories, but
first, it is necessary to explore the concepts of media advocacy, fundraising, and online communication as important functions of nonprofit health organizations, specifically related to the American Cancer Society and Relay For Life.

**Media Advocacy and Health**

Wallack, et al., (1993) described media advocacy as strategically using media to frame a problem as a public health issue, changing the focus from individual behavior change to promoting political and/or economic solutions to health issues. They defined advocacy as, "a catch-all word for the set of skills used to create a shift in public opinion and mobilize the necessary resources and forces to support an issue, policy, or constituency" (p. 27). Media advocacy seeks to increase awareness, using the power of people, groups, and institutions to respond to human needs. More specifically, media advocacy consists of three steps: 1) setting the agenda; 2) framing the issue; and 3) advancing a solution (Gibson, 2010). Although media are instrumental in this process, there are more media and ways to communicate than ever before, and many groups, including nonprofit organizations and their stakeholders, are helping to push issues onto the agenda and frame them for the public.

Health organizations rely on advocacy to improve public health in many ways, including starting petitions urging legislators and other leaders to increase funding, enact laws, or create community resources promoting health and safety. Communication campaigns are typically designed to publicize the organizations’ efforts and gain support from media, the general public or key stakeholders, such as board members, donors, volunteers, or community leaders. Advocacy has been essential in the anti-tobacco movement, for example, helping to enact nonsmoking ordinances, curb tobacco
advertising and availability, and increase industry sponsorship of community events. Health advocates were also involved in the passage of the Ryan White CARE Act, which mandated funding for HIV/AIDS treatment and research in the 1980s (Rogers, Dearing, & Chang, 1991), and in the Food and Drug Administration's change to show nutritional information in food labeling to consumers (Wallack, et al., 1993). Nonprofit organizations like Mothers Against Drunk Driving (MADD) have been heavily involved in media advocacy surrounding alcohol use, and organizations like the American Cancer Society regularly involve stakeholders in lobbying government entities for funding for cancer research, screenings, and other preventative and treatment options. All of these efforts require public support and often rely on volunteers to help communicate and accomplish goals.

Recent research has recognized the difficulty of measuring media advocacy yet also highlighted the importance of studying the concept. For instance, Askelson, Campo, Mastin, and Slonske (2009) studied media coverage of binge drinking and determined that media and communication campaigns need to focus more on the consequences of the problem, as well as parental strategies to prevent binge drinking in order to create social change. In a study on a consortium of California health clinics, Gardner, Geierstanger, Brindis, and McConnel (2010) determined that while direct lobbying efforts may be most effective in activating actual policy change, media advocacy is necessary for increasing public awareness and support for health issues. They also suggested that traditional media relations efforts, such as sending out mass press releases, may not be as effective as establishing more interpersonal relationships with media and other important stakeholders.
Similarly, Gibson (2010) wrote about the following two limits of current media advocacy work: 1) it focuses too much on traditional media and overestimates the power of traditional media to create social change, and 2) its emphasis on policymakers and other elites limits democracy and leaves out important voices, such as the members or constituents that the organizations serve. He argues that there are “subaltern public spheres” of stakeholders having conversations about issues, and organizations should participate in those conversations and provide tools for stakeholders to promote change (p. 57). Some of these conversations are happening online and through social media, and it is important that we continue expanding the concept of media advocacy through research. This point may be particularly true for health issues, around which communities develop to communicate, share important news and/or personal experiences, and advocate for further change.

McCarthy and Castelli (2002) described nonprofit organizational advocacy as collective action aimed at influencing public policy. Much like upstream and downstream efforts to improve public health, nonprofit advocacy can be divided into two categories: direct and indirect advocacy. The authors explain: "Organizations may operate through a wide array of direct advocacy strategies aimed at shaping public opinion and policy, but they may also operate indirectly, through the mobilization of advocacy by individual citizens" (p. 104). When citizens are encouraged to participate in an organization's advocacy activities as individuals, rather than as formal representatives of the organization, the tactics are referred to as grassroots lobbying or indirect advocacy (Hrebenar, 1997; McCarthy & Castelli, 2002).
Indirect advocacy is often carried out through routine contact between organizations and their stakeholders (clients, donors, volunteers), and it is successful when citizens directly, yet seemingly independently, build constituencies that apply pressure to bring about change in favor of their issue or position (Faucheaux, 1995; McCarthy & Castelli, 2002). Similarly, Palfrey (2006) described the importance of group advocacy (i.e., the bringing together of different stakeholders for one purpose or cause), which can be effective for increasing health funding because "policymakers and philanthropists often respond positively to appeals for financial support to resolve particular, well-defined, categorical problems" (p. 12). This approach is how many nonprofit health organizations operate, through indirect or group advocacy and fundraising that mobilizes multiple constituents around a health issue. Indeed, some of the tactics that fall under the umbrella of advocacy include activities practiced by many nonprofit health organizations, including grassroots organizing and mobilization of volunteers, lobbying, mass communication campaigns, media relations—and fundraising (Wallack et al., 1993).

**Nonprofit Philanthropy and Fundraising**

As part of the "upstream" approach to influencing public health, philanthropy and fundraising are essential to nonprofit organizations and are important but often overlooked components of nonprofit advocacy efforts. Although advocacy and philanthropy are separate concepts, nonprofit health organizations rely on both strategies, and it could be argued that they are related and equally integral parts of a nonprofit organization's efforts to improve health. Fundraising is a function of philanthropy, and both are crucial to the health of nonprofit organizations.
Fundraising has been described as "an organizational function unique to that sector of our democratic society alternatively referred to as nonprofit, voluntary or independent" (Kelly, 1998, p. 1). Fundraising involves "the raising of assets and resources from various sources for the support of an organization or a specific project" (Association of Fundraising Professionals, 2003, p. 54). It has been argued that fundraising and philanthropy are necessary for providing many of the services people rely upon in the U.S., particularly as many public needs previously fulfilled by government entities are now (since the late 1980s/early 1990s) provided by nonprofit organizations (Boris & Steuerle, 2006; Clemens, 2006; Hall, 2006). Increasingly, nonprofit organizations are working with corporate and government entities to raise funds and provide services to the public (Frumkin, 2002; Galaskiewicz & Colman, 2006). However, the majority of nonprofit contributions still come from individuals (83%), rather than foundations (13%) and corporations (4%) (Giving USA Foundation, 2010). Thus, the necessity of fundraising has been described this way: "Fundraising is an essential part of American philanthropy; in turn, philanthropy—as voluntary action for the public good—is essential to American democracy" (Rosso, 1991, p. 4).

Indeed, nonprofit organizations have become part of the fabric of America, and healthcare is the most resource-intensive domain of U.S. nonprofit activity (Schlesinger & Gray, 2006). The health industry is also where many of the largest nonprofit organizations are located. In other words, the generosity or philanthropy expressed through fundraising ultimately helps nonprofit health organizations provide services to the sick, information to those in need, and further investigation into illnesses with ineffective treatment options, vaccines, or cures.
Although some scholarly research in public relations and persuasion has examined aspects of philanthropy and fundraising (e.g., Das, Kerkhof, & Kuiper, 2008; Hall, 2006b), the majority of mass communication research in these areas focuses on relationship management. In fact, one of the top scholars in the field described fundraising as "the management of relationships between a charitable organization and its donor publics" (Kelly, 1998, p. 8). Waters (2008) applied relationship management theory to fundraising and found that donors who gave multiple times to a nonprofit hospital evaluated their relationship to be stronger than did one-time donors. The same author found that the four strategies of stewardship — reciprocity, responsibility, reporting, and relationship nurturing — were viewed favorably by donors and affect multiple dimensions of the donor-organization relationship, including trust, satisfaction, commitment, and control mutuality or perceived balance of power (Waters, 2009a; 2009b). Another study by Waters (2009c) examined the role of cognitive dissonance in crisis fundraising and found that individuals who donated to the American Red Cross following the 2004 Asian tsunami felt better or more balanced after making a donation; they also avoided news to reduce additional negative feelings during that time.

Nonprofit Communication Online

More than a decade ago, Hon and Grunig (1999) predicted that in the future, most organizations would manage relationships with multiple publics online. Like many organizations, nonprofits have turned to new technologies and social media (including Facebook and Twitter) to communicate with donors and other stakeholders. Kent and Taylor (1998) and many others have advocated for studying organizational-public relationships online, and more recent research has focused on “new media,” including
websites, blogs, and social media (e.g., Hanson, Thackeray, Barnes, Neiger, & McIntyre, 2008; Seltzer & Mitrook, 2007; Thackeray, Neiger, Hanson, & McKenzie, 2008; Taubenheim, Long, Smith, Jeffers, Wayman, & Temple, 2008; Waters & Lord, 2009; Waters, Burnett, Lam, & Lucas, 2009).

Many of these studies focus on the effectiveness of various media and means of communicating with different publics. For example, Seltzer and Mitrook (2007) conducted a content analysis of environmental blogs and websites and found that blogs were better at ease of navigation, conservation of visitors, and responsiveness, but websites were rated higher in terms of providing useful information for volunteers and other stakeholders. Waters and Lord (2009) looked at nonprofit websites and found that while many of them were good at promoting openness, access, and networking, they should continue to strive to provide useful information for multiple publics. Providing frequent updates to stakeholders about causes and programs could elevate perceptions of competence, dependability, and integrity, which would lead to increased commitment to the organization.

Health communication is increasingly relying on new media to carry out various campaigns. Social media, mobile phones, and other new technologies make it easier than ever for health communicators to reach important stakeholders. Nonprofit organizations no longer have to rely on mainstream media as gatekeepers to key publics; social media, viral marketing, websites, etc., allow publics to come to the organizations online. In this way, media advocacy may be changing. Hanson, et al., (2008) equated the difference between social/online media and traditional media/communication techniques to that of “pull vs. push marketing,” meaning that publics are now coming to the organizations
(online), rather than the organizations having to push information to them. However, “best practices” are still needed for practitioners who may not understand or be able to keep up with changing technology and the possible applications for various publics. Some say social media may be most useful for helping with “buzz” or viral marketing, and practitioners need to keep three things in mind when designing these types of information technology strategies: 1) key publics (socioeconomic status and other factors may affect access); 2) resources or costs; and 3) the goals of the campaign (Thackeray et al., 2008). In other words, social media may not be the best means to reach all publics with all messages; nonetheless, these platforms are increasingly being used by multiple stakeholders of many backgrounds to communicate about important issues.

The Heart Truth Campaign is an example of using social media and other online marketing techniques to raise awareness about heart disease among women. Evaluations of the various strategies used in the campaign found that online PSA banners, influential bloggers, and YouTube videos were particularly effective in raising awareness and driving traffic to the campaign site (Taubenheim, et al., 2008). Although Facebook had a slow start in this particular campaign, researchers suggested that Facebook and other forms of social media would grow and continue to be more important in similar campaigns in the future. Nonprofit use of sites like Facebook is on the rise, although it is not quite where some believe it should/could be. For instance, a recent content analysis of nonprofit Facebook pages found that only 14% of 275 organizations were conducting fundraising through Facebook, with educational and health nonprofits being the most sophisticated in their use of Facebook for fundraising (Waters, et al., 2009). It has been
suggested that nonprofit organizations have much to learn in terms of using social media to full potential.

While there has been significant research on nonprofit communication, media advocacy and fundraising, more research is needed, particularly related to social media and the changing media environment. It is important to understand how nonprofit organizations communicate with various stakeholders to affect public health. How do people become aware of and communicate about particular health issues or organizational efforts? And how and why do they become and/or stay involved with the organization or health issue? The following section provides background information on the health organization that is the focus of this study – the American Cancer Society and the Relay For Life campaign.

The American Cancer Society and Relay For Life

The American Cancer Society (ACS) is one of the largest nonprofit health organizations in the United States engaging in advocacy, fundraising, and other efforts to fight cancer, find cures, and save lives (American Cancer Society, 2010). As the largest non-governmental funder of cancer research, ACS has invested more than $3.5 billion in cancer research since 1946. The organization has funded 44 Nobel Prize-winning scientists who have helped with many advances in health, including confirming the link between cigarette smoking and lung cancer, establishing the link between obesity and multiple cancers, developing drugs to treat leukemia and breast cancer, and showing that mammography is the most-effective way to detect breast cancer.

The organization’s advocacy affiliate, the American Cancer Society Cancer Action Network (ACS CAN), has helped increase funding for cancer research, and
helped pass smoke-free laws covering nearly 70% of the United States. The organization has also helped pass state laws ensuring that people have access to and coverage for cancer screenings and treatments, and helped more than three million uninsured, underinsured, and low-income women get breast and cervical cancer screenings since 1991 (ACS, 2010). Beyond funding research and advocacy efforts, ACS provides services like a 24-hour cancer hotline, a website where people can find information on cancer screening guidelines, nutrition and physical activity, as well as personalized programs to help them quit smoking. It also offers a clinical trial matching service that connects patients with different treatment options, offers online and face-to-face support communities, and helps provide lodging to patients and caregivers who have to travel for treatment, among other services.

All of this is made possible by a “grassroots force of three million passionate volunteers who tirelessly seek to save lives from cancer” (ACS, 2010). Of course, cancer comes in many types and affects a vast population of males and females ranging in terms of age, race, ethnicity, and geographic location. More than 1.5 million people will be diagnosed with cancer in 2011, and more than 570,000 are expected to die from cancer this year, at a rate of more than 1,500 per day. Cancer is the second-most-common cause of death (exceeded only by heart disease) and is responsible for one in four deaths in the U.S. Thankfully, many people also survive the disease; the five-year survival rate for all cancers diagnosed between 1999 and 2006 is 68% (ACS, Cancer Facts & Figures, 2011).

Considering the scope of cancer, it is not surprising that so many people are affected by the disease and, thus, support the American Cancer Society. In 2008, the organization reported total revenues exceeding $1 billion, much of which was provided
by individual donations, corporate contributions, and other support (Charity Navigator, “American Cancer Society,” 2010). Like many nonprofit organizations, ACS reports that a significant portion of revenue comes from fundraising events, such as Relay For Life.

Relay For Life is the signature fundraising event of the American Cancer Society. The organization calls the event “the world’s largest movement to end cancer,” estimating that one in every 100 Americans participates in one of nearly 5,100 Relay For Life events nationwide (ACS, 2010). The event began in 1985 when Dr. Gordy Klatt, a colorectal surgeon in Tacoma, Washington, walked and ran around a local track for 24 hours to raise money for ACS. Since then, Relay For Life events have started in communities of every size across the nation, with many occurring on an annual basis.

Relay For Life events are generally held overnight (for up to 24 hours) with participants walking, running, and/or gathering around a track or path, often near a community park, high school, or on the campus of a college or university. The idea behind Relay For Life is that “cancer never sleeps,” and events are filled with opportunities for participants to “celebrate, remember, and fight back” (Relay For Life, 2010, para. 1, 3). Each event typically begins with a survivor’s lap, in which cancer survivors circle the track or path together, and includes a luminaria ceremony, in which participants remember or honor loved ones by lighting candles and walking a lap in silence. Anyone may participate in Relay For Life, and people often come together in teams to raise money on behalf of individuals or groups for ACS; individuals may participate on their own as well. Most events require only a small registration fee, but many individuals and groups set fundraising goals and ask friends, family, co-workers, and other community members to sponsor them in their fundraising, which often include
customizable online requests for donations, as well as localized, grassroots efforts, such as auctions, bake sales, etc. (Relay For Life, 2010).

Relay For Life has become popular in college towns across the country, and The University of North Carolina at Chapel Hill is one of many campuses participating in the event. In 2010, approximately 2,300 participants raised nearly $200,000 for ACS (“A reason to celebrate,” 2010). The event was held on campus again in 2011 and raised more than $205,000 (Martinez, 2011). When this study launched, the organization was in the process of recruiting participants and teams, and was active in communicating with stakeholders. Relay For Life provides a unique opportunity to study the communication, advocacy, and fundraising processes of a nonprofit health organization as it interacts with multiple publics.

While there has been much research on media advocacy, fundraising, and health communication, the concepts are rarely combined, and collegiate/community fundraising programs such as Relay For Life have not received much attention in academic research. It is important to note that these efforts are not limited to the American Cancer Society; similar events are held nationwide benefiting multiple health organizations. For example, St. Jude Children’s Research Hospital has a program similar to Relay For Life called Up ‘til Dawn, and Dance Marathon events benefit Children’s Miracle Network and affiliated children’s hospitals. These events are hosted on hundreds of campuses across the country and bring in millions of dollars for nonprofit health organizations. By studying one of these events, we may get a glimpse into the inner-workings of nonprofit-stakeholder communication, advocacy and fundraising, which may lead to better understanding of these programs and the various processes involved.
Study Scope and Overview

To summarize, this research seeks to understand public communication about and participation in the community fundraising event Relay For Life benefiting the nonprofit health organization, the American Cancer Society. This study explores the situational theory of publics, the theory of reasoned action, media advocacy, and framing through an online survey of UNC students and participants in Relay For Life. More specifically, an online survey was developed using Qualtrics, online survey software provided by the Odum Institute at UNC. The online survey link was distributed via e-mail to a random list of 5,000 undergraduates at UNC, allowing for assessment of participants as well as those who were not participating. Studying a specific public, health issue, and organization contributes to the broader goal of this study - to better understand awareness, attitudes, communication, and involvement surrounding nonprofit organizations, health issues, advocacy, and fundraising.

The next chapter outlines the situational theory of publics, the theory of reasoned action, framing, and other relevant literature. Next, the methods section will describe the survey in depth, including advantages and disadvantages of online surveys, details about the development of the survey questionnaire, and the pre-test that was conducted. The results section details the findings from the survey, including relevant tables and figures. The final chapter provides discussion and a summary of conclusions from the results.
CHAPTER 2: LITERATURE REVIEW

This chapter outlines three theoretical concepts that are important to the proposed study. First, the situational theory of publics is a public relations theory that emerged in the 1960s through research by communications scholar James Grunig and colleagues. Second, the theory of reasoned action emerged in the 1970s from the work of social psychologists Martin Fishbein and Icek Ajzen, and has been highly influential in health communication research, among other areas. Third, the theory of framing also has a long history in mass communication research, beginning with sociologist Erving Goffman, and has influenced our understanding of communication about political, social, and health issues. This chapter provides an overview of these theories and relevant literature related to the current study.

The Situational Theory of Publics

The situational theory of publics has a long history in public relations and communication research and has been called the first “deep theory” of public relations (Aldoory & Sha, 2007, p. 339). It originated from James Grunig’s interest in cognitive dissonance, information seeking, and decision-making, and his dissertation research in the late 1960s (Grunig, 1966; 1968). It has been applied primarily through survey research; however, it has also been applied using focus groups, experiments, and other methods to study many different topics. This section discusses the theory’s origins and history, its major variables and how they’ve changed over the years, and how the theory has expanded our understanding of public relations research. It also reviews several
studies that have applied the theory to political issues and to health and risk communication, and explains how and why situational theory of publics is appropriate for the current study.

The situational theory of publics provides a framework for exploring the various factors involved in different publics' attitudes and behaviors toward an organization based on their perceptions of an issue or situation (Grunig, 1989, 1997; Grunig & Hunt, 1984; Hamilton, 1992). According to the situational theory of publics, three independent variables - problem recognition, constraint recognition, and involvement - predict two dependent variables - information seeking and information processing (which have been collapsed into one dependent variable and transformed in other ways over the years). Passive or low levels of information seeking and processing may imply that individuals simply receive information presented to them. Active or higher levels of information seeking and processing, on the other hand, imply that individuals expend effort to locate or consume information about an issue or situation, which may lead to subsequent, relevant behaviors. As Grunig (1989b) stated, "people communicating actively develop more organized cognitions, are more likely to have attitudes about a situation, and more often engage in a behavior to do something about the situation" (p. 6). The situational theory can be used to segment publics and create communication campaigns; however, Grunig (1989b) and many others have acknowledged the importance of individual differences and effects, which may include other variables related to participation in advocacy or fundraising efforts, such as attitudes, social norms, and the perceptions people associate with certain issues, events, or organizations.
In a well-known textbook chapter, Grunig and Hunt (1984) discussed how the situational theory of publics developed to explain how, why, and to what extent people get involved with and/or communicate about issues, and how public relations practitioners might be able to use this knowledge to segment and effectively communicate with different publics to potentially affect behavior. They used survey data to segment publics into multiple types, using the original terms: problem-facing, routine, constrained, and fatalistic. When these types were combined with the variable of involvement (either high or low involvement), these types evolved into the more commonly known groups of publics: non-public, latent, aware, and active. Grunig and Hunt (1984) also used survey data to categorize publics around issues and came up with four more types of issue publics: those who are active on all issues, those who are apathetic on all issues, those who are active only on issues that affect nearly everyone, and single-issue publics.

Years later, Grunig (1997) wrote an overview of the situational theory, in which he discussed its history, recent research, and possible directions for future research. In a more-recent article, Grunig (2006) stated that the theory still provides a useful tool for segmenting publics and has many scholarly and practical applications. He suggested that the theory should continue to be used in research on public relations as a management function, and that the variables need to continue to be explored in new contexts related to different issues, situations, media, and communication tactics. Similarly, Aldoory and Sha (2007) acknowledged that although the theory has had methodological issues, including difficulties choosing measures to represent variables and occasionally low alphas from factor analysis, it has many academic, practical, and pedagogical
applications, including helping scholars, practitioners, and students use primary research to segment publics and design effective communication campaigns.

*The Situational Theory of Publics Variables.* The independent variables of the situational theory of publics are problem recognition, constraint recognition, and involvement, and the original dependent variables are information seeking and processing (Grunig & Hunt, 1984). Research has looked at relationships among the three independent variables and how those variables predict or relate to the dependent variables. **Problem recognition** is defined as the moment when people recognize that something should be done about an issue or situation, and stop to think about what to do. **Constraint recognition** happens when people perceive that there may be obstacles in the way of acting related to the issue or situation. **Involvement**, the third independent variable, is defined as the extent to which people personally connect with the issue or situation. **Information seeking and processing** can include passive or active forms of communication. Information processing typically means that an individual simply receives or consumes information that is presented to them, while information seeking is active and implies that individuals expend effort to find information or communicate about an issue or situation (Grunig, 1989a, 1997; Hamilton, 1992). Of course, these variables have changed over the years, which will be discussed below.

Although many questions have been used to measure the independent variables over the years, the original questions were: 1) How often do you stop to think about a particular issue? (problem recognition) 2) To what extent can you have an effect on this issue? (constraint recognition) and 3) To what extent do you see a connection between yourself and this issue? (involvement). The dependent variables are typically measured
through questions that ask about information seeking and processing, including items related to exposure, attention, media use, and other communication behaviors (Grunig & Hunt, 1984).

While the situational theory variables have remained fairly consistent over the years, many studies have tried using different variables and/or variations of the main variables. For example, Grunig and Childers (1988) differentiated between *internal involvement*, meaning personal attachment or involvement “in the mind,” and *external involvement*, which refers to “real-world” activity or involvement. They found that these variables did not explain communication behavior, however. Hallahan (1999) studied *motivation* instead of involvement as one of the independent variables, and in subsequent research, he suggested the need to focus on “inactive publics” and why they do not respond to communication campaigns (Hallahan, 2000; 2001). The proposed study will attempt to understand how these inactive publics relate to cancer, the American Cancer Society, and UNC Relay For Life by surveying those who are not participating as well as those who are involved with the event.

Sha (2006) studied cultural identity and suggested that it may be an important fourth independent variable for the theory. She suggested that cultural identity may be similar to Grunig’s originally proposed fourth independent variable, “referent criterion,” which was dropped from the theory early on and refers to the way situations or issues were handled in the past. In situations where cultural identity is salient, the extent to which people identify with their culture (or with certain groups within the culture) may be an important predictor of the other variables in situational theory. Similarly, Sriramesh, et al., (2007) conducted a survey of Singapore residents about customer
service and found that cultural differences, such as deference to authority, may mean that people perceive constraints differently. While respondents seemed to recognize problems of customer service, they were much more likely to complain among friends and social networks than to write formal letters or otherwise participate in “activist” behavior. This finding has implications for public relations research and practice, as well as for more-recent research on social networks, social media, and many forms of activism.

**The Situational Theory, Nonprofit, and Political Activism.** The situational theory of publics has been used to study political activism and involvement in nonprofit organizations, making it highly appropriate for the proposed research. In one of the earliest studies of the theory, Grunig (1989a) conducted a survey of Sierra Club members to understand when and how publics become “activist” or active members of organizations. He found that “all issue” publics (i.e., people who were active on all of the issues studied) were most likely to become members of nonprofit or activist organizations, and that these publics were more likely to become the most active within the organizations. He further determined that purposive incentives, meaning satisfaction or the feeling of purpose respondents gained from membership, were more important than monetary or social incentives in determining group membership. He referred to membership in such organizations as “delegation of activism,” because by belonging to the group, people are essentially expressing their opinions through the organization’s actions (p. 20).

Recent research is taking the situational theory of publics in new and interesting directions, and expanding our knowledge of how public relations is changing related to nonprofit and/or activist communication. For example, Werder (2006) used an
experiment to study how Hazleton and Long’s (1988) public relations process model and its various public relations strategies might be associated with the variables in the situational theory of publics. Using a case study of a PETA campaign against McDonald’s, she found that out of the multiple strategies described by Hazleton and Long, the persuasive strategies were most influential on problem recognition and involvement. From this finding, she concluded that communication campaigns or public relations strategies that use persuasive language may be able to influence people caring about or becoming involved with issues they may not have been aware of previously. She also tested the idea of “goal compatibility” (p. 338) between an organization and an individual, or the extent to which their goals coincide, and found that it was associated with involvement and information seeking.

The situational theory of publics has been used to study political communication and involvement with political issues as well. For example, Atwood and Major (1991) found that involvement in an international political issue was more highly correlated with interpersonal communication than mass media use. Additionally, involvement was associated with relevance, meaning the more involved people were with the issue, the more relevant they found information about the issue to be; however, information seeking may not take place until an issue reaches crisis proportions. This research is relevant to health communication and issues like cancer, which may be viewed as serious but ongoing issues that may not be considered time-specific or quite at the level of “crisis proportions.”

Highlighting the importance of timing for communicating about various issues, Hamilton’s (1992) research about a governor’s race in Kansas found that highly involved
people used mass media more than others during the race, and this activity increased as
the race got closer. Highly involved and active communicators had stronger cognitions
and attitudes about the race, made decisions more quickly, were stronger in their
convictions, and were more active in terms of political activity, including actually voting.
Problem recognition did not predict media use, however, which may suggest that other
elements such as “habit” (i.e., using the same media repeatedly) and “drive,” (i.e.,
generalized level of energy to seek information) may be important variables to add to the
theory to describe communication behavior. This idea could apply to many issues
beyond politics, including health.

*The Situational Theory and Health Communication.* Several studies have
applied the situational theory of publics to explore risk and health communication. The
theory is highly appropriate to health communication because problem recognition is
similar to perceived risk, involvement is similar to perceived susceptibility, and
constraint recognition is similar to self-efficacy, the main variables involved in many
health communication theories and research (Aldoory & VanDyke, 2006; Aldoory, Kim
& Tindall, 2010). For instance, Major (1998) found that situational theory’s independent
variables were associated more with interpersonal communication than mass media use
(see also Atwood & Major, 1991) for information seeking and processing about risks,
which has important implications for health communication. Reducing constraints may
be one of the most-important focuses of risk and health communication campaigns, and
interpersonal sources may be very important in communicating about and dealing with
risks. Although Major (1998) refers to social networks like churches, community centers,
and even restaurants or other social locations, these findings may apply to social media or
other online networks, where groups often form around specific issues, including health problems. This finding may also have implications for perceived social norms, one of the variables in the theory of reasoned action, meaning that social media or online sources may be influencing perceived social expectations in ways we do not yet know or understand.

Aldoory (2001) used focus groups to study the situational theory of publics and communication about health issues among women. Similar to Major (1998), she found that perceived high constraints (i.e., lack of time, resources, ability to find information from similar or relevant sources) reduced communication, a finding that is very important for health communication campaigns, which generally try to increase information seeking and processing and subsequent action. Five factors influenced involvement with the health issue for women: self-identity, source preference, consciousness of personal health, consciousness of everyday life, and cognitive analyses of message content. These findings indicate that health communication needs to be highly tailored and personalized, particularly for women.

In addition to interpersonal sources and communication, mass media have been found to play an important role in research on the situational theory of publics and health/risk communication process. For instance, Aldoory and VanDyke’s (2006) studied public perceptions of risk related to potential bioterrorist attacks on U.S. food and found that attention to news coverage was associated with higher problem recognition, which could be beneficial if media and/or health communicators are trying to increase risk perceptions about an issue; however, they also warned that too much news coverage could lead to information overload and shut-down for some people. They also reported
that shared involvement, or the feeling that a source is “in the same boat” increased involvement and attention to issues. Aldoory, Kim, and Tindall (2010) confirmed this idea of “shared risk” as important for health communication and proposed that involvement may be an *antecedent* variable to problem and constraint recognition for health issues. This study and others have noted the need to study health/risk communication and the situational theory of publics related to newer forms of online media.

*The Situational Theory and Online Communication.* Several scholars have highlighted the need to adjust the situational theory of publics’ dependent variables of information seeking and processing to the “new” or changing media environment, including the rise of 24-hour news and the many forms of online communication and social media. For instance, Yang (2005) concluded that general publicity (e.g., sending mass press releases to traditional media) does not have much effect on organizational reputation, and how actively organizations communicate with their active publics may be one of the strongest predictors of organizational success. These findings indicate a growing need for organizations to reach out to active publics through social media or other more-tailored means, as opposed to focusing on general communication outputs and/or traditional media. Similarly, Kim (2005) explored how active communicators come together socially (in-person or online) to form collective publics to help solve problems. He proposed a new variable of “communication activeness,” which describes how people acquire, select, and transmit information. This variable is a bit different from the typical dependent variables of information seeking and processing because it focuses
on transmission or sharing information with others, which is one of the main purposes of online communication and social media.

Recently, Aldoory and Sha (2007) suggested that future research should continue to explore the nuances of the independent variables, particularly involvement, and that the dependent variables of information seeking and processing should be adjusted because of the new media environment. Perhaps picking up on this suggestion, Aldoory, Kim, and Tindall (2010) combined information seeking and processing to create a dependent variable called “information gaining,” using questions about the likelihood of individuals to pay attention to and search for more information about an issue. They suggest that information gaining may be more appropriate than the separate measures of information seeking (which is active) and processing (which is passive) for studying situational theory in the new media environment. The current study aims to build on these ideas by exploring how one community is seeking and processing information about cancer and about a local event (Relay For Life) benefiting the American Cancer Society.

Austin and Halvorson (2008) also mentioned new media in their study of the situational theory of publics and political activity among college students. They found that media use, proximity of issues, and inclusion in groups were the strongest predictors of political activity. They also suggested that future research should continue to explore the relationships between media use, subsequent communication, and various levels of involvement, especially considering the popularity of online sources and social media among young people and other important publics. These findings seem particularly relevant for this study’s focus on a university community; thus, survey questions were
designed to assess inclusion in groups, various types of communication, and levels of media use, and subsequent nonprofit support or participation behaviors.

**The Situational Theory Moving Forward.** More recent research has been moving the situational theory of publics beyond its current form to focus on problem solving. Kim and Grunig (2011) introduced the situational theory of problem solving as an extended version of the situational theory of publics. It adds the independent variable of situational motivation in problem solving, or a “readiness to make problem-solving efforts” (p. 132). However, the authors admit that the items they used to measure situational motivation are the same as those used in previous studies to measure problem recognition. Additionally, although the authors refer to the dependent variable in situational theory of problem solving as “communicative action in problem solving” (building on Kim’s 2005 dissertation), they divide this variable into six types of information selection, transmission, and acquisition (information forefending, permitting, forwarding, sharing, seeking, and attending). While this breakdown may be useful for further understanding information seeking and processing, the current study attempts to move situational theory of publics beyond the dependent variable of information seeking and processing to focus on behavioral intentions and behaviors related to showing support for an organization, issue, or event, such as Relay For Life benefiting the American Cancer Society.

Based on existing research on the situational theory of publics, the current study continues to explore the nuances of organizational involvement, communication, and participation behaviors in the changing media environment. As several scholars have noted (Aldoory, 2001; Aldoory, Kim & Tindall, 2010; Aldoory & VanDyke, 2006), the
situational theory of publics is highly relevant to studying health issues. Its independent variables of problem recognition, constraint recognition, and involvement are important for individuals trying to understand and communicate about or otherwise become involved with health issues or organizations. The dependent variables of information seeking and processing, or the combined variable of information gaining (Aldoory, Kim, & Tindall, 2010), are also important for health and nonprofit communication. Although the situational theory of publics has been used to study health and risk communication and political and nonprofit activism, it does not appear that it has been used to study community fundraising events such as Relay For Life. This study adds to ongoing research on nonprofit communication, advocacy, and fundraising. The following section describes another relevant theory that might help explain support of nonprofit organizations and initiatives, the Theory of Reasoned Action.

**The Theory of Reasoned Action**

Although there has been significant research on the situational theory of publics, applications to fundraising and nonprofit communication and advocacy efforts seem lacking. The current study seeks to fill this gap by studying the situational theory of publics' variables related to attitudes, perceived social norms, and behavioral intentions about participating in fundraising and communication efforts surrounding Relay For Life. In order to examine these variables, this study employs the Theory of Reasoned Action.

The Theory of Reasoned Action (TRA) has been used widely in social psychology, consumer behavior, health communication, and other research involving attitudes and behaviors (Fishbein & Ajzen, 1975, 1981). In short, TRA states that a person’s behaviors are based on their behavioral intentions, which are influenced
primarily by the person’s attitudes toward the behavior, as well as their subjective norms concerning the behavior (meaning their perceived normative expectations and motivations to comply with peers/the social environment). Beyond the variables in the situational theory of publics (problem and constraint recognition, involvement, information seeking and processing), applying TRA to the current study helps tap into attitudes, perceived social norms, and behavioral intentions related to participation in fundraising events like Relay For Life for nonprofit health organizations, such as the American Cancer Society.

**The Theory of Reasoned Action Variables.** At its core, the theory of reasoned action assumes that people are rational beings who systematically process the information that is available to them and use that information to arrive at a decision about a particular behavior (Fishbein & Ajzen, 1975, 1981). The independent variables in TRA are individuals’ **attitudes** toward a behavior and their perceived social or **subjective norms** about the behavior, which have been shown to affect **behavioral intentions** to perform (or not to perform) that behavior. A meta-analysis of TRA-based research showed support for the theory, confirming that attitudes and subjective norms do predict behavioral intentions and actual behaviors in many different situations (Sheppard, Hartwick, & Warshaw, 1988).

More specifically, attitudes refer to beliefs associated with outcome evaluations. According to TRA, individuals’ attitudes toward a behavior are determined by the sum of their beliefs about performing a behavior, weighted by the evaluations of the beliefs (Ajzen, 1985; Fishbein & Ajzen, 1975). Generally, behaviors that are thought to produce a favorable outcome are associated with positive attitudes, while behaviors that are
thought to produce an unfavorable outcome are associated with negative attitudes. According to the theory, these attitudes are the result of the information a person has about the object or issue at hand; that is, the information contributes to readily available or accessible beliefs that make the object or issue salient for the person, and the person generally forms an evaluation (positive, negative, etc.) with that now-salient object/issue (Petty & Cacioppo, 1996).

The other major independent variable in TRA is subjective norms, defined as an individual’s beliefs that certain people or groups believe he or she should or should not perform a particular behavior (Fishbein & Ajzen, 1975; 1981). In other words, individuals’ behavioral intentions are generally influenced by their perceptions of what others may think (Petty & Cacioppo, 1996). These influential others may include family, friends, significant others, co-workers, peers, or whole groups such as sororities/fraternities, athletic teams, social clubs, community or religious groups. Motivation to comply with these individuals or groups may range from nonexistent or very low to very high, depending on the person and their relationship(s). Generally, a person who perceives pressure from important “others” to perform a particular behavior will be more inclined to perform that behavior than if he/she perceives no social pressure or does not consider the people or pressure to be important (Silk, Weiner, & Parrott, 2005).

The dependent variable in TRA is behavioral intention, which is assumed to lead to actual behaviors. Indeed, research has shown that behavioral intentions are good predictors of actual behavior (e.g., Sheppard, Hartwick, & Warshaw, 1988); however, situational constraints or barriers, including time, money, cooperation with others, etc.,
can affect behavioral intentions and/or behaviors (Ajzen, 1985; Ajzen & Madden, 1986). In fact, TRA has been criticized for leaving out this idea of perceived constraints, self-efficacy, or “volitional control” (Silk, et al., 2005, p. 753) over actually performing a behavior (Ajzen & Madden, 1986; Stasson & Fishbein, 1990; Tesser & Shaffer, 1990). The Theory of Planned Behavior (TPB) evolved as a result of this criticism; it adds the independent variable of *perceived behavioral control*, or “one’s perception of how easy or difficult it is to perform the behavior,” (Eagly & Chaiken, 1993, p. 185) to the existing variables of TRA. TPB is often used in studies on individual health behaviors that can be difficult to change or sustain in which perceived behavioral control could be an issue, such as eating or exercise habits, oral hygiene practices, condom use, or other sexual health-related behaviors (e.g., Godin & Kok, 1996; Hausenblas, Carron, & Mack, 1997; Sheeran & Taylor, 1999). However, perceived behavioral control is not as relevant to participation in events like Relay For Life, which does not require particularly difficult behaviors that need to be controlled or sustained. Attitudes and subjective norms are more likely to be the major factors influencing behavioral intentions and actual participation in such an event, which is why TRA (and not TPB) is appropriate to apply to the current research.

*The Theory of Reasoned Action and Health Communication.* TRA has been used in significant research on numerous health issues ranging from alcohol and drug use (e.g., Ajzen, Timko, & White, 1982; Park, Klein, Smith, & Martell, 2009) to sexual risk reduction and HIV/AIDS prevention (e.g., Cochran, Mays, Ciarletta, Caruso, & Mallon, 1992; Davidson & Morrison, 1983). More important to the current study, however, TRA
has also been described as an audience segmentation tool or a way to identify and divide publics for communication campaigns based on the variables involved in TRA.

For example, Wang (2009) studied elements of TRA related to undergraduates’ intentions to participate in physical activity and suggested that health campaign planners should work more strategically to match attitudes to target audiences’ personality traits, including their self-esteem and social identities (such as whether they participate in competitive sports). Silk, Weiner and Parrott (2005) conducted a survey on attitudes and norms about genetically modified foods and determined that publics could be divided into four groups (similar to the situational theory of publics) based on their level of ambivalence toward the topic and their perceptions of others’ positive or negative attitudes toward the topic. These studies show how the theory of reasoned action and situational theory of publics are related in their utility to help communicators understand and segment publics and develop targeted informational strategies and campaigns.

The TRA variables have also been used to show that positive attitudes and perceived norms about organ donation predicted behavioral intentions of becoming an organ donor (Siegel, Alvaro, Lac, Crano, & Dominick, 2008). A lack of awareness or salience about organ donation was found among the sample’s Hispanic population (which the authors note is less likely than the general population to become organ donors); this finding contradicted the expected perceived negative attitudes and norms anticipated because of religious or cultural beliefs. With this knowledge, health communication practitioners or campaign planners could design messages addressed at increasing awareness or clarifying misconceptions, rather than trying to change falsely perceived negative attitudes or social norms. In this way, TRA is very useful in designing
communication campaigns, and the proposed research could be helpful to nonprofit practitioners communicating about fundraising, advocacy, and other behaviors related to health issues like cancer.

Similarly, Nabi, Southwell, and Hornick (2002) surveyed Philadelphia residents to assess attitudes, subjective norms, and behavioral intentions about the issue of domestic violence prevention. Findings revealed that while most respondents believed the issue was important and had similar attitudes and intentions to act or intervene if they knew about an instance of domestic violence, perceived social norms and uncertainty of consequences may prevent actual behavior related to helping in such a situation. Taking a practical approach, the authors suggest that a communication campaign directed at “social mobilization” (p. 446) or moving social norms and intentions to intervene in a positive direction could produce positive results related to communication and involvement with the important issue of domestic violence prevention.

Theory of Reasoned Action and Advocacy. Beyond individual health behaviors, TRA has been used in studies of collective efforts to improve societal conditions or participate in advocacy or activist groups. For example, one study used TRA to examine women’s participation in political groups to promote women’s rights (Kelly & Breinlinger, 1995). Survey results revealed strong relationships between attitudes and intentions and between intentions and actual behavior to participate in group activities (such as protests); however, the additional variable of perceived behavioral control (from TPB) had little effect, which further reflects the point that this variable and the theory of planned behavior are not as applicable as the theory of reasoned action to collective participation. Social identity with gender and as an activist also played a role in women’s
participation in advocacy efforts, which underscores the fact that many variables including and in addition to those involved in TRA affect behavioral intentions and actual participation with nonprofit or other groups.

Perhaps recognizing the similarities between TRA and the situational theory of publics, two recent studies have combined the two theories to examine activism or collective action related to social issues. Jin (2007) conducted a survey of college students about the issue of sexual violence on college campuses. Of the situational theory variables, involvement with the issue was the strongest predictor of behavioral intentions to seek more information about sexual violence. Results for the TRA variables were even more robust; attitudes and subjective norms toward seeking information about the issue each significantly predicted behavioral intentions to seek information about sexual violence. Another study combining the two theories found that the independent variables associated with the theory of reasoned action explained 56% of the variance in behavioral intentions to sign a petition, donate money, forward an e-mail, or write a letter on behalf of an imaginary animal/environmental advocacy group; subjective norms were the strongest predictor of these behavioral intentions (Werder & Schuch, 2008). This finding is highly relevant to the current study, which aims to examine similar behaviors related to the American Cancer Society and Relay For Life.

Attitudes and subjective norms understandably predict behavioral intentions in many situations (Hale, Householder, & Greene, 2002), and although TRA has its limitations and criticisms, it is valuable for its ability to be applied to many topics and publics to predict or explain behavior. While it does not seem that the theory has been used in significant public relations or fundraising research, its applications and relevance...
to the current study seem clear. It has been suggested that college students are particularly susceptible to being influenced by perceived norms, and that peers and social networks are generally important to college students (Campo, Brossard, Frazer, Marchell, Lewis, & Talbot, 2003). Because of the nature of college campuses and community events like Relay For Life, social norms along with attitudes are likely to be involved in students’ decisions to participate in such events.

Although there has been significant research on the theory of reasoned action and the situational theory of publics, our understanding of these theories as they relate to nonprofit communication and participation in advocacy and fundraising efforts could be expanded. The current study seeks to fill this gap by applying TRA and situational theory variables to explore participation in communication and fundraising activities for UNC Relay For Life benefiting the American Cancer Society. Additionally, in order to further study public awareness, salience, and attitudes, and how communication and media advocacy might be changing, this study also employs framing theory.

**Framing Theory**

Organizational efforts to communicate about health issues, programs, and events can be understood through the theoretical lens of framing. Framing has been studied extensively in social science research and is often applied to explore the ways in which media present problems to the public, yet the concept still seems to lack one cohesive definition or means of measurement. Despite these difficulties and differences in the literature, it remains an important theory, particularly related to social problems, political, and health issues.
Decades ago, sociologist Erving Goffman (1974) defined a frame as an approach, a perspective, and stated that public response to issues is dependent upon one or more frameworks or “schemata of interpretation” (p. 21), which are shaped by multiple factors, including media. Media framing has been described as selection of some aspects of an issue, and emphasis in a communicating text to promote salience of that issue or particular aspects of the issue among the audience. Entman (1993) argued that framing has four functions: defining problems, diagnosing causes, making moral judgments, and suggesting remedies.

Framing is frequently used to study media portrayals of social, political and health problems. In his book about news framing of social problems, Iyengar (1991) argued that responsibility is the major factor determining individuals’ opinions on how to respond (if at all) to an issue. Iyengar and others have differentiated between episodic and thematic framing. From a health perspective, episodic framing appears in stories told from the point of view of one individual or family suffering from a health problem, while thematic framing might include an issue being described from a societal perspective, including statistics, facts and figures, and incidence levels. Some research has suggested that episodic framing may be more emotionally involving, while thematic framing may be more effective for advocating mass response or pushing for large-scale political, economic, or social changes (Kim & Willis, 2007).

Framing has been associated with agenda setting, or the idea that the media tell us what issues to think about, with framing being referred to as the second-level of this process, focusing on the attributes of an issue emphasized by media and other forces (McCombs & Ghanem, 2001; Weaver, 2007). Reese (2001, 2007) described framing as a
process that occurs among media, communication professionals, and their audiences; it can include the selection or emphasis of certain aspects of an issue as well as what might be omitted from the story. The concepts of agenda setting and framing converge in the mental images people have of issues, which affect their responses to the issues (McCombs & Ghanem, 2001).

Noting the discrepancies in framing research, some scholars have argued for a focus on framing as a theory of media effects (Scheufele, 1999; Scheufele & Tewksbury, 2007). Scheufele (1999) stated that the framing process consists of three segments: 1) inputs, constructed by media and communication professionals; 2) processes, meaning the way in which frames become embedded in communicating texts and in people’s minds, and 3) outcomes, which refers to the things that happen or changes that take place in society because of various issue frames. The current study will focus on the latter, the processes and outcomes of framing by measuring audience salience and perceptions of issues as they relate to their communication and participation behaviors.

While we need to continue to understand framing as a complex, multi-faceted concept, future research needs to further operationalize and focus on distinct steps in the framing process: frame-building and frame-setting, in which frames are created and communicated, individual level effects of framing, and the link from audiences and organizations back to media (Scheufele, 1999), which is where nonprofit organizations and stakeholders might influence framing. Recent research has stressed the need to study how multiple forces, including activists, nonprofit organizations, and public relations or health communication practitioners, influence the media and public agendas for various issues (Carragee & Roefs, 2004).
Framing and Public Relations. Communications and public relations practitioners influence frames by providing information to the media and by creating campaigns that directly target different publics. Hallahan (1999) looked at framing from a public relations perspective and wrote about seven types of framing: news, issues, attributes, action, choices, responsibility, and situations. He suggested that framing of issues, action, choices, and responsibility are most important for social or health problems, and this may be where public relations, health communication, or nonprofit practitioners can be most influential in framing a topic. He referred to the “medicalization” of health issues in the news, meaning the practice of framing health issues to focus on individual behavior change, which is common in Western/American media and may or may not be ideal (depending on the health issue and the change sought). For instance, according to media advocacy, this type of frame will not help push policy change for an issue like breast cancer (e.g., providing funding for mammograms), but it may be highly effective for promoting individual health behaviors (e.g., encouraging women to get mammograms). As this and other research suggests, frames influence our awareness and perceptions of issues, which in turn, affect our involvement (or lack thereof) with those issues; this may be particularly true for health issues and their effects on various populations.

Framing has also been linked with agenda building, a process that addresses how issues become the focus of media coverage, public policy efforts, and/or part of the general public consciousness or agenda. Carragee and Roefs (2004) described “frame sponsorship” as a process in which organizations may proactively or reactively influence these agendas through formal and informal communication and information subsidies.
Park and Reber (2008) studied this aspect of framing from a nonprofit perspective by conducting a content analysis of press releases from the American Cancer Society, American Heart Association, and the American Diabetes Association. They found that medical research, public education, and social support frames were frequently the focus of these materials. While there is a great deal of literature on what Scheufele (1999) calls the “inputs” part of framing, what is needed is more research that looks at the outcomes of framing, using surveys, interviews, and other means of assessing stakeholder awareness and involvement with issues. This awareness or salience component is where the current study intends to focus on framing, by conducting a survey of individuals to gauge their perceptions of cancer, nonprofit organizations like the American Cancer Society, and events like UNC Relay For Life.

**Framing Health Issues.** Of course, all health issues have different causes, effects, means of prevention and treatment, and the way these issues are framed (by media, organizations and/or individual stakeholders) can influence public opinion, support, and action. For instance, in Lawrence’s (2004) research on public opinion related to obesity, he reported that a “frame contest” is underway between people attributing responsibility for obesity to biological, behavioral, and systemic causes. He discussed a Harvard School of Public Health survey in which half of the respondents said obesity is a “private matter,” while the other half said it is a social problem that policymakers and others should help solve. Similarly, Kim and Willis (2007) conducted a content analysis of news coverage of obesity and found that personal or individual causes and solutions were included more frequently than societal-level causes and solutions, especially in television news coverage. This phenomenon was starting to change in more recent years of news
coverage, however, and may be influenced by funding and concerted communication efforts from organizations like the CDC and government reports, such as Healthy People 2010 (& 2020). Indeed, health issues like childhood obesity have been pushed onto the national agenda and framed by individuals such as first lady Michele Obama, resulting in support from Congress and large-scale public programs like the “Let’s Move!” campaign (Robertson, 2010).

“Reframing” is another way practitioners can work with or against certain social values as an important component of health communication campaigns (Slater, 2006). Examples of this approach in recent campaigns include the CDC Verb campaign, in which exercise is reframed as a fun, social activity rather than a chore or necessary component to weight-loss. The Legacy “Truth” campaign and the “Be Your Own Influence” anti-smoking and anti-drug campaigns emphasize autonomy and not using tobacco and marijuana as ways to express individualism among adolescents and young adults. Although Slater (2006) discussed framing or “reframing” on a conceptual level, his article leaves out operational definitions of framing. Clearly, more research and explicit definitions and explications of the concept are needed, particularly on the awareness or salience aspect of framing as the media environment evolves.

In an effort to connect media coverage of health issues with real world “effects,” Boyce (2006) and Clarke (2008) studied framing in American and British news coverage of autism and the supposed link to the measles, mumps, and rubella (MMR) vaccine. They argued that because British coverage focused more on the possible autism-vaccine link, vaccination levels went down in the UK. However, although these studies focus on societal effects that may be the result of media coverage (vaccination levels), they again
focus on the input part of framing by analyzing news coverage through content analysis, rather than measuring audience awareness or attitudes (through surveys or interviews).

_Framing Cancer._ Existing research on framing of cancer similarly focuses on media coverage and/or possible effects related to news coverage of cancer, but it does not typically assess audience salience or perceptions of the issue. For instance, Andsager and Powers (2001) provided descriptive analysis of magazine coverage of breast cancer, which focused mostly on personal experiences and risk factors associated with the disease. Many studies test gain- and loss-framing, or messages that focus on the positive gains of screening or prevention versus those that focus on the negative losses associated with detection or treatment related to various types of cancer (Block & Keller, 1995; Hoffner & Ye, 2009; Meyerowitz & Chaiken, 1987; O’Keefe & Jensen, 2008; Rothman, Bartels, Wlaschin & Salovey, 2006; Umphrey, 2003). For example, a recent experiment tested gain- and loss-framing, along with episodic and thematic framing, in news stories about lung cancer, and found that thematic framing coupled with loss-framing influenced participants’ perceptions of lung cancer as a societal issue (Major, 2009).

Similarly, two content analyses found positive frames of tobacco control suggested as a societal solution for lung cancer (Smith & Wakefield, 2005; Wakefield, Smith, & Chapman, 2005). The authors acknowledged the implications of such findings for media advocates working to influence public perceptions of health issues; a media focus on societal solutions may lead people to push for public policy or widespread environmental changes like smoking bans to curb second-hand smoke, while a media focus on individual solutions may lead people to think about solutions such as individuals quitting smoking (Smith & Wakefield, 2005; Wakefield, Smith, & Chapman, 2005).
Another content analysis of cancer news coverage in local and national newspapers, television, and magazines was conducted and compared with cancer incidence and mortality rates in different locations (Slater, Long, Bettinghaus, & Reineke, 2008). The results showed that news coverage under-represented the risk or incidence of people suffering and dying from lung cancer while news coverage overrepresented breast cancer in this way. The authors also noted that there was minimal coverage of prevention and detection behaviors for preventable and easily detectable cancers. Of course, many factors influence people’s reactions to health information (and its particular framing), including exposure and attention to the health issue as well as actual and subjective knowledge (Slater, Hayes, Reineke, Long, Bettinghaus, 2009). The current study looks at audience frames by assessing perceptions and attitudes related to cancer and news coverage of the issue through open- and close-ended survey questions.

Most of the aforementioned studies on framing focused on individual health behaviors or societal-level effects related to cancer, but they do not focus on support for cancer organizations, advocacy, or fundraising efforts. And again, while these studies focus on news framing of cancer (through content analyses) and possible media effects (through experiments), more empirical research is needed. Framing needs to continue to be refined through studies that look at audience salience and perceptions of health issues (using surveys, for instance). Existing research on framing of health issues, particularly cancer, was used to inform the proposed survey, which explores this important aspect of the framing process related to cancer, support for the American Cancer Society, and UNC Relay For Life.
Moving Framing Forward. Although some framing literature acknowledges the multiple influences on audience frames and the many ways in which publics communicate, there seems to be little empirical research that moves framing forward to focus on audience involvement with health issues and nonprofit organizations or that extends framing beyond traditional media to explore how the concept is changing in the new media environment. Although framing is pervasive throughout social science research, the theory has lacked a statement that shows exactly how frames become embedded within society or how framing influences thinking, and the theory still suffers from measurement issues (Matthes, 2009).

Kensicki (2004) highlighted the need for audiences and individuals to be connected to organizations when she reported that traditional media coverage of social problems does not typically mention specific solutions, “calls to action,” or groups involved in advocacy efforts to solve problems. This type of communication does a disservice by not connecting people to individuals or groups that are helping to promote change, and may lead to apathetic publics. Rather than relying on traditional media, many publics are converging online or otherwise in groups to communicate about issues that matter to them. Sometimes these groups mobilize and use their power to create or promote collective action (i.e., indirect or group advocacy), which may be influenced by nonprofit or advocacy groups working to solve issues.

Gibson (2010) underscored these points in her article about the limits of media advocacy (including framing) because of its focus on traditional media, policymakers, and other elites, and the potential dangers of leaving out important voices and/or ignoring powerful publics. There are important groups of stakeholders having conversations about
issues, and communication professionals should participate in those conversations and
provide tools to promote social change. Some of these conversations are happening
online and through social media, and it is important that we continue expanding, refining,
and measuring the concepts of media advocacy and framing through future research. This
may be particularly important for nonprofit organizations, which are often reliant on
public opinion and public support yet don’t always have the funding or means for
elaborate communication campaigns.

In summary, this study aims to add to our understanding of media advocacy,
framing, nonprofit communication, and fundraising using an online survey regarding
UNC Relay For Life benefiting the American Cancer Society. The survey includes
questions related to framing, along with questions designed to measure the variables of
the situational theory of publics and the theory of reasoned action to better understand
stakeholders’ involvement with an important health issue, organization, and program.
The goal is to help explain public support for nonprofit organizations (or lack thereof), as
well as to explore the nuances involved in communicating with different publics about
important health issues in the changing media environment.

Research Questions and Hypotheses

Using the literature as a guide, this study seeks to test hypotheses and answer
research questions related to the situational theory of publics, the theory of reason action,
and framing. It also proposes a new working model that combines the situational theory
of publics and the theory of reasoned action in an attempt to better understand and
explain public support, particularly related to nonprofit organizations and health issues.
The research questions and hypotheses are outlined below, followed by an illustration of
the working model. The next chapter describes the methods that were used to explore the hypotheses, research questions, and the proposed model.

First, based on the situational theory of publics literature and previous research demonstrating positive relationships between problem recognition, involvement, and information seeking and processing (e.g., Grunig, 1989a; Grunig & Hunt, 1984; Hamilton, 1992), this study proposes the following hypothesis:

**H1:** Among UNC students, there will be a positive relationship between problem recognition and involvement with cancer, and information seeking and processing about UNC Relay For Life.

Previous research has also demonstrated a negative relationship between constraint recognition and information seeking and processing (e.g., Aldoory, 2001; Major, 1998; Sriramesh, et al., 2007). This study seeks to replicate this finding in the context of nonprofit fundraising events, proposing:

**H2:** Among UNC students, there will be a negative relationship between constraint recognition about nonprofit fundraising events, and information seeking and processing about UNC Relay For Life.

Of the three independent variables of the situational theory of publics, research on health issues, in particular, has shown *involvement* to be the strongest predictor of the dependent variable, information seeking and processing (Aldoory, Kim & Tindall, 2010; Aldoory & VanDyke, 2006). Thus, this study will test the following hypothesis:

**H3:** Among UNC students, involvement with cancer will be the strongest predictor (over problem recognition and constraint recognition) of information seeking and processing about UNC Relay For Life.

Next, considering the literature on the theory of reasoned action and the positive relationships consistently demonstrated between the independent variables, attitudes and subjective norms, and the dependent variable of behavioral intentions (e.g., Fishbein &
Ajzen, 1975; 1981; Hale, Householder & Greene, 2002; Sheppar, Hartwick & Warshaw, 1988; Siegel, et al., 2008), this study proposes to replicate these findings with the following hypothesis:

**H4:** Among UNC students, there will be a positive relationship between attitudes and subjective norms about nonprofit fundraising events, and behavioral intentions to participate in UNC Relay For Life.

Of the two independent variables involved in the theory of reasoned action, some research, particularly involving college student populations, has shown subjective norms to be the most influential variable on behavioral intentions (e.g., Campo, et al., 2003; Werder & Schuch, 2008). This study predicted similar findings, proposing:

**H5:** Among UNC students, subjective norms will be the strongest predictor (over attitudes) of behavioral intentions to participate in UNC Relay For Life.

Other research has found additional variables, such as inclusion in groups, to be predictive of behavioral intentions to participate in advocacy or nonprofit efforts (e.g., Austin & Halverson, 2008; Hamilton, 1992). Thus, this study seeks to test the following hypothesis:

**H6:** Among UNC students, inclusion in groups or activity on campus will predict behavioral intentions to participate in UNC Relay For Life.

Beyond the predicted hypotheses, this study also seeks to answer four related research questions. In order to better understand information seeking and processing, and the influence of various media sources and forms of communication on audience salience and perceptions of nonprofit organizations, health issues, and fundraising programs, this research employs the concepts of media advocacy and framing (e.g., Carragee & Roefs, 2004; Entman, 1993; Gibson, 2010; Scheufele, 1999; Wallack, et al., 1993) to answer the following two research questions:
**RQ1:** Among UNC students, what sources are most frequently used for information seeking and processing related to cancer and UNC Relay For Life?

**RQ2:** Among UNC students, what frames are most salient related to cancer and UNC Relay For Life?

Finally, the situational theory of publics and theory of reasoned action variables are combined in the last two research questions in an attempt to build upon existing theory and research related to public support for situations, issues, and/or organizations (e.g., Austin & Halverson, 2008; Jin, 2007; Werder & Schuch, 2008). Specifically, it seeks to answer the following final research questions related to Relay For Life benefiting the American Cancer Society:

**RQ3:** Among UNC students, what is the relationship between information seeking and processing about UNC Relay For Life, and behavioral intentions to participate in UNC Relay For Life?

**RQ4:** Among UNC students, what is the strongest predictor of behavioral intentions to participate in UNC Relay For Life?

In order to explore these questions, a new working model is proposed (see Figure 1). This model combines the independent and dependent variables of the situational theory of publics and the theory of reasoned action to examine which variables might be most relevant to public support, and to further study the nuances of communication and support behaviors. One of the goals of this working model is to further explore the various factors that contribute to information seeking and processing and behavioral intentions, and to better understand what helps move people toward this type of support for an issue or organization.

Some of the expected relationships predicted by the hypotheses are indicated in the model by plus (+) or minus (-) signs. The plus symbols indicate positive relationships and the minus symbol indicates the one negative relationship that is predicted by previous
research. As the research questions and model indicate, the relationship between information seeking and processing and behavioral intentions is not fully understood. Analyses related to the hypotheses and research questions will help empirically examine and confirm relationships among these variables and the proposed working model.

Figure 1: Working Model Combining the Variables of the Situational Theory of Publics and Theory of Reasoned Action
CHAPTER 3: METHOD

This chapter describes the methods that were used for this study, and provides details about the research instrument, data collection, and data analysis procedures, as well as the research sample. Briefly, an online survey was sent to undergraduate students at UNC-Chapel Hill to gather data on awareness, attitudes, and behaviors regarding UNC Relay For Life benefiting the American Cancer Society. The survey included questions designed to measure the variables involved in situational theory of publics and the theory of reasoned action (TRA). Additionally, the survey assessed audience salience, perceptions or frames associated with cancer, the American Cancer Society, and Relay For Life. Before going into more detail about the survey sample and questionnaire, this chapter will review the advantages and disadvantages of different modes of survey research.

In the International Handbook of Survey Methodology, deLeeuw (2008) discussed three factors to consider in designing survey research: 1) the research objectives; 2) the characteristics of the mode; and 3) the population. She noted that researchers need to consider interviewer effects, depending on the topic, mode, and sample; self-administered surveys, such as those taken online, may minimize these effects. Dillman and colleagues (2009) created the Tailored Design Method (TDM), a well-known resource that helps survey methodologists determine how best to approach different research situations, objectives, and populations. They created it based on social exchange theory and the idea that research should maximize rewards, minimize costs, and
maximize trust that the rewards will outweigh the costs for those involved. The current study was designed using these and other resources on survey methodology. The remainder of this chapter will outline the specific mode, sample, and measures that were used in this research, beginning with discussion of the strengths and weaknesses of online surveys.

**Online Surveys**

This study used an online survey to measure the variables described in the literature review, including awareness, attitudes, involvement, and behavioral intentions related to UNC Relay For Life benefiting the American Cancer Society. Several studies have looked at differences in cost, speed, response rate, and other characteristics of different survey modes. For example, Cobanoglu, Warde, and Moreo (2001) looked at differences among fax, mail, and online surveys and reported that online surveys were the least expensive, relatively fast, and yielded the best response rates of the three modes. Deutskens, deJong, deRuyter, and Wetzels (2006) looked at differences in cost and response quality by mode and determined that online surveys are just as good as mail surveys in recent years, most likely because more and more people are comfortable online and with new technologies. Similarly, Descombe (2006) looked at differences in quality of responses between mail and online survey modes and found that online responses were just as good as mailed responses, but he acknowledged that qualitative or open-ended responses need more examination in survey research as they’re often avoided in favor of forced-response options or pre-tested scales. The current study aims to add to existing findings in this area by including opportunities for free response and qualitative analysis of online survey responses.
Of course, most survey respondents are self-selected; that is, individuals within the sample choose whether to fill out and return a mail survey, answer and participate in a telephone interview, or click on an electronic link to fill out an online survey. Several studies have noted differences in respondent characteristics based on survey mode. For instance, Kaplowitz, Hadlock, and Levine (2004) allowed respondents to choose whether to participate in a survey by mail or online and found that online respondents were generally younger (mean age = 24) than those who responded by mail (mean age = 31). Sills (2002) reported that white, wealthier, higher-educated males tend to be overrepresented in online surveys; however, Beck, Yan, and Qi Wang (2009) pointed out that older, female respondents tend to be overrepresented in telephone surveys. Indeed, most survey samples are biased in some way, and respondents generally self-select to participate based on many individual characteristics, including time available, interest in the topic, and willingness to help. Generally, researchers concluded that online surveys are good for specific, tech-savvy populations (Beck, et al., 2009; Chang & Krosnick, 2009; Sills, 2002). Greenlaw and Brown-Welty (2009) noted that combining survey modes (i.e., using mixed modes, such as e-mail and phone, or letting participants choose how to respond) may be best, but this method is also much more costly, can be more time-consuming, and may produce more data entry errors.

Because this survey was conducted online, it is important to highlight the advantages and disadvantages of online survey research specifically. Advantages of online surveys include speed, cost, ease, geographic reach, ability to use images and graphics, and access to unique populations. Disadvantages include low response rates, limited access to some populations, inability to generalize results (which can be
problematic with other survey modes as well), and possible problems with software and/or technology (Wright, 2005).

To help with response rates, Cook, Heath, and Thompson (2000) suggested making multiple contacts (i.e., sending 2-3 notices and/or reminders). Interestingly, their meta-analysis found that somewhat salient topics produced higher response rates than those that were very or not salient. For example, a topic that might apply to a group (such as UNC students) would be more likely to get a response than a personal issue or one that is not at all relevant to the respondent. Additionally, they reported that blanket incentives produced more homogeneous data and lower response rates. The current survey will offer a chance to win a free i-Pod Touch for all those who choose to enter their e-mail address at the end of the survey (see Appendix A & C).

Finally, for any survey but perhaps especially for those conducted online, it is important that the researcher is cognizant of respondent security and confidentiality, as well as ethical concerns like separating e-mail addresses from other response data (Manfreda & Vehovar, 2008). I kept these issues in mind when administering the current survey, and when storing and analyzing response data. Despite some drawbacks, online survey research has many advantages and is a viable mode for measuring the variables of interest among the current study’s target population, which is described more below following a brief discussion of the survey design and administration.

**Questionnaire Design and Administration**

The online survey questionnaire was designed using Qualtrics survey software provided by the Odum Institute for Research in Social Science at UNC-Chapel Hill. Qualtrics allows researchers to design an online survey and send a link to a population
via e-mail (see Appendix A for introductory e-mail). When respondents clicked on the link, they were brought to a welcome screen that described the purpose of the survey. They were provided with brief information about voluntary participation in the study and asked for consent before they began the survey (see Appendix B). If/when respondents agreed to participate, they were brought to the first survey questions. Respondents were guided through the survey by simple instructions and online prompts that moved them automatically from one section to the next. They were able to quit the survey at any time with no penalty, which the consent screen acknowledged.

Questionnaire design is particularly important for online surveys because people tend to scan and read quickly online (Manfreda & Vehovar, 2008). As deLeeuw and Hox (2008) noted, survey elements should be purposive; essentially, “less is more” when it comes to visual design and layout of online surveys. More specifically, Toepel, Das, and Van Soest (2009) studied layout, design, and scale options for online surveys and determined that linear, horizontal layouts with five response options, no numbers, and fully labeled points are best for encouraging responses and completion of surveys. Thus, the current survey was designed accordingly (see Appendix C for survey questionnaire).

Although the questionnaire in Appendix C shows vertical response options (in order to fit page size/restrictions), response options were horizontal on the computer screen. Additionally, seven-point, fully labeled scales were used to capture the maximum amount of response variance while not overwhelming participants with options. Research has shown that survey scales using five to ten points can be successful (Osteras, Gulbrandsen, Garratt, Benth, Dahl, Natvig, & Brage, 2008), and one resource on health-related measurement scales suggested that seven-point scales are more reliable than five-point
scales (Streiner & Norman, 2003). Specific survey measures are described below, followed by descriptions of the survey sample and a pre-test that was conducted.

**Survey Measures**

Most of the measures in this survey were adapted from previous research on situational theory of publics (e.g., Aldoory & Sha, 2007; Aldoory, Kim, & Tindall, 2010; Austin & Halvorson, 2008; Grunig, 1997, 1989; Hamilton, 1992; Sriramesh, Moghan, & Wei, 2007) and the theory of reasoned action (e.g., Nabi, Southwell, & Hornick, 2002; Siegal, et al., 2008; Silk, et al., 2005; Wang, 2009). Because the survey was sent to UNC undergraduates who may or may not be aware of and/or involved with UNC Relay For Life, questions generally referred to “events like UNC Relay For Life,” while others asked about cancer and the American Cancer Society. Framing measures are based on Scheufele’s (1999; Scheufele & Tewksbury, 2007) arguments that framing should be studied from the perspective of audience effects, with a focus on issue awareness or salience. Because of some of the measurement and operationalization issues related to framing mentioned in the literature review, this survey took an open-ended approach to assessing audience frames and also included some closed-response questions designed to assess audience salience and perceptions about cancer and events like UNC Relay For Life. As noted, all scaled response options were measured on seven-point modified Likert-type scales.

Common demographics measures were also included in the survey, including gender, race/ethnicity, age, year in school, and major. Respondents were also asked to disclose the number and type of organizations they were involved with at UNC at the time.
The Situational Theory of Publics. As noted in the literature review, the situational theory of publics addresses problem recognition, constraint recognition, and involvement, as well as how individuals seek and process information. Situational theory measures were adapted from previous research (Aldoory & Sha, 2007; Aldoory, Kim, & Tindall, 2010; Austin & Halvorson, 2008; Grunig, 1997; Hamilton, 1992; Sriramesh, Moghan, & Wei, 2007). Items measuring problem recognition included the classic situational theory question: “How often do you stop and think about cancer?” as well as “How often do you stop and think about what you can do to help with the problem of cancer?” Response options were on seven-point scales, ranging from “never” to “daily.” Two additional measures addressed awareness of cancer: “Generally, I am very aware of the health issue of cancer;” and “Generally, I recognize that cancer is a serious health issue.” Response options ranged from “strongly disagree” to “strongly agree.”

Constraint recognition was initially measured by asking respondents the extent to which they agree or disagree with the following two items: “There are many constraints to participating in fundraising events like UNC Relay For Life;” and “It is easy to get involved with fundraising events like UNC Relay For Life” (reverse-scored). There were also two items addressing the difference fundraising events like UNC Relay For Life make when it comes to cancer. In the survey pre-test, these four items achieved an alpha of .68, so two additional measures were added: “Fundraising events like UNC Relay For Life are too time-consuming;” and “It is not convenient to get involved with events like UNC Relay For Life.” These additional items were adapted from Sriramesh, Moghan, and Wei (2007), who reported reliability of $\alpha=.63$ (one of the highest alphas reported for constraint recognition in research on situational theory of publics).
Involvement was assessed with multiple items that asked to what extent “do you feel personally connected to” and “has your life been affected by” cancer, with response options ranging from “not at all” to “very.” Respondents were also asked the extent to which they agree or disagree with the statements: “Generally, I feel very involved with the health issue of cancer;” and “I know many people who have been affected by cancer.” Response options ranged from “strongly disagree” to “strongly agree.”

Information seeking and processing was measured through four questions that asked how likely respondents are to seek information, share information with others, and pay attention to information about UNC about Relay For Life. An additional question asked specifically about social media sites, such as Facebook and Twitter. Response options to these questions ranged from “very unlikely” to “very likely.” Two other questions asked about the desire to learn more about fundraising events like UNC Relay For Life, as well as the difficulty of finding such information. The final question in this section asked what sources respondents have used or intend to use to find information about UNC Relay For Life, with options including “newspaper,” “television,” “radio,” “Internet/online sources (NOT social media),” “social media such as Facebook or Twitter,” “personal sources such as friends or classmates,” and “other.” If respondents chose “other,” they were asked to specify or type in additional sources.

This survey also included questions about general media use, which Hamilton (1992) and others have suggested is valuable for gleaning additional information about information seeking and processing, particularly in the new media environment. Specifically, respondents were asked how many minutes per day they spend using the
following media or means of communication: television, newspaper, radio, online news, e-mail, text messages, and social networking sites like Facebook and Twitter.

**The Theory of Reasoned Action.** In addition to situational theory of publics’ variables, this study assessed the variables involved in the theory of reasoned action (TRA), including attitudes, subjective norms, and behavioral intentions to participate in UNC Relay For Life. **Attitudes** toward fundraising events like UNC Relay For Life were measured with four questions adapted from previous research. Siegel, et al., (2008) used similar measures and reported fairly high reliability among them ($\alpha = .79$). Respondents were asked to use a 1-7 scale, where 1 = “strongly disagree” and 7 = “strongly agree,” with the following statements: “Generally, I am in favor of fundraising events like UNC Relay For Life;” “I would feel good about participating in an event like UNC Relay For Life;” “Being involved in events like UNC Relay For Life is not important to me” (reverse-scored); and “Generally, I believe fundraising events like UNC Relay For Life have a positive impact.”

**Subjective norms**, or perceived social expectations, were measured using the following statements adapted from previous research (Bagozzi, Baumgartner, & Yi, 1992; Nabi, Southwell, & Hornick, 2002; Siegel, et al., 2008; Silk, et al., 2005; and Wang, 2009): “People who are important to me are participating in UNC Relay For Life;” “People who are important to me think I should participate in events like UNC Relay For Life;” “Generally, I do what people who are important to me think I should do;” and “Generally, I like doing things with people in my life who are important to me.” Wang (2009) used similar items in his survey of college students and reported high reliability among the measures ($\alpha = .84$). However, a pre-test of these measures revealed
low reliability ($\alpha = .63$) so two additional measures were added: “Most people who are important to me have negative attitudes toward events like UNC Relay For Life” (reverse-scored) and “Most people probably think it is good to participate in events like UNC Relay For Life.” These additional measures were adapted from studies (Bagozzi, Baumgartner & Yi, 1992; Silk, et al., 2005) that reported high reliability ($\alpha = .86$).

**Behavioral intentions** were measured through a series of questions that asked about respondents’ plans to participate in UNC Relay For Life. One question asked how likely it is that respondents will participate in Relay For Life in the near future (responses ranged from “not at all” to “very likely”), and another question asked respondents the extent to which they agree or disagree with the following statement: “I intend to participate in UNC Relay For Life.” Similar questions asked about past, present, and future participation in UNC Relay For Life and support of the American Cancer Society. Response options were simply “yes,” “no,” or “maybe/undecided.” In order to further assess behavioral intentions and levels of participation, a block of questions asked about specific behaviors related to UNC Relay For Life. More specifically, respondents were asked whether they “have done” or “intend to do” things like “register for the event,” “raise additional money by asking friend or family to donate,” “recruit friends or others to participate in the event,” etc. (see Appendix C for survey questionnaire).

**Framing Theory.** The majority of research on framing uses content analysis to identify news frames, or experiments to test message frames. Survey research on framing focuses on public perceptions or audience frames, as Scheufele (1999; Scheufele & Tewksbury, 2007) and others have recommended. However, because the current study is exploratory in nature and focuses on a topic that people may or may not be familiar
and/or involved with in their community, this survey takes an open-ended approach to assessing respondents’ salience, associations or audience frames with the survey subject. More specifically, respondents were asked the following three questions: “What are the first things that come to mind when you think of cancer?” “What are the first things that come to mind when you think of UNC Relay For Life?” and “What are the first things that come to mind when you think of the American Cancer Society?” These questions were listed first so that other survey questions would not “prime” survey respondents to list certain words or phrases. Qualitative analysis was then used to determine the major frames that emerged from open-ended responses to these questions.

Subsequent questions were designed to assess possible audience frames that have been the focus of previous research, including episodic vs. thematic framing, gain vs. loss framing, and salience or perceived importance of the health issue, organization, and event. For example, respondents were asked to use a seven-point scale ranging from “not at all important” to “extremely important” to answer three questions assessing the importance of the health issue of cancer, the work of the American Cancer Society, and fundraising events like UNC Relay For Life. Respondents were also asked to rate the extent to which they agree or disagree with several statements including: “When I see or hear stories about cancer in the news, they are generally filled with facts, figures, and statistics;” and “When I see or hear stories about cancer in the news, they generally tell the story of one individual or family.” These questions were designed to assess perceptions of thematic versus episodic framing (respectively).

The following questions were included in an attempt to assess perceptions of gain- and loss-framing: “When I see or hear stories about cancer, they generally provide
positive or hopeful news” as well as, “When I see or hear stories about cancer, they
generally provide information about preventing or treating the disease.” Additional
statements were included to measure perceptions of media-provided solutions, calls to
action, or mobilizing information related to cancer, nonprofit organizations, and UNC
Relay For Life: “When I see or hear stories about cancer, they generally provide
information about things I can do to help, such as getting involved with the American
Cancer Society (or UNC Relay For Life).” Again, responses were measured on seven-
point scales ranging from “strongly disagree” to “strongly agree.”

Survey Sample

This study attempted to rely on two different sampling frames and multiple means
to contact potential survey respondents. In order to examine awareness, attitudes, and
behaviors about cancer, the American Cancer Society, and UNC Relay For Life among
the UNC-Chapel Hill community, it was important to survey both participants and non-
participants in the event. First, the survey was sent to a random sample of UNC-Chapel
Hill undergraduate students. The university registrar compiled a list of 5,000 randomly
selected undergraduate e-mail addresses for this purpose. This number was requested
based on the idea that online surveys generally have a response rate of 8% to 15%, and a
sample of 5,000 will likely yield 400 to 750 responses, which should be adequate for data
analysis (Dillman, Smith, & Christian, 2009). The survey link was sent to this list via e-
mail with an introductory message in the body of the e-mail and an electronic link to the
online survey (see Appendix A). The e-mail and survey link were sent to this list once in
February 2011, and three reminder prompts were sent in February and March 2011 to
An attempt was made to reach a second survey sample in order to collect responses from present and/or past participants in UNC Relay For Life. The organization maintains an e-mail listserv of participants, which included approximately 200 e-mail addresses as of February 2011. The exact same survey was copied and administered using a separate survey link created through Qualtrics. Separate survey links were used in case there were problems with survey samples and/or in order to differentiate samples upon completion. The executive director of UNC Relay For Life sent the introductory e-mail and survey link to the listserv in February 2011; however, only 17 people completed the survey. Additionally, UNC Relay For Life maintains a page on the social media sites, Facebook and Twitter. In February 2011, the Facebook page had more than 600 “friends,” and the Twitter page had more than 300 “followers.” The UNC Relay For Life executive director reported that the survey link was posted to both sites in February 2011; however, I did not see the survey link posted on Facebook (despite additional reminders and correspondence). Because the total number of responses from this separate sample of current/past Relay For Life participants was only 17, these responses were not included in data analysis. The main sample of randomly generated UNC undergraduates included both participants and non-participants in UNC Relay For Life, so the original research goals were still fulfilled using the initial sample.

**Survey Pre-Test**

Survey measures were pre-tested with a small group of UNC students who closely match the larger sample, and adjustments were made accordingly. More specifically, the survey was pre-tested with three classes of undergraduate students enrolled in courses in the School of Journalism and Mass Communication at UNC. Between February 14-18,
2011, the survey link was sent via e-mail to approximately 160 students who were asked to participate voluntarily in the survey. Instructors volunteered to give students extra credit for their participation in the survey, and 153 responses were collected.

Survey data were cleaned and analyzed for scale reliability. All scales achieved reliability (Cronbach’s alpha, $\alpha$) of .63 to .88. While the traditionally acceptable threshold for Cronbach’s alpha is .80 or above, exploratory research often includes scales with lower levels of reliability. In this pre-test, two variables had low alphas and seemed problematic: subjective norms ($\alpha=.63$) and constraint recognition ($\alpha=.68$). I consulted the literature again at this point, but not all studies publish reliability coefficients for scales, and Aldoory and Sha (2007) noted that situational theory variables (constraint recognition, in particular) have suffered from occasionally low alphas (.36 to .50) in previous research. With all of this in mind, I searched the literature for additional measures and added more survey questions for the two variables that achieved lower reliability coefficients: subjective norms ($\alpha=.63$) and constraint recognition ($\alpha=.68$). These additional survey items were submitted for IRB approval with a modification form.

Upon approval from the Institutional Review Board (IRB), the full survey was launched (see Appendix D and E for IRB approval notices for the original and modified survey).

**Participants and Response Rate**

Because the survey was conducted online and respondents were self-selected (i.e., they chose whether or not to participate), the final sample should be considered a convenient, purposive sample, and responses may not be generalizable to the entire UNC community or to other university populations. Nonetheless, the sample was chosen because of their ability to participate in campus/community fundraising, communication,
and advocacy efforts related to UNC Relay For Life benefiting the American Cancer Society, and responses are therefore relevant and important for fulfilling the study’s purpose and answering the research questions.

The initial e-mail was sent on Feb. 23, 2011 to 5,000 randomly generated undergraduate e-mail addresses. According to Qualtrics survey software, all 5,000 emails were received, indicating an initial “absorption rate” of 100%, which simply means that the quality of the email list was good and there were no wrong addresses or “bouncebacks” (Callegaro & Disogra, 2008); it does not mean that all 5,000 individuals read the email. Subsequent reminder e-mails were sent and received by almost the same amount of people, but a few recipients must have removed themselves from the list (Qualtrics automatically includes that option) or blocked the e-mail. Table 1 shows the dates email messages were sent, the number of emails received and corresponding absorptions rates, and the number of surveys started and completed by date. The total number of completed surveys was 514, which represents just over 10% of the original survey sample of 5,000. While this is not an ideal response rate, it is typical of online surveys, which are generally in the range of 8% to 15% (Dillman, Smith, & Christian, 2009).

<table>
<thead>
<tr>
<th>Date</th>
<th>Emails Received</th>
<th>Absorption Rate</th>
<th>Surveys Started</th>
<th>Surveys Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb. 23, 2011</td>
<td>5,000</td>
<td>100%</td>
<td>456</td>
<td>290</td>
</tr>
<tr>
<td>March 1, 2011</td>
<td>4,996</td>
<td>99.9%</td>
<td>280</td>
<td>98</td>
</tr>
<tr>
<td>March 6, 2011</td>
<td>4,989</td>
<td>99.8%</td>
<td>149</td>
<td>64</td>
</tr>
<tr>
<td>March 12, 2011</td>
<td>4,984</td>
<td>99.7%</td>
<td>119</td>
<td>62</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>514</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Data Collection and Analysis

Qualtrics survey software collected responses as participants completed the online survey and allowed me to download data directly into SPSS files. SPSS 18.0 was used to analyze the survey data. Quantitative responses are represented in tables using descriptive statistics, including raw numbers, proportions, means, and standard deviations. Data were screened for skewness, kurtosis, and to ensure that distributions were reasonably normal before further analysis. Then I used correlations, factor analysis, and multiple linear regressions to examine relationships among variables in order to answer the research questions and test hypotheses.

I analyzed open-ended survey questions through careful readings of printed responses, and also used Microsoft Excel software to allow for table or matrix analysis (Miles & Huberman, 1994). Organizing data into tables or matrices helped structure the content of textual responses, and allowed for rapid identification and interpretation of themes and patterns. The qualitative responses were analyzed using an interpretive perspective, with little emphasis on empirically differentiating specific units of analysis (Owen, 1984; Putnam, 1983). Instead, responses were examined for themes that emerged within and across responses; thematic analysis is a search for patterns that emerge as important in the description of phenomena (Daly, Kellehear, & Gliksman, 1997). When patterns were recognized in the data, the themes or frames became categories for further analysis (Fereday & Muir-Cochrane, 2006). More specifically, I read and re-read responses, highlighted key words and repeated phrases, and made notes. I then organized data by creating tables or matrices to validate emerging themes or frames, and compared and contrasted responses that were thematically related (Anderson & Felsenfeld, 2003).
Frames were recognized when there was significant recurrence and repetition among responses (Owen, 1984), which are reported and described in the results section.

This survey was designed to reveal results regarding how situational theory of publics and theory of reasoned action might help identify and explain attitudes, involvement, and intentions related to participation in fundraising efforts for a nonprofit health organization and an important health issue (cancer), as well as how the concepts of media advocacy and framing might be changing in the new media environment. The next chapter describes the survey findings in detail.
CHAPTER 4: RESULTS

Before answering the study’s research questions and testing the hypotheses, this chapter outlines some of the demographic and other information revealed about respondents through the survey questions. Some of the data are compared to the general UNC population, and tables are included where relevant. Following general information about the sample, findings related to each research question and hypothesis are reported, along with some interpretation of the results. The discussion chapter provides additional interpretations of the findings, along with suggestions for future research.

Of the final 514 survey respondents, 71.6% (368) were female and 28.4% (146) were male. Like many surveys, the sample is skewed compared to the total UNC undergraduate population, which is approximately 59.2% (10,147) female and 40.8% (6,996) male (UNC Office of Institutional Research & Assessment, 2010). The average age was 20 years old (SD=2.25). Respondents were fairly evenly split in terms of education or grade/class level at UNC-CH: 25.3% (130) were Freshmen; 25.5% (131) were Sophomores; 23.5% (121) were Juniors; and 24.5% (126) were Seniors; 1.0% (5) indicated other, and .2 percent (1) indicated graduate student.

In terms of race/ethnicity, 68.8% (353) of respondents were White or Caucasian, which very closely resembled the general UNC-CH undergraduate population statistics (66% white). Other race/ethnicities represented among completed responses included the following: 9.9% (51) Asian or Pacific Islander; 9.4% (48) Black or African American; 4.3% (22) Latino or Hispanic; 0.4% (2) Native American or American Indian; 6.0% (31)
indicated “two or more race/ethnicities;” and 1.2% (6) indicated “other.” Comparisons to UNC undergraduate demographics are shown in Table 2.

Respondents were also asked to report their major or academic department at UNC. Similar to university statistics, the largest proportion of the sample (68.2%) reported being part of the College of Arts & Sciences, which includes humanities, fine arts, social and natural sciences. Also similar to university statistics, the School of Journalism and Mass Communication was the second largest proportion (7.6%) represented in the sample. Table 2 shows academic departments represented in the sample compared to the general UNC-CH undergraduate population.

<table>
<thead>
<tr>
<th>Key Categorical Variables</th>
<th>Respondents % (N)</th>
<th>UNC Population %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender: Female</td>
<td>71.6 (368)</td>
<td>59.2</td>
</tr>
<tr>
<td>Male</td>
<td>28.4 (146)</td>
<td>40.8</td>
</tr>
<tr>
<td>2. Race/Ethnicity: White</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>68.8 (353)</td>
<td>66</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>9.9 (51)</td>
<td>7</td>
</tr>
<tr>
<td>Black or African American</td>
<td>9.4 (48)</td>
<td>9</td>
</tr>
<tr>
<td>Latino or Hispanic</td>
<td>4.3 (22)</td>
<td>11</td>
</tr>
<tr>
<td>Native American or American Indian</td>
<td>0.4 (2)</td>
<td>2</td>
</tr>
<tr>
<td>Two or more race/ethnicities</td>
<td>6.0 (31)</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>1.2 (6)</td>
<td>14</td>
</tr>
<tr>
<td>3. Academic Department: Arts &amp; Sciences</td>
<td>68.2 (349)</td>
<td>87.5</td>
</tr>
<tr>
<td>Journalism &amp; Mass Communication</td>
<td>7.6 (39)</td>
<td>4</td>
</tr>
<tr>
<td>General College</td>
<td>6.6 (34)</td>
<td>N/A&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Business</td>
<td>5.1 (26)</td>
<td>3</td>
</tr>
<tr>
<td>Nursing</td>
<td>2.9 (15)</td>
<td>2</td>
</tr>
<tr>
<td>Education</td>
<td>2.0 (10)</td>
<td>1</td>
</tr>
<tr>
<td>Public Health</td>
<td>1.6 (8)</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Information &amp; Library Science</td>
<td>1.0 (5)</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Undecided</td>
<td>3.1 (16)</td>
<td>N/A&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Other</td>
<td>2.0 (10)</td>
<td>&lt;1%&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>Note.</sup> <sup>a</sup>Total N=514, but not all respondents reported gender, race/ethnicity, or academic department. <sup>b</sup>UNC population proportions do not add up to 100% for race/ethnicity because of differences between university statistics and survey categories. <sup>c</sup>UNC statistics did not report...
“general college” or “undecided.” UNC statistics did not include an “other” category, but included dentistry and medicine, which are reported under “other” in this table.

Respondents were asked about past, current, and future participation in UNC Relay For Life. In response to the question, “Have you participated in UNC Relay For Life in the past two years?” approximately one-fifth of respondents (21.4%) said they had participated in the event in the past, while slightly less (16.3%) reported that they would be participating in the current year (2011). When asked, “Do you plan to participate in UNC Relay For Life in the future?” almost 35% said yes. Respondents were also able to report “maybe/undecided.” Table 3 provides details related to these responses.

Table 3
Past, Present, and Future Participation in UNC Relay For Life

<table>
<thead>
<tr>
<th>Question about Participation</th>
<th>Yes</th>
<th>No</th>
<th>Maybe/Undecided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participated in the past two years?</td>
<td>21.4% (113)</td>
<td>78.6% (415)</td>
<td>N/A</td>
</tr>
<tr>
<td>Participating this year (2011)?</td>
<td>16.3% (86)</td>
<td>48.4% (256)</td>
<td>35.3% (187)</td>
</tr>
<tr>
<td>Plan to participate in the future?</td>
<td>34.7% (183)</td>
<td>18.9% (100)</td>
<td>46.4% (245)</td>
</tr>
</tbody>
</table>

Respondents were also asked how many groups, clubs, or organizations they belong to at UNC; the mean number reported was 2.56 (N=462, SD=1.66). Respondents were then asked what types of groups and organizations they belong to, using a list of 11 existing types of groups/organizations at UNC-CH. They were asked to “check all that apply,” meaning they could check one or multiple boxes (the categories were not mutually exclusive). Of the 462 who responded to the first question, the largest proportion reported belonging to service organizations (47.6%, N=220) and academic/honor societies (34.2%, N=158). Other types of groups and organizations are reported in Table 4.
**Table 4**
**Membership in Groups, Clubs, and Organizations**

<table>
<thead>
<tr>
<th>Type of Organization</th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service organizations</td>
<td>47.6</td>
<td>220</td>
</tr>
<tr>
<td>Academic/honor societies</td>
<td>34.2</td>
<td>158</td>
</tr>
<tr>
<td>Religious</td>
<td>27.7</td>
<td>128</td>
</tr>
<tr>
<td>Sports/recreation</td>
<td>26.2</td>
<td>121</td>
</tr>
<tr>
<td>Professional/pre-professional</td>
<td>18</td>
<td>93</td>
</tr>
<tr>
<td>Arts</td>
<td>18</td>
<td>86</td>
</tr>
<tr>
<td>Cultural</td>
<td>16</td>
<td>77</td>
</tr>
<tr>
<td>Greek (fraternities/sororities)</td>
<td>14</td>
<td>67</td>
</tr>
<tr>
<td>Political</td>
<td>9.3</td>
<td>43</td>
</tr>
<tr>
<td>Student government</td>
<td>8.7</td>
<td>40</td>
</tr>
<tr>
<td>International</td>
<td>7.5</td>
<td>35</td>
</tr>
</tbody>
</table>

*Note.* Proportions are based on the 462 (N) respondents who answered this question. Respondents could report more than one type of group/organization.

A block of questions asked about general media use among survey respondents. More specifically, respondents were asked to estimate how many minutes per day they use various types of media, including television, newspapers, radio, online news, e-mail, text messaging, and social media. They were asked to use a slide bar to enter any number of 0 to 500, which would be more than eight hours per day. Of the media listed, respondents reported spending the most amount of time “on a social media site like Facebook or Twitter” (M=94.96, SD=93.14) and the least amount of time “reading a newspaper” (M=22.50, SD=44.86). Means and standard deviations for various types of media use are displayed in Table 5. More questions and responses about media use related to cancer and Relay For Life, specifically, are discussed related to RQ1 (below).

**Table 5**
**General Media Use Reported in Estimated Minutes Per Day**

<table>
<thead>
<tr>
<th>Media/Communication Variable</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>On a social media site like Facebook or Twitter</td>
<td>94.96</td>
<td>93.14</td>
<td>489</td>
</tr>
<tr>
<td>Reading, sending, receiving text messages</td>
<td>70.77</td>
<td>85.33</td>
<td>502</td>
</tr>
<tr>
<td>Reading, sending, receiving e-mails</td>
<td>63.35</td>
<td>63.09</td>
<td>504</td>
</tr>
<tr>
<td>Reading or watching news online</td>
<td>43.35</td>
<td>54.27</td>
<td>440</td>
</tr>
<tr>
<td>Watching news on television</td>
<td>35.91</td>
<td>54.27</td>
<td>321</td>
</tr>
</tbody>
</table>
Respondents were also asked: “Do you personally know anyone who has or has had cancer?” They could respond by checking one or “all that apply” to a list of personal sources, including themselves, immediate and extended family, friends, peers, and acquaintances. Frequencies and proportions are displayed in Table 6.

<table>
<thead>
<tr>
<th>Person/Contacts</th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extended family (grandparents, aunts, uncles, cousins, etc.)</td>
<td>82.5</td>
<td>410</td>
</tr>
<tr>
<td>Acquaintances</td>
<td>59.4</td>
<td>295</td>
</tr>
<tr>
<td>Friends</td>
<td>49.9</td>
<td>248</td>
</tr>
<tr>
<td>Classmates, peers or co-workers</td>
<td>36.2</td>
<td>180</td>
</tr>
<tr>
<td>My immediate family (mother, father, siblings)</td>
<td>18.3</td>
<td>91</td>
</tr>
<tr>
<td>Other</td>
<td>.04</td>
<td>22</td>
</tr>
<tr>
<td>Me</td>
<td>.01</td>
<td>5</td>
</tr>
</tbody>
</table>

Note. Proportions are based on the 497 (N) respondents who answered this question. Respondents could check more than one category.

The following sections report findings related to each of the four research questions and six proposed hypotheses. Quantitative and qualitative results are discussed. Tables and figures are included where appropriate.

**Research Questions and Hypotheses Results**

The first research question (RQ1) asked: “Among UNC students, what sources are most frequently used for information seeking and processing related to cancer and UNC Relay For Life?” One of the survey questions that corresponded to this research question was: “Which sources have you used or will you use for information about cancer? Please respond to each source in the appropriate column.” Because the question asked about past communication behavior as well as intentions to use various media,
response options included “have used;” “intend to use;” “do not intend to use;” “don’t know;” and “not applicable.” Sources included the following: newspaper; television; radio; Internet/online sources (NOT social media); social media, such as Facebook and/or Twitter; and personal sources, such as friends or classmates. Respondents reported using online and personal sources most frequently for cancer information, in terms of past use and intention to use. Of more traditional media outlets, the most-frequently used sources were television, followed by newspaper, followed by social media, and then radio. However, regarding intention to use, a higher proportion intended to use social media in the future, followed by television, newspaper, and then radio. Frequencies and proportions are shown in Table 7, and additional “other” sources are listed below.

Table 7
Sources Used for Information About Cancer

<table>
<thead>
<tr>
<th>Source</th>
<th>Have Used</th>
<th>Intend to Use</th>
<th>Will Not Use</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspaper^a</td>
<td>41.6% (229)</td>
<td>10.2% (56)</td>
<td>28.9% (159)</td>
<td>19.4% (107)</td>
</tr>
<tr>
<td>Television^b</td>
<td>50.8% (279)</td>
<td>11.5% (63)</td>
<td>23.3% (128)</td>
<td>14.4% (79)</td>
</tr>
<tr>
<td>Radio^c</td>
<td>21.9% (119)</td>
<td>6.8% (37)</td>
<td>44.9% (244)</td>
<td>26.3% (143)</td>
</tr>
<tr>
<td>Online sources^d</td>
<td>69.4% (384)</td>
<td>18.1% (100)</td>
<td>5.2% (29)</td>
<td>7.2% (40)</td>
</tr>
<tr>
<td>Social media^e</td>
<td>25.3% (139)</td>
<td>16.0% (88)</td>
<td>38.7 (213)</td>
<td>20.0% (110)</td>
</tr>
<tr>
<td>Personal sources^f</td>
<td>57.8% (320)</td>
<td>18.2% (101)</td>
<td>13.9% (77)</td>
<td>10.1% (56)</td>
</tr>
<tr>
<td>Other^g</td>
<td>13.5% (35)</td>
<td>1.9% (5)</td>
<td>15.8% (41)</td>
<td>68.8% (179)</td>
</tr>
</tbody>
</table>

Note. ^a Item had 551 responses. ^b Item had 549 responses. ^c Item had 543 responses. ^d Item had 553 responses. ^e Item had 550 responses. ^f Item had 554 responses. ^g Item had 260 responses.

Respondents who listed “other” regarding sources used for cancer information were asked to specify the sources they used by typing responses into a blank space in the online survey. Some respondents listed more than one source including the following (frequencies appear in parentheses for responses reported more than once across the sample): American Cancer Society; books (5); cancer biology class; classes (4); doctors (4); family (2); flyers (2); genetics textbook (2); journal articles (2); magazine; mom; my
boss (a physician); phone; research associates; school (2); scientific journals (3); survivor blogs; teachers; textbooks (3); and work (at the hospital). Although some of these responses could have been folded into the pre-existing categories (for example, “family” could be considered a “personal source”), they were listed here instead to show the range of sources reported by respondents.

Another survey question asked: “Which sources have you used or will you use for information about UNC Relay For Life?” Respondents were given the same source/response options as in the previous question (see Table 7). Table 8 shows the most-frequently used sources for information about UNC Relay For Life. In terms of sources that have been used (in the past) for information on UNC Relay For Life, personal sources were most frequently used, followed by social media, followed by online sources. Sources respondents “intend to use” (in the future) were similar for UNC Relay For Life as they were for cancer, with online sources being reported most frequently, followed by social media, followed by personal sources. It seems that higher proportions of respondents had not used and did not intend to use more traditional media, including television, newspaper, and radio, for information about UNC Relay For Life, which contrasts from their responses about media use for cancer information (in general).

<table>
<thead>
<tr>
<th>Source</th>
<th>Have Used</th>
<th>Intend to Use</th>
<th>Will Not Use</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspaper(^a)</td>
<td>16.9% (93)</td>
<td>14.0% (77)</td>
<td>40.4% (222)</td>
<td>28.7% (158)</td>
</tr>
<tr>
<td>Television(^b)</td>
<td>6.9% (38)</td>
<td>6.5% (36)</td>
<td>54.4% (299)</td>
<td>32.1% (177)</td>
</tr>
<tr>
<td>Radio(^c)</td>
<td>3.60% (20)</td>
<td>3.8% (21)</td>
<td>58.8% (323)</td>
<td>33.7% (185)</td>
</tr>
<tr>
<td>Online sources(^d)</td>
<td>27.9% (154)</td>
<td>28.8% (159)</td>
<td>21.4% (118)</td>
<td>22.9% (121)</td>
</tr>
<tr>
<td>Social media(^e)</td>
<td>31.5% (174)</td>
<td>27.31% (151)</td>
<td>22.4% (124)</td>
<td>18.8% (104)</td>
</tr>
<tr>
<td>Personal sources(^f)</td>
<td>45.3% (251)</td>
<td>26.5% (147)</td>
<td>12.6% (70)</td>
<td>15.6% (86)</td>
</tr>
<tr>
<td>Other(^g)</td>
<td>4.46% (13)</td>
<td>2.5% (7)</td>
<td>18.6% (53)</td>
<td>74.3% (212)</td>
</tr>
</tbody>
</table>

Note. \(^a\) Item had 550 responses. \(^b\) Item had 550 responses. \(^c\) Item had 549 responses. \(^d\) Item had 552 responses. \(^e\) Item had 553 responses. \(^f\) Item had 554 responses. \(^g\) Item had 285 responses.
Again, respondents who reported “other” sources were asked to list the sources they had used or “intend to use” for information about UNC Relay For Life. Responses included the following (frequencies appear in parentheses for sources reported more than once): campus awareness; club swim team; Fallfest; family involvement in Relay; flyers/posters (5); magazine; phone; Pit advertising/Pit-Sitters\footnote{“The Pit” is a common name for a place where students gather on the UNC campus.} (2); Relay committee work; sticky notes around campus; and texts. Again, these sources were listed here instead of being folded into pre-existing categories to show the range of responses.

**Results for Quantitative Framing Questions**

The second research question (RQ2) asked: “Among UNC students, what frames are most salient related to cancer and UNC Relay For Life?” Multiple survey questions were designed to help answer this research question, including questions designed to assess salience and types of frames. Open-ended questions also allowed respondents to write in their own thoughts and responses related to this question. The quantitative, close-ended responses will be discussed first, followed by analysis of the open-ended responses.

In order to assess salience of the various issues, respondents were asked: “In your opinion, how important is the issue of cancer?” They were asked the same question regarding “the work of nonprofit organizations like the American Cancer Society,” as well as “fundraising events like UNC Relay For Life.” Response options for all three questions were on a 1-7 scale, where 1=“not at all important” and 7=“extremely important.”
According to the results, cancer is a very salient health issue to respondents (M=6.30, SD=0.76, N=520). The work of nonprofit organizations like the American Cancer Society appears to be just slightly less salient or “important” to respondents (M=6.09, SD=0.88, N=517). Respondents also deemed fundraising events like UNC Relay For Life to be fairly important, though the mean score is slightly less than the mean score for the health issue of cancer and the work of the ACS (M=5.64, SD=0.99, N=516). The next block of survey questions revealed more-nuanced information about audience frames related to cancer and UNC Relay For Life.

More specifically, several questions were designed to assess public perceptions or audience frames about cancer as well as UNC Relay For Life. These questions were designed partially based on the gap in framing research about audience frames on health issues like cancer, based on media coverage and communication about the issue, as well as audience perceptions about fundraising programs such as Relay For Life. Respondents were asked the extent to which they agree or disagree with several statements, using a 1-7 scale where 1= strongly disagree and 7= strongly agree.

In an attempt to assess the idea of thematic versus episodic framing, respondents were given the following statements: “When I see or hear stories about cancer in the news, they are generally filled with facts, figures, and statistics” (thematic); and “When I see or hear stories about cancer in the news, they generally tell the story of one individual or family” (episodic). Respondents could agree or disagree with the statements in the same direction or to the same extent, meaning the ideas of episodic and thematic framing were not mutually exclusive. The same two statements were provided with the phrase
“events like UNC Relay For Life” in place of cancer to assess perceptions of episodic and thematic framing specifically related to the fundraising program.

The statement: “When I see or hear stories about cancer, they generally provide positive or hopeful news” was designed to try to assess the idea of gain (i.e., benefits-focused) versus loss (i.e., cost-focused) framing of health issues. The same statement was provided with “events like UNC Relay For Life” in place of cancer to assess perceptions of news and information about such fundraising programs, which are presumed to be different than communication about the health issue alone. Another statement designed to assess perceptions of media-provided prevention and treatment information related to cancer was also provided: “When I see or hear stories about cancer, they generally provide information about preventing or treating the disease.”

A final set of questions were included in an attempt to assess audience perceptions of media-provided mobilizing information or “calls to action,” (e.g, Hoffman, 2006; Kensicki, 2004; Lemert, 1981, 1984; Lemert, et al., 1977; Nicodemus, 2004; Weberling, 2010) which can be important for inspiring advocacy or support related to cancer and UNC Relay For Life: “When I see or hear stories about cancer, they generally provide information about things I can do to help, such as getting involved with organizations like the American Cancer Society;” and “When I see or hear stories about events like UNC Relay For Life, they generally provide information about how I can get involved with the event.” Table 9 shows means and standard deviations for responses to this set of questions. Findings related to cancer will be discussed first, followed by those related to UNC Relay for Life.
Table 9
Descriptive Statistics for Framing Statements Related to Cancer and Relay For Life in Order of Descending Means

<table>
<thead>
<tr>
<th>Framing Statement</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relay… how to get involved (MI)</td>
<td>5.58</td>
<td>1.13</td>
<td>509</td>
</tr>
<tr>
<td>Cancer… one individual or family (Episodic)</td>
<td>5.33</td>
<td>1.03</td>
<td>515</td>
</tr>
<tr>
<td>Relay… positive or hopeful news</td>
<td>5.13</td>
<td>1.10</td>
<td>508</td>
</tr>
<tr>
<td>Cancer… facts, figures and statistics (Thematic)</td>
<td>4.59</td>
<td>1.28</td>
<td>516</td>
</tr>
<tr>
<td>Relay… facts, figures, statistics (Thematic)</td>
<td>4.56</td>
<td>1.19</td>
<td>508</td>
</tr>
<tr>
<td>Relay… one individual or family (Episodic)</td>
<td>4.56</td>
<td>1.20</td>
<td>507</td>
</tr>
<tr>
<td>Cancer… positive or hopeful news</td>
<td>4.28</td>
<td>1.22</td>
<td>516</td>
</tr>
<tr>
<td>Cancer… preventing or treating the disease</td>
<td>4.22</td>
<td>1.29</td>
<td>515</td>
</tr>
<tr>
<td>Cancer… things I can do to help (MI)</td>
<td>4.17</td>
<td>1.43</td>
<td>518</td>
</tr>
</tbody>
</table>

*Note.* Responses measured on 1-7 scale, where 1=strongly disagree and 7=strongly agree.

Mean scores for all of the statements were above the midpoint, meaning that respondents tended to “somewhat agree,” “agree,” or “strongly agree” with the statements. Of the statements about news framing of cancer, respondents agreed most strongly with the statement, “When I see or hear stories about cancer in the news, they generally tell the story of one individual or family” (M=5.33, SD=1.03, N=515). This finding may indicate that episodic framing, or news stories that focus on one individual or family, are more salient for respondents, or it could indicate that there are generally more stories that communicate about cancer in this way. However, this finding does not mean that thematic stories are not being told or remembered, as the mean scores were not much lower for this statement: “When I see or hear stories about cancer in the news, they are generally filled with facts, figures, and statistics” (M=4.59, SD=1.28, N=516). Of the five cancer statements, the one that yielded the least agreement was the following, “When I see or hear stories about cancer, they generally provide information about things I can do to help, such as getting involved with organizations like the American Cancer Society” (M=4.17, SD=1.43, N=518). This finding may indicate a lack of mobilizing
information or “calls to action” often noted in scholarly literature about news coverage of problems (e.g., Lemert, 1981, 1984; Lemert, et al., 1977; Kensicki, 2004; Hoffman, 2006; Weberling, 2010); however, it is still above the midpoint in terms of agreement.

The statement that had the second lowest mean score in the set of statements about cancer was, “When I see or hear stories about cancer, they generally provide information about preventing or treating the disease” (M=4.22, SD=1.29, N=515). This finding may reflect that news coverage of cancer is not focusing on prevention and treatment as previous research has suggested (Slater, et al., 2008). However, respondents reported slightly higher agreement with the statement, “When I see or hear stories about cancer, they generally provide positive or hopeful news” (M=4.28, SD=1.22, N=516), which seems to stand in contrast with the idea that news does not provide information about preventing or treating the disease. It could be that the episodic stories of survival that seem to resonate with respondents (see Question 2 in Table 9) are contributing to these perceptions even though specific information about prevention may not be evident or salient in the news.

The statement that received the most agreement of the **UNC Relay For Life** statements was, “When I see or hear stories about events like UNC Relay For Life, they generally provide information about how I can get involved with the event” (M=5.58, SD=1.13, N=509). This finding seems to indicate that news stories about the event itself *do* provide “calls to action” or mobilizing information for audiences, unlike media stories about cancer in general. These stories also generally provide positive news, or at least they are perceived that way by audiences, as evidenced by agreement with the following statement, “When I see or hear stories about events like UNC Relay For Life, they
generally provide positive or hopeful news” (M=5.13, SD=1.10, N=508). The two statements designed to assess perceptions of episodic vs. thematic frames related to UNC Relay For Life received virtually the same scores in terms of agreement: “When I see or hear stories about events like UNC Relay For Life, they generally include facts, figures, or statistics about the health issue of cancer” (M=4.56, SD=1.19, N=508); and “When I see or hear stories about events like UNC Relay For Life, they generally tell the story of one individual or family (M=4.56, SD=1.20, N=507).

**Results for Qualitative Framing Questions**

Three open-ended questions were also designed to assess audience perceptions or frames related to cancer, the American Cancer Society, and UNC Relay For Life, allowing respondents to type in their own word and phrase associations. Respondents could type in one or a few words or phrases or full sentences in response to the following three questions: “What are the first things that come to mind when you think of cancer?” “What are the first things that come to mind when you think of UNC Relay For Life;” and “What are the first things that come to mind when you think of the American Cancer Society?” It should be noted that these were the first three questions posed to respondents in the survey; this was done intentionally in an attempt to prevent biases from subsequent survey questions (although other biases may have occurred).

Miles and Huberman (1994) recommended using tables and matrixes to organize data and structure the content of text responses for analysis and interpretation, a method that involves data display and reduction in order to draw and validate conclusions. In this case, data display and reduction included printing, reading and rereading responses, and making notes. Next, I entered the qualitative responses into Microsoft Excel spreadsheets,
and reduced the words and phrases into categories and themes that could be understood in meaningful ways. I searched for patterns by organizing related words and phrases under categories that became consistent themes or frames, which are described more below. Finally, I compared and contrasted themes and frames across survey responses in order to draw and validate conclusions.

Before describing themes and frames that emerged, this section will provide some general information about responses. Approximately 630 people responded to the open-ended question about cancer; 626 responded to the question about UNC Relay For Life; and 624 responded to the question about the American Cancer Society. Many of the responses were one or a few words or phrases; some respondents included full sentences. Themes and frames were not mutually exclusive. In other words, one response could include multiple frames. For example, in response to the question about cancer, one person wrote, “leukemia, chemotherapy, my cousin, death.” Although brief, this response comprises multiple themes, including knowledge or awareness of a type of cancer (leukemia) as well as treatment (chemotherapy), and also reflects personal experience by naming a family member (my cousin) as well an association with the disease (death) that could be general or very personal depending on the person’s individual experience, which we do not know. While all of the words and phrases were considered, compared, and contrasted, responses were viewed in aggregate (rather than separated and parsed out within each response) and themes were drawn from responses as a whole.

**Thoughts on Cancer: Experience; Knowledge & Awareness; Images & Associations**

Generally, there was more consistency and repetition among frames that emerged in response to the question, “What are the first things that come to mind when you think
of cancer?” than among frames that emerged in response to the same question focusing on UNC Relay For Life and on the American Cancer Society. The major frames that emerged in responses to this question fell into the following 11 categories, listed in order of prevalence: Death & Dying; Family & Friends; Treatment; Sickness & Disease; Sadness & Fear; Events & Institutions; Types of Cancer; Science & Research; Physical Manifestations; Causes & Prevention; and Cure & Survival. After the 11 frames were determined, I looked for patterns and broader themes under which the frames might fall. There seemed to be three major themes: Experience, which included thoughts that reflected personal experience with cancer; Knowledge & Awareness, which reflected either textbook/factual knowledge or awareness that could have been gained from personal experience; and Images & Associations, which included visual representations and more general associations people may have with the health issue. Themes, frames, and examples of responses that fell into each category are shown in Figures 2, 3 and 4, and are described more below.

**Experience with Cancer.** The theme of Experience included the following frames: Death & Dying, Family & Friends, Sickness & Disease, and Sadness & Fear (see Figure 2). The Death & Dying frame included words and phrases, such as deadly, death sentence, grief, killer, end of life, and mortality. Responses representing this frame were generally very short, often consisting of only one or a few words (e.g., “death” or “death and grief”); however, some longer responses focused on death but also included words that fit into other frames within the Experience theme, such as Sickness & Disease or Sadness & Fear. There were very few longer responses in this frame, but examples include: “deadly disease with no guaranteed cure;” “death and radiation and misery;” and
“death, financial meltdown, loneliness, isolation, inability to enjoy life.” Responses are overwhelmingly negative, with some taking on this spiraling tone, listing one awful descriptor after another. There is also a sense of finality and termination among these responses, whether brief or longer.

The Family & Friends frame included mentions of almost every imaginable type of family member (my dad, my mom, my grandparents), several listings of my friend(s), along with other people such as “my friend’s dad” and more general descriptors such as “my deceased family members.” Longer responses in this frame included: “family members that have fought their lives to defeat it;” “My brother. He has battled with leukemia since he was 3;” “My family members who have died while fighting cancer and those still fighting;” and “A close friend, many of the faces of my family, pain, determination.” Although these responses generally had a sad or negative tone because of the nature of what they are describing, many also reflected hope by evoking the idea of fighting or battling the disease.

The Sickness & Disease frame included brief descriptions of what it must be like to have cancer, such as struggle, pain, and hurt, and also included very literal descriptors of the health issue (e.g., “devastating disease;” “a terrible disease”). One of the most powerful responses in this category, in terms of evoking a visual image of cancer was, “sick old man dying in a hospital alone.” Longer responses that fell under this frame included the following: “Illness, Suffering, Fight for Life;” “A terrible disease that a cure needs to be found for;” “A disease that takes the lives of too many people;” and “disease that is treatable but can be deadly...especially when not found soon enough.”
meaning behind many of these statements seems to be one of inevitability, although some also add an element of hope by mentioning treatment, a cure, and the “fight for life.”

The Sadness & Fear frame included variations of the word sad and fear, along with many other similar adjectives, including horrifying, heartache, scary, unfortunate and life changing, consuming, hardship, and tragedy. Longer responses included statements like the following: “Cancer is a very terrifying thing;” and “I think about how terrible it must be for the sufferers and their families.” One of the longest responses also fell into this category:

Sadness and heartache. Families being torn apart and friends being taken away. Crying for hours and days because it's just not fair that they take that person. So many people lose their lives to cancer and typically at a reasonably young and healthy age. It affects everyone, at every age, no matter what your status.

While this response includes multiple frames (including family and death), it begins with “sadness and heartache” and then describes the respondents’ experience with or perceptions of cancer spiraling from that main idea. Phrases like “crying for hours and days because it’s just not fair that they take that person” reflect very raw emotions and personal experience with the disease. The last two phrases, “so many people lose their lives to cancer and typically at a reasonably young and healthy age. It affects everyone, at every age, no matter what your status” reflect sadness and fear, but also evokes a sense of injustice and hopelessness. It is in responses like this that we can see the variety of emotions people have surrounding cancer. Figure 2 shows words and phrases that fell under the four frames with the theme of experience.
**Knowledge & Awareness about Cancer.** The next major theme found within responses to the open-ended question about cancer was Knowledge & Awareness, and the more specific frames were: Types of Cancer, Science & Research, Causes & Prevention, and Treatment (see Figure 3). Generally, these frames were much more fact-based than responses that fell under the theme of “experience.” They were less emotional and more rational in nature, and reflect education or understanding about the health issue of cancer. Responses in this category were generally less descriptive, as though respondents were answering questions on a test rather than describing how they feel about cancer. For example, the Types of Cancer frame comprised listings of various types of cancer, including brain, breast, lung, skin, and leukemia. Some respondents simply listed multiple types (e.g., “lung, brain, breast, etc.”). Breast cancer was listed most frequently, followed by lung cancer, followed by leukemia. The types of cancer were often followed by other associations such as, “breast cancer, pink ribbons” and “breast cancer, Susan G. Komen Foundation and Relay For Life walks;” the latter part of these
responses were categorized under the “Images & Associations” theme, which is described more below.

The Science & Research frame included textbook-like definitions of cancer, such as “cell proliferation;” “uncontrolled cell division;” and “the mitotic recombination of mutant cells.” Longer responses seemed to reflect more in-depth knowledge, perhaps gleaned from an undergraduate course: “Cells that do not stop multiplying and have a defect as well as taking nutrients from cells that are ‘normal’;” and “Rapid, over production of unregulated cells that form obstructive masses and can spread and potentially be lethal.” Other responses within this frame focused on the medical research side of cancer, mentioning words and phrases like genetics, cancer research, oncology, DNA mutation, and telomerase.

Treatment was one of the most-common frames found within responses to the question about cancer, with many respondents listing “chemotherapy” or “chemo.” Radiation was also mentioned, along with doctors, hospitals, surgery, “cancer treatment facilities,” and simply “treatment.” There were few long phrases found within this frame; those that were a bit longer often followed an initial mention of the word “hospital,” which seemed to conjure up additional images for some respondents. For example, respondents wrote: “Hospitals, doctors, patients;” “Hospital beds and IV drips;” and “Hospitals, older people, nurses and hospice.” Likewise, chemotherapy was often mentioned in conjunction with words like “hairloss,” “extreme nausea,” and “vomiting,” indicating that respondents have an idea of the effects of cancer treatment.

The Knowledge & Awareness theme also included a Causes & Prevention frame, in which respondents listed many known or suspected causes of cancer, such as smoking,
tanning beds, radiation, and “eating animals.” Prevention was also mentioned, along with “health care.” This frame was found less frequently than other frames, and responses were very short. The longest response within this frame was, “different factors that go into causing a person to have cancer.” Figure 3 shows examples of responses found within the four frames that fell under the theme, Knowledge & Awareness.

**Figure 3**
The Knowledge & Awareness Theme and Frames Found in Thoughts about Cancer

<table>
<thead>
<tr>
<th>Knowledge &amp; Awareness</th>
<th>Types of Cancer</th>
<th>Science &amp; Research</th>
<th>Causes &amp; Prevention</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Breast cancer, breast, brain cancer, colon, lung, lung cancer, leukemia, heart, skin, lymphoma, types</td>
<td>Cell proliferation, cells reproducing rapidly, cells, DNA mutation, metastasis, metastization, mutated cells, uncontrolled cell division, the mitotic recombination of mutant cells, telomerase, genetics, oncology, cancer research</td>
<td>Smoking, drinking, radiation, eating animals, animal protein, health care, tanning beds, chemicals, prevention, different factors that go into causing a person to have cancer</td>
<td>Chemotherapy, chemo, hair loss, doctors, extreme nausea, remission, hospitals, radiation, radiation therapy, hospital beds and IV drips, medical bills, cancer treatment facilities</td>
</tr>
</tbody>
</table>

**Images & Associations of/with Cancer.** The last set of frames fell under the theme, Images & Associations, because they reflect visuals that come to mind when people think of cancer, whether it is from personal experience or exposure through news, marketing, entertainment, or other means. This theme also included specific organizations and events associated with cancer, along with phrases that respondents may have seen or heard related to cancer. The Images & Associations theme included the following three frames: Physical Manifestations, Events & Institutions, and Cure & Survival (see Figure 4).

Physical Manifestations were somewhat similar to some of the ideas expressed under the Sickness & Disease frame, but responses categorized into this frame focused
more on visual images of the effects that cancer can have on the body. For example, tumor was mentioned many times, along with lymph nodes. There were also many variations of the word bald: “baldness,” “bald heads,” “bald kids,” and “hairless people.” These words and phrases were often followed by “chemotherapy” or something that fell into one of the other categories. One respondent was particularly descriptive in their thoughts on cancer: “visual images of disfigurement, growths, pustules even.” Some of these responses may reflect actual experience with cancer, while others may reflect images from movies, television shows, or other forms of exposure to cancer.

The Events & Institutions frame included names of specific nonprofit organizations and events that are associated with cancer. For example, respondents mentioned national organizations like Susan G. Komen, American Cancer Society, Make-a-Wish Foundation, and St. Jude’s, along with more local organizations, such as UNC, Duke, NC Cancer Hospital and NC Children’s Research. Beyond Relay For Life, respondents also mentioned events like Dance Marathon and Race for the Cure. They also mentioned popular marketing tools used by some of these events and organizations, such as pink ribbons, purple ribbons, and “month of October” (breast cancer awareness month). Relay For Life was mentioned more than other events, which could reflect the age and relative awareness and associations of the sample. Interestingly, however, pink and pink ribbons (the color and symbol associated with breast cancer) were mentioned more than purple and purple ribbons (the color and symbol associated with Relay For Life, specifically). Responses found within this frame may reflect the pervasiveness of certain types of marketing more than anything else.
Cure & Survival were not mentioned as frequently as negative associations with cancer; however, some respondents listed these words (or variations of these ideas) on their own or in conjunction with other frames. Some respondents alluded to there currently being “no cure” or mentioned the “need for a cure.” Others took a more-optimistic approach mentioning, “hope for a cure,” “survivors,” and the “possibility of survival.” One respondent wrote, “Cancer is not a death sentence” and another similarly wrote, “not a death sentence,” a phrase that has been used by many individuals and promulgated by the media. Figure 4 shows example responses representing the Images & Associations theme and the three frames that emerged.

**Figure 4**
The Images & Associations Theme and Frames Found in Thoughts about Cancer

<table>
<thead>
<tr>
<th>Images &amp; Associations</th>
<th>Events &amp; Institutions</th>
<th>Cure &amp; Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tumor, tumors, hairlessness, hairless</td>
<td>Susan G. Komen Race for the Cure, Susan Komen Foundation, St. Jude’s, Relay For Life,</td>
<td>Cure, possibility of survival, survivors, that there is no cure</td>
</tr>
<tr>
<td>people, bald head, bald kids, lumps,</td>
<td>Relay For Life, American Cancer Society, Dance Marathon, NC Children’s Research, NC</td>
<td>currently, cancer is not a death sentence, need for a cure, no cure, not a</td>
</tr>
<tr>
<td>visual images of disfigurement,</td>
<td>Cancer Hospital, pink, Livestrong, Angels Among Us, Make a Wish Foundation, pink</td>
<td>death sentence, potential loss of quality in one’s life, hope for a cure</td>
</tr>
<tr>
<td>pustules even, vomiting diarrhea</td>
<td>ribbons, month of October, purple, purple ribbon, several support foundations, Lineberger, UNC, Duke</td>
<td></td>
</tr>
</tbody>
</table>

**Thoughts on Relay For Life: Mission; Memories; and Outside the Event**

Responses to the question, “What are the first things that come to mind when you think of UNC Relay For Life?” were generally less emotional and descriptive in nature, and included more positive descriptions and optimism than responses about cancer. The 12 major frames that surfaced from these data included the following, listed in order of prevalence: Fundraising; Fighting Cancer; Running & Walking; Help & Hope; Good Fun; Marketing; People & Teamwork; Overnight on the Track; Unknown; Organizational
Purpose; Race/Gender/Class; and Annoying Scam. These frames were able to be collapsed under three major themes: Mission, which included information about the purpose or mission of the event and organization; Memories, which reflected previous experience with and/or memories of UNC Relay For Life; and Outside the Event, which included responses that indicated minimal or no knowledge of the event, as well as those that seemed to be written from an “outside” perspective. Figures 5, 6, and 7 show major themes, frames, and examples of responses, which will be described more below.

**Relay For Life Mission.** The Mission theme included the following frames: Fundraising; Fighting Cancer, Help & Hope; and Organizational Purpose (see Figure 5). Fundraising was the most-commonly occurring frame among all responses to the open-ended question about the first things that come to mind when people think of UNC Relay For Life. Responses were clear and simple, including words and phrases like funding, fundraiser, fundraising effort, fundraising runs, raises money, raising money for cancer patients/research, raising money for a good cause, and donations. Some responses also mentioned “community” and “commitment” in conjunction with fundraising. There were few long responses in this category. Some were very matter-of-fact: “Fundraising effort that takes place mostly at high schools and colleges;” and “I usually think about a lot of fundraisers, and different events to raise money for cancer research.” Others mentioned the ideas of hope and help related to fundraising: “Fundraising with the hope of making a difference;” and “Fundraising organization that is active in the UNC community. I think of energetic volunteers around campus trying to raise awareness about cancer and help to save lives.” Beyond these few longer statements, responses simply focused on the fact that fundraising is the mission and one of the major purposes of Relay For Life.
Fighting Cancer was another major theme among responses about UNC Relay For Life. Many respondents mentioned fighting cancer, fighting back, fighting for a cure, fighting for patients with cancer, or other variations of this idea. There were also several mentions of cancer (alone), cancer research, cancer awareness, and cancer funding. Beyond fundraising, it seems clear that many respondents knew that Relay For Life focuses on and/or raises money for cancer. Several responses mentioned “breast cancer,” specifically, indicating that there may be some confusion surrounding the exact purpose or benefiting organization of the event. There were few long responses in this category, and those that were longer were merely elaborations of the shorter ideas already expressed. For example, one person wrote: “a way of helping in the fight against cancer and to raise awareness,” while another responded with the following: “a way to raise money for cancer research that honors those who have died, survived, and their support system.” Most of the responses seem to reflect a sense of admiration for those battling cancer, if not for the mission of the event itself.

Many responses reflected the idea that the purpose of Relay For Life is to provide help and hope for cancer patients. The Help & Hope frame included many mentions of the word “hope” (on its own), along with phrases like “hope for a cure,” “help cancer,” “help find a cure,” “helping people with cancer,” and “helping prevent death.” Respondents also mentioned support, service, and solutions among their thoughts about UNC Relay For Life. The tone of most of these responses was positive and optimistic, focusing on life, a cure, and once again, survival. One respondent called the event a “celebration of life.”
The Organizational Purpose frame comprised many responses that focused on the nonprofit organization behind Relay For Life, the American Cancer Society. Many respondents mentioned this organization specifically, while others described “a charity to support cancer,” a “charity event,” a “campus organization,” “non-profit group,” or “organization that raises funds to provide for cancer research initiatives.” Some mentioned other similar events on campus, calling Relay For Life “another Dance Marathon,” “a lesser Dance Marathon,” and “better than Dance Marathon.” One respondent was more enthusiastic: “This is one of the best organizations on campus and they stand for a great cause.” Most responses in this category were more neutral in tone than the other frames that fell under the theme of Mission, however. In this frame, respondents seemed to simply acknowledge that Relay For Life is a campus organization and/or benefits a nonprofit organization, and some stated its basic purpose related to cancer. Figure 5 shows the Mission theme, the four frames that fell under it, and sample responses.

**Figure 5**
The Mission Theme and Frames Found in Thoughts about UNC Relay For Life

<table>
<thead>
<tr>
<th>Mission</th>
<th>Fundraising</th>
<th>Fighting Cancer</th>
<th>Help &amp; Hope</th>
<th>Organizational Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fundraising, funding, fundraiser, fundraising effort/relay/runs, raises money, raising money for cancer/for a good cause/for cancer research, donations</td>
<td>Fighting cancer, fighting back, fighting for a cure, fighting for patients with cancer, cancer, cancer awareness, cancer help, cancer relief, cancer research, a way of helping in the fight against cancer</td>
<td>Hope, hope for a cure, philanthropic, goodness, life, survivors, a good cause, help aid rescue, help cancer, helping find a cure, helping people with cancer, helping prevent death, support, service, solution</td>
<td>American Cancer Society, a charity to support cancer, another Dance Marathon, campus organization, charity, charity event, non-profit group, an organization that raises funds to provide for cancer research initiatives</td>
</tr>
</tbody>
</table>
**Relay For Life Memories.** The Memories theme included four frames that represent respondents’ memories of the event, or at least a greater understanding of what UNC Relay For Life entails from what they have seen or heard from others. The Memories theme included the following frames: Running & Walking, Good Fun, People & Teamwork, and Overnight on the Track. Generally, these frames express an “insider’s” point of view and were fairly positive in tone. Negative and “outsider” perspectives were expressed; those are described in the next section under the final theme in this section, Outside the Event. The Running & Walking frame was consistent and simply included mentions of the walking and running around a track that takes place at Relay For Life events. Some respondents referred to the event as a marathon, race, or 5k, and others stressed the amount of walking and running involved – “a lot.” Some also mentioned the event’s larger purpose in addition to mentioning walking: “walking around a track to try to fight cancer;” “walking to support;” and “walk to raise money for cancer research.” One respondent expressed a more weary view of events like Relay For Life: “just another run for some fundraiser.”

The Good Fun frame reflects respondents’ positive descriptions of UNC Relay For Life, including many variations of the following words: fun for a good cause, energetic, entertaining, enjoyable, exciting, good time, good cause, happy, success, awesome, festivities all throughout the night, and an amazing opportunity. Responses in this frame were enthusiastic, often including multiple adjectives in one entry with some containing exclamation points. One respondent wrote: “Great event with a great cause, always participate, sign me up!” Another respondent showed enthusiasm from past and/or present participation as well: “Awesome people, great friends, a committee that I am
proud to be a part of, college students that truly care.” It is in these types of statements that participation and memories of the event become clear. Other respondents are less descriptive but still positive in their response, with statements like, “It’s good.”

The People & Teamwork frame includes mentions of groups of people, such as “my team” or the more general “people raising awareness and money,” as well as mentions of individuals that respondents associate with the event, such as “my friend,” and “my sister.” Respondents mentioned teams and teamwork, and many focused on the energy of participants, which is reflected in the frame previously described (Good Fun). For instance, some respondents wrote things like “upbeat people,” “energetic and hopeful people,” and “strong individuals uplifting others.” Others indicated that they have participated in the event and have memories of specific people: “visuals of a specific friend running in a UNC jersey,” and “my sophomore year, my experience on the committee.” One person focused on the bonding aspect of the event: “Hey, cool, it’s at UNC, sounds like a team bonding thing-like a ropes course or something.” Another expressed guilt for not participating because of a family member with cancer: “How I should do it because my dad has cancer.” Despite rare, somewhat negative associations like this one, most of the responses in this category reflected positive associations with friends, family members, or teammates, often from memories or actual participation in the event.

Overnight on the Track includes a variety of responses that recall specific event details, many of which focus on the 24-hour or overnight aspect of the event, as well as the fact that it is held on the track at UNC. Many respondents mentioned “24 hours,” “Fetzer Field,” “the UNC track,” and “camping out.” Others focused on the idea that the
event makes for a “long evening” or “long weekend (but for a great cause).” Many responses that were categorized under this frame also mentioned the luminaries, candles or “little lights” that help decorate the event and raise money when participants purchase one in honor or memory of someone. In this way, this frame evoked visuals of the event more so than some other frames. One person even provided an auditory memory of the event: “the loud music that played through the night near the mid-campus residence halls, a couple of years back.” Figure 6 provide more examples of responses that fell under the four frames that make up the “Memories” theme.

**Figure 6**
The Memories Theme and Frames Found in Thoughts about UNC Relay For Life

<table>
<thead>
<tr>
<th>Memories</th>
<th>Running &amp; Walking</th>
<th>Good Fun</th>
<th>People &amp; Teamwork</th>
<th>Overnight on the Track</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Running &amp; Walking</strong></td>
<td>Run, running, running for a cure/for charity, race, walking, walking a lot, walking around a track, walking to raise money, walking to support, marathon, a race like a 5k, a race to raise money</td>
<td>Fun, fun time to work together, energetic, enjoyable, entertaining, exciting, good/cause/event, good organization, college, music, party, food, festivities all throughout the night, great event with a great cause, happy, success, awesome, empowerment, an amazing opportunity</td>
<td>People, people raising awareness and money, people walking, people wearing purple, upbeat people, visuals of a specific friend, my friends, my team, my mother, my sister, many volunteers, lots of people, teams, teamwork, friends who are participating, energetic and hopeful people</td>
<td>Fetzer Field, 24 hours, 24 hour walk-a-thon, track, track and field, luminaries, overnight camp-out, the UNC track, sleeping in outside, running around the track, camping out, little lights, a long evening, all night, a long weekend but for a great cause, candles, stadium, baseball field</td>
</tr>
</tbody>
</table>

outside the Event. The theme, “Outside the Event” included many responses that reflected either lack of knowledge of the event or being “outside of the event” in some way, whether in terms of race, class, gender, or being bothered by the event and/or people that participate in it. These responses fell under three frames: Unknown, Race/Gender/Class, and Annoying Scam. The fourth frame under this theme, Marketing,
reflects recognition and some knowledge of the event, but most of this awareness could be gained by not participating and simply seeing t-shirts on campus or other marketing in the community. For example, the Marketing frame included many mentions of purple, purple ribbons, and purple banners; it also included mistaken mentions of pink and pink logos, which reflects breast cancer events and organizations, rather than Relay For Life. Other mentions of misattributed marketing included phrases like “Save the Tatas” (also about breast cancer). Many respondents mentioned t-shirts, and some mentioned other forms of marketing, such as “pit advertising,” “students shouting in the pit,” “posters,” and “money jars,” which were likely seen being used to collect money and change at shops and restaurants around town.

The Unknown frame reflected many respondents’ lack of knowledge or awareness about UNC Relay For Life. Many specifically wrote questions like, “What is this?” although another asked, “When is it? How do I sign up?” A few respondents wrote “Nothing” and one followed it with “I am a freshman.” Others wrote that they weren’t aware of the event or “have never heard of this.” While these responses do not reflect much greater meaning about the event, they do show a lack of awareness on the part of some respondents and members of the UNC community.

The Unknown frame contrasted with the “Annoying Scam” frame, but also fit under the broader theme of those who are outside of the event. There were less than 10 responses that fell under the “Annoying Scam” frame, and thus, most are included in Figure 7. Specifically, one respondent wrote simply, “Scam,” while another wrote “Pointless.” A few described the “annoying people that scream in the Pit,” and another described the event as a “popularity contest, obnoxious, unfocused.” Of course, these
responses are negative in tone and reflect perceptions many people may have about events like UNC Relay For Life as well as some of the marketing techniques used (e.g., the “annoying people” in the pit refers to participants trying to recruit other students to get involved with the event). The word “scam” also shows an element of mistrust that is sometimes found surrounding nonprofit organizations and fundraising events like UNC Relay For Life.

The Race/Gender/Class frame revealed interesting issues of race, gender, and class that some respondents associate with UNC Relay For Life. For example, two respondents wrote: “white girls in running shorts.” Others mentioned sororities, sorority girls, and “rich white people.” Clearly, this event brings up many thoughts for those “outside of the event” about those who participate or are “inside” the event. One respondent was very descriptive in his/her thoughts related to UNC Relay For Life: “sorority girls in matching neon shirts with the same pair of running shorts in different colors. And leggings. And raising an inconsequential amount of money for the cause.” This idea of inconsequential funds was echoed in another response: “too large-scale to have any individual effect, rich white people.” Responses such as these show a very different side or perception of UNC Relay For Life than many of the afore-mentioned responses that reflected optimism and primarily positive attitudes about the event. In these responses, we see mistrust and feelings of negativity and “otherness” about participants. Figure 7 shows the “Outside the Event” theme, including its four frames, and examples of responses.

**Figure 7**
The Outside the Event Theme and Frames Found in Thoughts about UNC Relay For Life

<table>
<thead>
<tr>
<th>Outside the Event</th>
<th>Marketing</th>
<th>Unknown</th>
<th>Race/Gender/Class</th>
<th>Annoying Scam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Purple, purple banners, purple ribbon, presence on campus, money jars, t-shirts, shirts, pink logo, purple logo, advertising, pit advertising, students shouting in the pit, posters, Carolina Blue, Save the Tatas, What is that? What is this? When is it? How do I sign up? Nothing, I am a freshman, I have no conception of it, A Relay?, ????, do not know much about it, not sure, never heard of it, I am unfamiliar, I didn’t know about it, I wasn’t aware UNC had a Relay For Life

| Sororities, sorority girls, girls, white girls in running shorts, too large-scale to have any individual effect, rich white people, sorority girls in matching neon shirts with the same pair of running shorts in different colors |
| Scam, annoying people in the pit, annoying people that scream in the pit, popularity contest, obnoxious, unfocused, pointless |

**Thoughts on the American Cancer Society: Facts; Functions; Feelings**

Responses to the question, “What are the first things that come to mind when you think of the American Cancer Society?” were categorized into the following 12 frames (in order of prevalence): Research; Cancer Cure; Support & Saving Lives; Nonprofit Organization; Raising Money; Great Hope; Branding Issues; Relay For Life; Nebulous; Advocacy & Awareness; Bureaucracy & Corruption; and Smoking Activism. These frames were organized under three major themes: Facts, which reflected basic information respondents knew or associated with the American Cancer Society; Functions, which included perceptions about the purpose(s) of the organization; and Feelings, which reflected respondents’ beliefs or emotions about the organization. The Facts and Functions themes were closely related, in terms of the content of responses, while the Feelings theme included a bit more descriptive responses. Figures 8, 9, and 10 show major themes, frames, and examples of responses, which are described more below.

**Facts about the American Cancer Society.** The Facts theme and the frames that fell under it included basic information and understanding respondents have about the American Cancer Society, which sometimes included misinformation or words and phrases that seemed to indicate confusion and/or branding issues for the organization.
Four frames comprised the Facts theme: Cancer Cure, Nonprofit Organization, Branding Issues, and Relay For Life. As it implies, the Facts theme included mostly fact-based, non-emotional responses, leaving little room for interpretation about greater meaning.

The Cancer Cure frame was one of the most common among all 12 frames (it was the most common after Research, which is described under the Functions theme). The Cancer Cure frame could be categorized under the Functions frame, but because there is not a cure for cancer and that is not part of what the organization actually does, it was categorized under the Facts frame because it seemed to indicate associations or perceived facts, rather than actual organizational functions (like “raising money”). For example, many people wrote “cancer” or “cure” only, while others wrote things like, “an institution for helping people with cancer.” Others wrote “fighting cancer,” “stopping cancer in America” or matter-of-fact statements such as, “they are American, and they do stuff to raise money to fight cancer.” Respondents listed other words they associated with cancer as well, including medicine, hospitals, treatment, doctors, and health. One individual expressed concern in their thoughts about the disease and the American Cancer Society: “Why haven’t we found a cure for cancer yet?”

The Nonprofit Organization frame included simple words and phrases used to describe the American Cancer Society, such as “an organization with the purpose of finding better treatments for cancer,” “a large organization that is designed to help people with cancer,” and “a society dedicated to help cancer patients and researching.” This frame also included one-word responses such as charity, large nonprofit, non-profit, and NPO. Like other frames under the Facts theme, very few responses in this category showed much emotion. There were a few exceptions, such as the following statement that
expressed admiration and potential support: “Hardworking organization who [sic] refuses to give up on their cause, I respect them.” In this statement, we see a bit of the organization being personified, though the use of words such as, “who” and “them.” This type of personification comes up again related to the American Cancer Society under the Great Hope frame, which is described below.

The Branding Issues frame related to the American Cancer Society is similar to the Marketing frame that emerged in response to the question about UNC Relay For Life; however, in responses about the American Cancer Society, there was even more confusion related to organizational branding. For instance, many respondents wrote things like pink, pink ribbons, red, the color red, a cross, red dress, and Lance Armstrong, which are all colors and images used for other organizations and issues including breast cancer (in particular), the American Red Cross, Livestrong (the Lance Armstrong Foundation), the American Heart Association and the National Heart Lung and Blood Institute. However, it could be argued that these responses do not reflect confusion or branding issues for the American Cancer Society (per se), but rather, the initial thoughts respondents had related to this question just happened to be about other nonprofit organizations. For example, the ACS logo is blue and red, so it is possible that respondents think of red first related to the organization. Also, Lance Armstrong has had cancer, so it may be that respondents were not thinking about his nonprofit organization, in particular, but rather than ACS made them think of cancer, which also made them think of Lance Armstrong.

Some respondents mentioned other specific nonprofit organizations, such as Susan G. Komen (breast cancer organization), as well as events associated with other
nonprofits, like Jump Rope for Heart (fundraising program for the American Heart Association). Other respondents mentioned elements related to branding that are pertinent to the American Cancer Society, such as purple and purple ribbons (the symbol for Relay For Life), “the ACS logo,” as well as the organization’s latest advertising campaign slogan, “more birthdays” and the corresponding “birthday commercials.”

The final frame within the Facts theme was simply “Relay For Life,” as many respondents specifically mentioned the event (only) or wrote things like “Relay in my hometown,” “hosts Relay For Life,” and “walking.” Although there were not many longer or more-descriptive responses related to Relay For Life, the phrase itself was included in many responses and, thus, seemed to warrant its own frame as a salient initial thought related to the American Cancer Society. Figure 8 shows examples of relevant responses under the four frames that make up the Facts theme.

**Figure 8**  
The Facts Theme and Frames Found in Thoughts about the American Cancer Society

<table>
<thead>
<tr>
<th>Facts</th>
<th>Cancer Cure</th>
<th>Nonprofit Organization</th>
<th>Branding Issues</th>
<th>Relay For Life</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cancer Cure</strong></td>
<td>Cancer, cancer patients, cure, finding a cure, breast cancer, fighting cancer, an institute for helping people with cancer, stopping cancer in America, medicine, treatment, hospitals, doctors, curing cancer, working to find a cure</td>
<td>Organization, nonprofit, organization devoted to finding cures for cancer, a group that helps out people with cancer, large organization, more formal organization, national organization, society for cancer, charity, large nonprofit, institution, prestigious/professional organization, foundation</td>
<td>Pink, pink ribbons, purple, purple ribbons, more birthdays, Jump Rope for Heart, Lance Armstrong, commercials, Susan G. Komen, Swim for cancer, the ACS logo, the birthday commercials, the color red, the medical logo, the symbol, the emblem, red, a cross, red dress, billboards</td>
<td>Relay For Life, relay in my hometown, hosts Relay For Life, walking</td>
</tr>
</tbody>
</table>

**Functions of the American Cancer Society.** The Functions theme is similar to the Facts theme in that it includes mostly fact-based (rather than emotional) responses related
to the perceived function(s) of the American Cancer Society. The Functions theme included the following four frames: Research, Raising Money, Advocacy & Awareness, and Smoking Activism. The Research frame was the most prevalent among all responses related to the American Cancer Society. Responses ranged from mentioning research or cancer research (alone) to elaborating a bit to include statements like, “research for new preventative measures and treatment options,” and “research to improve quality of life for those that suffer from cancer.” This frame also included words and phrases related to research, such as knowledge, science, NIH (National Institutes of Health), “medical studies,” and “highly trained doctors.”

The Raising Money frame is, of course, similar to the Fundraising frame that emerged in responses related to UNC Relay For Life. However, when asked about the American Cancer Society, respondents seemed to focus on “raising money” and even “money” (on its own) rather than “fundraising,” although respondents also mentioned “fundraising for research,” “fundraising for cancer victims,” and variations of these ideas. Only a few respondents elaborated with statements like, “raising funds for finding new treatments or cures, support system.” Other respondents focused on the donation side of “raising money” by writing things like, “donate and making a difference,” “giving money to hospitals,” “people giving money,” and “Philanthropy!”

The Advocacy & Awareness frame included several mentions of awareness and “raising awareness” and also included responses that focused on the advocacy functions of the American Cancer Society. For instance, one respondent wrote “people who advocate for cancer awareness,” and another responded with the following: “an advocate for issues that patients have to deal with and people actively searching for a cure.” Others
wrote things like “lobbyists” and “medical lobby.” Other respondents focused on the information that the American Cancer Society provides as part of its work on cancer awareness and advocacy, including words and phrases such as “informing people about cancer,” “information sources,” “information dissemination,” “an association that releases information about cancer,” and “information table.” Some respondents provided even more-specific details about the kind of information the organization provides: “statistics, guidelines for screening,” and “breast examinations, brochures.”

The Smoking Activism frame is somewhat related to the advocacy frame, but responses here focused more specifically on cigarettes and the anti-tobacco campaigns associated with the American Cancer Society (a type of media advocacy). For example, respondents wrote things like, “crusaders against cigarettes,” “stop smoking,” and “the anti-smoking campaign sign.” One respondent provided more information on his/her thoughts:

Attack big tobacco when they should be concerned about helping individuals with cancer, let[sic] be honest, people have a choice. I am an RN and people have/still make bad/stupid choices. People need to be accountable for their own actions.

This was a particularly long and strongly-worded response related to the American Cancer Society; most were not this descriptive and did not reflect this much opinion/emotion about the organization and its work. Only about 10 responses actually touched on the “smoking activism” frame” related to the ACS (thus, most are included in Figure 9), but it seemed an important issue and/or perceived function in respondents’ thoughts about the organization. Figure 9 shows the Functions theme, relevant frames, and examples of responses.
Figure 9
The Functions Theme and Frames Found in Thoughts about the American Cancer Society

<table>
<thead>
<tr>
<th>Functions</th>
<th>Research</th>
<th>Raising Money</th>
<th>Advocacy/Awareness</th>
<th>Smoking Activism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>Cancer research, academic papers, research for cancer’s cure, research</td>
<td>Raising money, funding, fundraisers, fundraising, funding for research, fund</td>
<td>Advocacy, lobbyists, medical lobby, people who advocate for cancer awareness,</td>
<td>Cigarettes, crusaders against cigarettes, smoking, stop smoking, the anti-smoki</td>
</tr>
<tr>
<td></td>
<td>funding, research money, research organization, research to improve the</td>
<td>raising organization, asking for donations, giving money to hospitals, donate</td>
<td>awareness, prevention, education, medical knowledge, raising awareness, information</td>
<td>ng campaign sign, attack big tobacco when they should be concerned about helping</td>
</tr>
<tr>
<td></td>
<td>lives of cancer patients, innovation, technology, science, prevention,</td>
<td>and making a difference, donation seekers, money, philanthropy, people giving</td>
<td>available, informing people about cancer, information dissemination/table,</td>
<td>individuals with cancer</td>
</tr>
<tr>
<td></td>
<td>medical research/studies</td>
<td>money</td>
<td>statistics, guidelines for screening, brochures</td>
<td></td>
</tr>
</tbody>
</table>

*Feelings about the American Cancer Society.* Responses related to the open-ended question about the American Cancer Society were generally much less descriptive and emotional than responses related to the open-ended question about cancer and UNC Relay For Life. However, the Feelings theme included a few more adjectives and descriptive phrases than some of the other themes that emerged in response to this question. The Feelings theme included four frames: Support & Saving Lives, Great Hope, Nebulous, and Bureaucracy & Corruption. For example, Support & Saving Lives included phrases like “an organization that helped my grandma get through breast cancer” and “establishment dedicated to aiding those affected by cancer and their families, and ultimately finding a cure.” Responses also specifically mentioned “saving lives,” “solutions to cancer,” and referred to the organization as “life-savers,” as well as “a united effort to cure cancer permanently.” Many respondents referred to the support the organization provides: “support for cancer patients;” “support important research and
educate people;” and “support team, gives comfort and hope.” Respondents also referred to the organization as “helpful,” “helping people,” “helping find a cure for cancer,” and “a support group.”

The Great Hope frame included many responses that simply provided positive adjectives or thoughts about the American Cancer Society. Many respondents wrote about the “good work” the organization does or called it a “great cause.” Other positive descriptors included committed, dedicated, honorable, legitimate, amazing, hope, and progress. Other respondents referred to the importance of the organization’s work: “very important foundation for raising money to help find a cure.” Some respondents even used words one would typically associate with an individual rather than an organization, personifying the organization through terms like, “thoughtful, caring, giving.”

The last two frames that fell under the theme of Feelings reflected thoughts that are in opposition, or are at least indifferent to, the American Cancer Society and the ideas represented in the Great Hope frame; these frames were Nebulous and Bureaucracy & Corruption. The word “Nebulous” was actually used by two respondents to describe the American Cancer Society, and other respondents wrote variations of this idea: nothing, not much, unavailable, and “not really familiar with it.” Others admitted, “I don’t know much about it;” “I’m not sure exactly what it does;” and “I know I’ve seen it on commercials, but I don’t really know anything about it.” Other respondents asked questions: “What do they actually do?” and “Who are they and what do they do?” While many of these responses reflected lack of knowledge with a sense of apathy, some seemed to indicate respect or gratitude despite being unsure of the organization’s actual purpose: “I wonder what they do… I’m glad someone cares to help cancer victims.”
The final frame that emerged under the Feelings theme was Bureaucracy & Corruption. This frame included responses about the size of the organization, describing it as “bureaucratic,” “complicated,” and “very big” with “lots of overhead.” Other respondents specifically mentioned “corruption,” “power,” and expressed frustration with the size and/or ability of the organization to carry out its mission: “Lots of money raised but not many results seen;” and “Frustration that there is more focus on breast cancer than the other forms.” This last response may reflect feelings about the broader societal focus on breast cancer (generally, rather than the American Cancer Society per se) as breast cancer is mentioned throughout responses to all three open-ended questions (cancer, UNC Relay For Life, and the American Cancer Society). Only about 10 responses included ideas related to Bureaucracy & Corruption, but it is still an important frame to note. Most of the responses related to this frame are included in Figure 10, along with other examples of responses related to the four frames that emerged under the Feelings theme.

**Figure 10**
The Feelings Theme and Frames Found in Thoughts about the American Cancer Society

<table>
<thead>
<tr>
<th>Feelings</th>
<th>Support &amp; Saving Lives</th>
<th>Great Hope</th>
<th>Nebulous</th>
<th>Bureaucracy &amp; Corruption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support, support for cancer patients, support</td>
<td>Good, good cause to support, good for the community, good group, good work, great</td>
<td>Not much, nebulous, unavailable, nothing, not really familiar with it, what</td>
<td>Corruption, power, airplanes, bureaucratic, large, lots of overhead, lots of money raised but not many results seen, frustration that there is more of a focus on breast cancer than on the other forms, very big, complicated</td>
<td></td>
</tr>
<tr>
<td>team, supporting a cause, optimism, supportive,</td>
<td>cause, great organization, caring, a godsend, wonderful, amazing work, very</td>
<td>they actually do? Who are they and what do they do? No idea, Never heard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>trying to help people, help, helpful, useful,</td>
<td>important, committed, hope, honorable, thoughtful dedicated, excellent foundation,</td>
<td>of it, N/A, I don’t know, I wonder what they do, don’t now much about</td>
<td></td>
<td></td>
</tr>
<tr>
<td>health, compassion, beneficial, needed, caring,</td>
<td>they do great work</td>
<td>it, they’re there, ????</td>
<td></td>
<td></td>
</tr>
<tr>
<td>an organization that helped my grandma,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>benefiting those in need, saving lives, people</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>helping people, life-savers, solutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Summary of Qualitative Findings

Generally, open-ended responses to questions about the “first things that come to mind” when people think of cancer, UNC Relay For Life, and the American Cancer Society seemed to reflect three major themes: knowledge or information learned; experience with the issue, organization or event; and feelings or emotions tied to the topics. As described above, cancer conjured up many more negative thoughts and stronger emotions than UNC Relay For Life and the American Cancer Society. There was a lot of sadness and fear reflected in respondents’ thoughts on cancer, as well as personal experiences with family members, friends, and acquaintances. Even those who did not mention personal experiences with the disease described a sense of fear and sadness, making this a particularly pervasive and salient theme related to cancer (whether people have/had personal experience with it or not).

Many respondents mentioned personal experiences related to UNC Relay For Life, and most of these memories and descriptions were understandably more positive than those related to cancer. There were numerous mentions of the fun people had and the feelings of hope and excitement that the event inspired. Negative feelings and perceptions of Relay For Life participants also emerged along with comments from those who may see themselves as “outside of the event.” Thoughts about the American Cancer Society were more neutral, across the board, although there were positive and negative perceptions of the organization mentioned in addition to factual information, including the perceived functions of the nonprofit. Participants were more familiar with UNC Relay For Life than with the work of the American Cancer Society (as shown in the Nebulous
frame), which may reflect the average age and stage of life of survey participants (undergraduates at UNC).

Thoughts reflecting marketing, branding, and breast cancer, in particular, were found throughout responses related to all three topics (cancer, UNC Relay For Life, and the American Cancer Society). It is clear that nonprofit organizations, and events like Relay For Life, have made an impression in people’s minds because of the images they use over and over again in media and marketing materials ranging from t-shirts and posters on campus to banners and collection jars in the community to nationally televised commercials and advertising campaigns. The variations of branding seem to blur in people’s minds, however, with Relay For Life ribbons being confused with American Red Cross emblems and/or American Heart Association events. Perhaps in some people’s minds, they are all the same. Breast cancer, and images and organizations associated with breast cancer, such as pink, pink ribbons, Susan G. Komen, “Save the Tatas,” and October (breast cancer awareness month) were also found throughout responses related to all three open-ended questions. It is clear, as King (2006) and others have noted, that breast cancer has taken over as the dominant health issue in people’s minds when it comes to anything cancer-related. This finding may be important information for nonprofit health organizations, health reporters, as well as for framing scholars. The discussion section includes more on open-ended questions and responses as they relate to the literature. But first, the following sections describe quantitative findings related to situational theory of publics, the theory of reasoned action, and this study’s hypotheses and research questions related to cancer and UNC Relay For Life.
Results for Situational Theory of Publics Hypotheses

The first three hypotheses proposed for this study were based on the literature and previous research on the situational theory of publics. More specifically, this study tested the following hypotheses:

**H1:** Among UNC students, there will be a positive relationship between problem recognition and involvement with cancer, and information seeking and processing about UNC Relay For Life.

**H2:** Among UNC students, there will be a negative relationship between constraint recognition about nonprofit fundraising events, and information seeking and processing about UNC Relay For Life.

**H3:** Among UNC students, involvement with cancer will be the strongest predictor (over problem recognition and constraint recognition) of information seeking and processing about UNC Relay For Life.

First, the situational theory of publics variables were explored in terms of means, standard deviations, correlations, and alphas before survey items were turned into indices for further analysis. Table 10 shows means and standard deviations for the multiple items that made up the four variables that comprise situational theory of publics, followed by tables that show inter-item correlation coefficients for each variable (Table 11-14).

<table>
<thead>
<tr>
<th>Variable &amp; Survey Item</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR4: Recognize cancer is serious health issue</td>
<td>6.52</td>
<td>.74</td>
<td>599</td>
</tr>
<tr>
<td>PR3: Generally, I am very aware of cancer</td>
<td>5.46</td>
<td>1.31</td>
<td>601</td>
</tr>
<tr>
<td>PR1: How often do you think about cancer $^a$</td>
<td>3.56</td>
<td>1.50</td>
<td>608</td>
</tr>
<tr>
<td>PR2: Think about what you can do to help $^a$</td>
<td>2.65</td>
<td>1.35</td>
<td>606</td>
</tr>
<tr>
<td>IN4: Know many people affected by cancer</td>
<td>5.16</td>
<td>1.60</td>
<td>600</td>
</tr>
<tr>
<td>IN1: Personally connected to cancer $^b$</td>
<td>4.80</td>
<td>1.57</td>
<td>608</td>
</tr>
<tr>
<td>IN2: To what extent…life been affected by cancer $^b$</td>
<td>4.78</td>
<td>1.63</td>
<td>607</td>
</tr>
<tr>
<td>IN3: I feel very involved with cancer</td>
<td>3.93</td>
<td>1.58</td>
<td>600</td>
</tr>
<tr>
<td>CR4: Relay For Life is too time-consuming</td>
<td>3.82</td>
<td>1.38</td>
<td>593</td>
</tr>
<tr>
<td>CR5: Not convenient to get involved with Relay</td>
<td>3.70</td>
<td>1.44</td>
<td>593</td>
</tr>
</tbody>
</table>
CR6: There are many constraints to participating 3.63 1.34 594
CR2: My participation does not really matter 3.24 1.41 592
CR3: Easy to get involved with Relay For Life \(^d\) 2.68 1.19 590
CR1: Events like Relay make a difference \(^d\) 2.64 1.16 593

IS&P3: Likely to pay attention to Relay information \(^c\) 4.60 1.46 577
IS&P2: Likely to share information about Relay \(^c\) 4.06 1.66 572
IS&P1: Likely to seek information about Relay \(^c\) 3.85 1.60 575
IS&P4: Likely to communicate through social media \(^c\) 3.75 1.84 577

Note. All responses measured on 1-7 scales where 1=strongly disagree and 7=strongly agree, except where noted. \(^a\)Item used 1-7 scales where 1= never and 7=daily. \(^b\)Item used 1-7 scales where 1=not at all affected/connected and 7=very affected/connected. \(^c\)Item used 1-7 scales where 1=very unlikely and 7=very likely. \(^d\)Item later reverse-scored.

Table 11 shows correlations among the survey items that made up the independent variable, problem recognition. All together, these four items had a suitable reliability (\(\alpha=.74\)); however, the lower correlations (less than \(r=.3\)) of one item (PR4: “Recognize cancer is a serious health issue”) with the other items indicated that this item might be bringing down the reliability of the four items together. Analysis indicated that reliability would increase slightly (to \(\alpha=.75\)) if the item four was removed from the index. Thus, the remaining three items were summed and averaged into an index of problem recognition to be used in further analyses.

Table 12 shows correlations among the survey items that made up the independent variable, involvement. All together, these four items had a reliability of \(\alpha=.87\). Because the alpha was already above .80 and because the means, standard...
deviations, and correlations were fairly consistent, all four items were summed and averaged to create an index of involvement for further analysis.

Table 12
Correlation Matrix for Involvement

<table>
<thead>
<tr>
<th>Variable &amp; Survey Item</th>
<th>IN1</th>
<th>IN2</th>
<th>IN3</th>
<th>IN4</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN1: Personally connected to cancer(^{a})</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IN2: To what extent...life been affected by cancer(^{a})</td>
<td>.78*</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IN3: I feel very involved with cancer</td>
<td>.61*</td>
<td>.52*</td>
<td>1.00</td>
<td>-</td>
</tr>
<tr>
<td>IN4: Know many people affected by cancer</td>
<td>.66*</td>
<td>.70*</td>
<td>.53*</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. *Correlation is significant at p < .05. All items measured on 1-7 scales where 1=strongly disagree and 7=strongly agree, except where noted. \(^{a}\)Item used 1-7 scales where 1=not at all affected/connected and 7=very affected/connected.

Table 13 shows correlations among the survey items that made up the independent variable, constraint recognition. All together, these six items had a reliability of \(\alpha= .82\). All six items were summed and averaged to create an index of constraint recognition for further analysis.

Table 13
Correlation Matrix for Constraint Recognition

<table>
<thead>
<tr>
<th>Variable &amp; Survey Item</th>
<th>CR1</th>
<th>CR2</th>
<th>CR3</th>
<th>CR4</th>
<th>CR5</th>
<th>CR6</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR1: Events like Relay make a difference(^{a})</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR2: My participation does not matter</td>
<td>.56*</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR3: Easy to get involved with Relay(^{a})</td>
<td>.37*</td>
<td>.24*</td>
<td>1.00</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR4: Relay For Life is too time-consuming</td>
<td>.30*</td>
<td>.34*</td>
<td>.38*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR5: Not convenient to get involved</td>
<td>.35*</td>
<td>.39*</td>
<td>.42*</td>
<td>.67*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>CR6: Many constraints to participating</td>
<td>.30*</td>
<td>.36*</td>
<td>.45*</td>
<td>.60*</td>
<td>.63*</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. *Correlation is significant at p < .05. All items measured on 1-7 scales where 1=strongly disagree and 7=strongly agree, except where noted. \(^{a}\)Item was reverse-scored.

Table 14 shows correlations among the survey items that made up the dependent variable, information seeking and processing. All together, these four items had a reliability of \(\alpha= .89\). All four items were summed and averaged to create an index of information seeking and processing for further analysis.
Table 14
Correlation Matrix for Information Seeking and Processing

<table>
<thead>
<tr>
<th>Variable &amp; Survey Item</th>
<th>IS&amp;P1</th>
<th>IS&amp;P2</th>
<th>IS&amp;P3</th>
<th>IS&amp;P4</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS&amp;P1: Likely to seek information about Relay</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IS&amp;P2: Likely to share information about Relay</td>
<td>.77*</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IS&amp;P3: Likely to pay attention to Relay information</td>
<td>.72*</td>
<td>.71*</td>
<td>1.00</td>
<td>-</td>
</tr>
<tr>
<td>IS&amp;P4: Likely to communicate through social media</td>
<td>.64*</td>
<td>.64*</td>
<td>.61*</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. **Correlation is significant at p < .05. All items measured on 1-7 scales where 1=very unlikely and 7=very likely.

Before describing analyses for the situational theory of publics hypotheses, Table 15 summarizes the alphas, number of items in the index, and the new means and standard deviations for the multiple-item indices created for the independent and dependent variables of the situational theory of publics.

Table 15
Descriptive Statistics and Alphas for the Situational Theory of Publics

<table>
<thead>
<tr>
<th>Index</th>
<th>α</th>
<th>Item N</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Recognition</td>
<td>.75</td>
<td>3</td>
<td>3.89</td>
<td>1.14</td>
<td>599</td>
</tr>
<tr>
<td>Involvement</td>
<td>.87</td>
<td>4</td>
<td>4.67</td>
<td>1.36</td>
<td>597</td>
</tr>
<tr>
<td>Constraint Recognition</td>
<td>.82</td>
<td>6</td>
<td>3.29</td>
<td>.96</td>
<td>585</td>
</tr>
<tr>
<td>Information Seeking &amp; Processing</td>
<td>.89</td>
<td>4</td>
<td>4.07</td>
<td>1.43</td>
<td>569</td>
</tr>
</tbody>
</table>

The next step in data analysis to test the hypotheses related to situational theory of publics was to test correlations among the independent and dependent variable indices (see Table 16). H1 predicted that there would be a positive relationship between problem recognition and involvement with cancer, and information seeking and processing about UNC Relay for Life. As predicted, there was a positive correlation between problem recognition and involvement with cancer (r=.67, p<.05) and information seeking and processing about UNC Relay For Life (r=.37, p<.05); there was also a positive relationship between involvement with cancer and information seeking and processing about UNC Relay For Life (r=.39, p<.05). Thus, H1 was supported.

H2 predicted a negative relationship between constraint recognition about nonprofit fundraising events and information seeking and processing about UNC Relay
For Life. As predicted by the theory, there was a negative correlation between constraint recognition and all of the other indices created from the situational theory of publics variables. The strongest negative correlation was between constraint recognition and information seeking and processing ($r = -0.62, p < .05$), followed by problem recognition ($r = -0.25, p < .05$), followed by involvement ($r = -0.24, p < .05$). Thus, H2 was supported (see Table 16).

**Table 16**

<table>
<thead>
<tr>
<th>Variable</th>
<th>PR</th>
<th>IN</th>
<th>CR</th>
<th>IS&amp;P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Recognition (PR)</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Involvement (IN)</td>
<td>.67*</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Constraint Recognition (CR)</td>
<td>-.25*</td>
<td>-.24*</td>
<td>1.00</td>
<td>-</td>
</tr>
<tr>
<td>Information Seeking &amp; Processing (IS&amp;P)</td>
<td>.37*</td>
<td>.39*</td>
<td>-.62*</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Correlation is significant at $p < .05$.

H3 predicted that involvement with cancer would be the strongest predictor (over problem recognition and constraint recognition) of information seeking and processing about UNC Relay For Life. To test this third hypothesis drawn from the situational theory of publics, a multiple regression was performed in which the information seeking and processing index was regressed onto problem recognition, constraint recognition, and involvement. Preliminary analyses were conducted to ensure there were no violations of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. The Normal Probability Plot and Scatter Plot revealed no outliers; Tolerance and VIF showed that assumptions of multicollinearity were not violated; and Mahalanobis’ and Cook’s distance values showed that no cases had undue influence (Pallant, 2007; Tabacknick & Fidell, 2007).

The $R^2$ (variance) explained by the model was 45.1%, $F (3, 557) = 152.27$, $p < .001$. All three of the independent variables were statistically significant, with
constraint recognition contributing the most ($\beta = -0.546$, $p<0.001$), followed by involvement ($\beta = 0.185$, $p<0.001$), followed by problem recognition ($\beta = 0.111$, $p<0.01$). The negative beta weight of constraint recognition makes sense given the nature of the variable, that is, the fewer constraints one perceives, the more likely they are to engage in information seeking and processing. Table 17 shows the unstandardized regression coefficients ($B$), standardized regression coefficients ($\beta$), and the semipartial correlation coefficients ($sr_i^2$). The semipartial correlation coefficients indicate the unique value or contribution of each independent variable to the total $R^2$. According to these values, constraint recognition uniquely contributes the most to the dependent variable, explaining 28% of the variance in information seeking and processing about UNC Relay For Life, while involvement with cancer explains 2%, and problem recognition explains less than 1%. However, as noted in Table 16, problem recognition and involvement are highly correlated ($r=0.67$, $p<0.05$) indicating that there is a lot of shared variance between these two independent variables, which is statistically removed when they are both included in the model (Pallant, 2007). Even considering this, constraint recognition has the largest beta weight and therefore makes the largest contribution (over involvement and problem recognition). Thus, H3 was not supported. Although all three independent variables predicted the dependent variable of information seeking and processing, constraint recognition was by far the strongest predictor, followed by involvement, followed by problem recognition.

Table 17
Summary of Standard Multiple Regression of Situational Theory Variables Predicting Information Seeking and Processing

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>$B$</th>
<th>$SE, B$</th>
<th>$\beta$</th>
<th>$sr_i^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Recognition (PR)</td>
<td>0.139</td>
<td>0.053</td>
<td>0.111**</td>
<td>0.007</td>
</tr>
<tr>
<td>Involvement (IN)</td>
<td>0.194</td>
<td>0.045</td>
<td>0.185**</td>
<td>0.019</td>
</tr>
<tr>
<td>Constraint Recognition (CR)</td>
<td>-0.814</td>
<td>0.049</td>
<td>-0.546***</td>
<td>0.276</td>
</tr>
</tbody>
</table>

*Note. $R^2 = 0.451$, **$p<0.01$, ***$p<0.001$.}
To summarize results related to the situational theory of publics, there was a positive relationship between problem recognition and involvement with cancer and information seeking and processing about UNC Relay for Life, while the relationship with constraint recognition was negative. These findings indicate that the more respondents recognize and feel involved with cancer, the more likely they are to seek and process information about UNC Relay for Life, unless they perceive high constraints to participation, which is the strongest reason participants may not seek information.

Behavioral intentions to participate in the event are examined in the next section, which explores hypotheses related to the theory of reasoned action. The two theories are then combined in analyses related to the final two research questions.

**Results for Theory of Reasoned Action Hypotheses**

The next three hypotheses were developed from literature on the theory of reasoned action to determine the influence attitudes and subjective norms might have on behavioral intentions. Specifically, this study proposed to test the following hypotheses:

**H4:** Among UNC students, there will be a positive relationship between attitudes and subjective norms about nonprofit fundraising events, and behavioral intentions to participate in UNC Relay For Life.

**H5:** Among UNC students, subjective norms will be the strongest predictor (over attitudes) of behavioral intentions to participate in UNC Relay For Life.

**H6:** Among UNC students, inclusion in groups or activity on campus will predict behavioral intentions to participate in UNC Relay For Life.

Similar to analyses for H1-H3, the theory of reasoned action measures were explored in terms of means, standard deviations, correlations, and alphas before items were summed into indices for further analysis. Table 18 shows means and standard deviations for the multiple items that made up the three variables that comprise theory of
reasoned action (attitudes, subjective norms, and behavioral intentions), followed by tables that show inter-item correlations for each variable (Tables 19-20).

**Table 18**
Descriptive Statistics for Theory of Reasoned Action Variables: Attitudes; Subjective Norms; and Behavioral Intentions in Order of Descending Means per Variable

<table>
<thead>
<tr>
<th>Variable &amp; Survey Item</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT1: Generally in favor of events like Relay</td>
<td>5.99</td>
<td>1.05</td>
<td>546</td>
</tr>
<tr>
<td>AT4: Believe events like Relay have positive impact</td>
<td>5.97</td>
<td>.99</td>
<td>547</td>
</tr>
<tr>
<td>AT2: Feel good about participating in an event like</td>
<td>5.87</td>
<td>1.04</td>
<td>542</td>
</tr>
<tr>
<td>AT3: Being involved is not important to me^</td>
<td>4.74</td>
<td>1.54</td>
<td>546</td>
</tr>
<tr>
<td>SN5: Like doing things with people in my life</td>
<td>6.12</td>
<td>.88</td>
<td>530</td>
</tr>
<tr>
<td>SN3: People have negative attitudes toward events^</td>
<td>5.90</td>
<td>1.16</td>
<td>530</td>
</tr>
<tr>
<td>SN4: People think it is a good thing to participate</td>
<td>5.84</td>
<td>.87</td>
<td>528</td>
</tr>
<tr>
<td>SN6: Generally do what people think I should do</td>
<td>4.54</td>
<td>1.31</td>
<td>534</td>
</tr>
<tr>
<td>SN1: People important to me are participating</td>
<td>4.44</td>
<td>1.65</td>
<td>531</td>
</tr>
<tr>
<td>SN2: People think I should participate</td>
<td>4.30</td>
<td>1.58</td>
<td>527</td>
</tr>
<tr>
<td>BI2: How likely is it that you will participate?^</td>
<td>4.25</td>
<td>1.81</td>
<td>521</td>
</tr>
<tr>
<td>BI1: I intend to participate in Relay in near future</td>
<td>4.24</td>
<td>1.74</td>
<td>527</td>
</tr>
<tr>
<td>BI3: Feel a need to become more involved</td>
<td>4.19</td>
<td>1.46</td>
<td>584</td>
</tr>
</tbody>
</table>

*Note. All items measured on 1-7 scale where 1=strongly disagree and 7=strongly agree, except where noted. ^Item was reverse scored. bItem used 1-7 scales where 1=very unlikely and 7=very likely.

Table 19 shows correlations among the survey items that made up the attitudes index. All together, these four items had a reliability of $\alpha=.83$; however, analysis indicated that reliability would increase to $\alpha=.87$ if one item (AT3), which had a lower correlation with item AT1 ($r=.47$), was removed from the index. Thus, the remaining three items (AT1, AT2, and AT4) were summed and averaged for further analyses.

**Table 19**
Correlation Matrix for Attitudes

<table>
<thead>
<tr>
<th>Variable &amp; Survey Item</th>
<th>AT1</th>
<th>AT2</th>
<th>AT3</th>
<th>AT4</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT1: Generally in favor of events like Relay</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>AT2: Feel good about participating in event like</td>
<td>.75 *</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>AT3: Being involved is not important to me^</td>
<td>.47 *</td>
<td>.55 *</td>
<td>1.00</td>
<td>-</td>
</tr>
<tr>
<td>AT4: Believe events like Relay have positive impact</td>
<td>.67 *</td>
<td>.64 *</td>
<td>.47 *</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Note. *Correlation is significant at $p < .05$. All items measured on 1-7 scale where 1=strongly disagree and 7=strongly agree, except where noted. ^Item was reverse scored.
Table 20 shows correlations among the survey items that were used to measure subjective norms. Not all correlations were significant, and reliability among the six items was low ($\alpha=.66$). Unlike some of the other variables, analysis did not indicate that reliability would increase by removing any one particular item so further analysis seemed warranted. However, because item six (SN6) did not reveal correlations above .3 with any other variable (Pallant, 2007), it was dropped from factor analysis. The remaining five variables each had at least one correlation above the $r=.3$ threshold. Thus, the remaining five items were subjected to factor analysis.

Table 20  
Correlation Matrix for Subjective Norms

<table>
<thead>
<tr>
<th>Variable &amp; Survey Item</th>
<th>SN1</th>
<th>SN2</th>
<th>SN3</th>
<th>SN4</th>
<th>SN5</th>
<th>SN6</th>
</tr>
</thead>
<tbody>
<tr>
<td>SN1: People important to me are participating</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN2: People think I should participate</td>
<td>.74*</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN3: People have negative attitudes toward $^a$</td>
<td>.10*</td>
<td>.08</td>
<td>1.00</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN4: People think it is good thing to participate</td>
<td>.23*</td>
<td>.27*</td>
<td>.47*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN5: Like doing things with people in my life</td>
<td>.16*</td>
<td>.21*</td>
<td>.27*</td>
<td>.38*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>SN6: Generally do what people think I should</td>
<td>.23*</td>
<td>.26*</td>
<td>-.03</td>
<td>.13*</td>
<td>.23*</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. *Correlation is significant at $p < .05$. All items measured on 1-7 scale where 1=strongly disagree and 7=strongly agree, except where noted. $^a$Item was reverse scored.

Prior to performing factor analysis, the suitability of data for the procedure was assessed. Again, inspection of the correlation matrix revealed the presence of some coefficients of .3 and above. The Kaiser-Meyer-Oklin value was .61, which is just above the recommended value of .60 (Kaiser, 1970, 1974, as cited in Pallant, 2007) and Bartlett’s Test of Sphericity (Bartlett, 1954, as cited in Pallant, 2007) reached statistical significance, supporting the factorability of the correlation matrix.

Factor analysis with varimax rotation revealed the presence of two components with eigenvalues exceeding 1 (2.21 and 1.32), explaining 44.24% and 26.45% of the variance respectively. An inspection of the scree plot revealed a clear break after the
second component. Based on Catell’s (1966, as cited in Pallant, 2007) scree test, two components were retained for further investigation (see Appendix F for scree plot).

The two-component solution explained a total of 70.7% of the variance, with Component 1 contributing 44.24% and Component 2 contributing 26.45%. Table 19 shows loadings of the item on factors, communalities ($h^2$), and percents of variance and covariance. Variables are ordered and grouped by size of loading to facilitate interpretation, and loadings under .50 are replaced by zeros (Tabachnick & Fidell, 2007). Based on the factor loadings (and additional consideration of the survey items), it was determined that there might be two underlying factors comprising the subjective norms variable. However, when the three-item index combining SN3, SN4, and SN5 was subjected to reliability analysis, the alpha was low ($\alpha=.65$), lower than the original alpha on all six norms measures ($\alpha=.66$). Looking at the communality analysis (see Table 21), dropping the fifth item (SN5, which had a low communality of .50) was considered; however, recall that the correlation of SN3 and SN4 was only $r=.47$ (see Table 20), while the correlation of the other two items, SN1 and SN2, was much higher ($r=.74$). Based on all of these considerations, it was determined that the most-robust yet parsimonious measure of subjective norms was a single, two-item index comprising SN1 (“People important to me are participating”) and SN2 (“People think I should participate”). These items were summed and averaged into a single, two-item index for further analysis.

<table>
<thead>
<tr>
<th>Variable &amp; Survey Item</th>
<th>F1</th>
<th>F2</th>
<th>$h^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>SN1: People important to me are participating</td>
<td>.921</td>
<td>.00</td>
<td>.86</td>
</tr>
<tr>
<td>SN2: People think I should participate</td>
<td>.919</td>
<td>.00</td>
<td>.87</td>
</tr>
<tr>
<td>SN3: People have negative attitudes toward events</td>
<td>.00</td>
<td>.807</td>
<td>.65</td>
</tr>
<tr>
<td>SN4: People think it is a good thing to participate</td>
<td>.00</td>
<td>.789</td>
<td>.65</td>
</tr>
</tbody>
</table>

Table 21: Factor Loadings, Communalities, and Percents of Variance and Covariance for Factor Analysis on Subjective Norms Items
SN5: Like doing things with people in my life
Percent of Variance
Percent of Covariance

Note. All items measured on 1-7 scale where 1=strongly disagree and 7=strongly agree, except where noted. *Item was reverse scored.

Table 22 shows correlations among the survey items that made up the dependent variable, behavioral intentions. All together, these three items had a reliability of $\alpha=.87$ and were summed and averaged to create a three-item index of behavioral intentions.

Table 22
Correlation Matrix for Behavioral Intentions

<table>
<thead>
<tr>
<th>Variable &amp; Survey Item</th>
<th>BI1</th>
<th>BI2</th>
<th>BI3</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI1: Intend to participate in Relay in the near future</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>BI2: How likely is it that you will participate?*</td>
<td>.94*</td>
<td>1.00</td>
<td>-</td>
</tr>
<tr>
<td>BI3: Feel a need to become more involved</td>
<td>.56*</td>
<td>.56*</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. *Correlation is significant at $p < .05$. All items measured on 1-7 scale where 1=strongly disagree and 7=strongly agree, except where noted. *Item used 1-7 scales where 1=very unlikely and 7=very likely.

The indices created to represent the variables of the theory of reasoned action are summarized in Table 23, which shows the means and standard deviations for the items, along with the appropriate measure of reliability ($\alpha$ or $r$) for the index, along with the number of items in the index.

Table 23
Descriptive Statistics and Alphas for the Theory of Reasoned Action

<table>
<thead>
<tr>
<th>Variable &amp; Survey Item</th>
<th>$\alpha$</th>
<th>Item N</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>.87</td>
<td>3</td>
<td>5.94</td>
<td>.92</td>
<td>540</td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>.74(r)</td>
<td>2</td>
<td>4.36</td>
<td>1.51</td>
<td>525</td>
</tr>
<tr>
<td>Behavioral Intentions</td>
<td>.87</td>
<td>3</td>
<td>4.22</td>
<td>1.50</td>
<td>518</td>
</tr>
</tbody>
</table>

The next step to explore hypotheses related to the theory of reasoned action was to test correlations among the independent and dependent variable indices. Table 24 shows correlations among the independent and dependent variables. As predicted by H4,
there was a positive relationship between attitudes and behavioral intentions to participate in UNC Relay For Life ($r=.52$, $p<.05$) as well as between subjective norms and behavioral intentions ($r=.58$, $p<.01$). There was also a positive relationship between attitudes and subjective norms about nonprofit fundraising events ($r=.36$, $p<.01$). Thus, H4 was supported. Of the three correlations, the highest was between subjective norms and behavioral intentions, hinting at the answer to H5, which was further tested through regression analysis.

| Table 24 | Correlations Among Theory of Reasoned Action Variables |
|---|---|---|---|
| Variable                      | AT  | SN  | BI  |
| Attitude (AT)                 | 1.00| -   | -   |
| Subjective Norm (SN)          | .36*| 1.00| -   |
| Behavioral Intention (BI)     | .52*| .58*| 1.00|

Note. *Correlation is significant at $p < .05$.

H5 predicted that subjective norms would be the strongest predictor (over attitudes) of behavioral intentions to participate in UNC Relay For Life. To test this hypothesis, a multiple regression was performed. The dependent variable, behavioral intentions, was regressed onto attitudes and subjective norms. Preliminary analyses were conducted to ensure that there were no violations of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. The Normal Probability Plot and Scatter Plot did not reveal any outliers; Tolerance (.87) and VIF (1.15) showed that assumptions of multicollinearity were not violated; Mahalanobis’ distance values showed that there were two cases that were outside of the critical value of 13.82, but Cook’s distance was less than 1 (.24), indicating these cases did not have undue influence (Pallant, 2007; Tabacknick & Fidell, 2007).
The variance explained by the model was 45%, \( F(2, 507) = 207.25, p < .001 \). Both of the independent variables were statistically significant, with subjective norms contributing the most (\( \beta = .454, p < .001 \)) followed by attitudes (\( \beta = .356, p < .001 \)). Table 25 shows the unstandardized regression coefficients (\( B \)), standardized regression coefficients (\( \beta \)), and the semipartial correlation coefficients (\( sr_i^2 \)). The semipartial correlation coefficients indicate the unique value or contribution of each independent variable to the total \( R^2 \). According to these values, subjective norms uniquely explain 18% of the variance in behavioral intentions to participate in UNC Relay For Life, while attitudes uniquely explain 11%. However, as noted in Table 25, subjective norms and attitudes were significantly correlated (\( r = .36, p < .05 \)), indicating that there is shared variance between the independent variables, which is statistically removed when they are both included in the model (Pallant, 2007). As predicted by H5, subjective norms produced the largest beta weight, making the largest contribution (over attitudes) to behavioral intentions. Thus, H5 was supported.

**Table 25**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>( B )</th>
<th>( SE B )</th>
<th>( \beta )</th>
<th>( sr_i^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>.581</td>
<td>.058</td>
<td>.356***</td>
<td>.110</td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>.451</td>
<td>.035</td>
<td>.454***</td>
<td>.179</td>
</tr>
</tbody>
</table>

*Note. \( R^2 = .450, ***p < .001 \).*

**H6** suggested that inclusion in groups or activity on campus would predict behavioral intentions to participate in UNC Relay For Life. To test this hypothesis, a correlation was run between behavioral intentions and respondents’ reported number of groups. The correlation was modest yet significant (\( r = .161, p < .05 \)), showing some support for H6. To further test this hypothesis, the “inclusion in groups” variable was
entered into regression analyses in response to research questions three and four, which will be discussed more below.

Results related to H4-H6 show a positive relationship between attitudes and subjective norms and behavioral intentions to participate in UNC Relay for Life, with subjective norms being the strongest predictor of intentions. How might the variables of the theory of reasoned action be related to the situational theory of publics? In particular, what is the relationship between information seeking and processing and behavioral intentions, and what is the strongest predictor of behavioral intentions to participate in events like UNC Relay for Life? The next section explores these questions.

Results for Final Research Questions

In order to explore the relationships among the variables of both the theory of reasoned action and the situational theory of publics, this study asked the following final two research questions:

**RQ3:** Among UNC students, what is the relationship between information seeking and processing about UNC Relay For Life, and behavioral intentions to participate in UNC Relay For Life?

**RQ4:** Among UNC students, what is the strongest predictor of behavioral intentions to participate in UNC Relay For Life?

To explore RQ3, correlational analyses were conducted among all seven variables derived from the situational theory of publics and the theory of reasoned action (see Table 26). Correlations among all of the variables were positive and significant (p<.05), except correlations between constraint recognition and each of the other variables, which were expected to be negative based on the nature of constraint recognition and previous research on the situational theory of publics. Some of the strongest relationships in the correlation matrix are those among the independent variables of situational theory and the
dependent variable of TRA as well as the independent variables of TRA and the
dependent variable of situational theory, which were not explored in previous analyses.
Specifically, information seeking and processing correlated with TRA’s attitudes ($r=.53$, $p<.05$) and subjective norms ($r=.56$, $p<.05$) fairly evenly. Of the independent variables of the situational theory of publics, behavioral intentions correlated most strongly with constraint recognition ($r=-.58$, $p<.05$), followed by problem recognition ($r=.28$, $p<.05$) and involvement ($r=.26$, $p<.05$), which is consistent with findings related to H2 and H3 about the importance of constraint recognition’s influence on information seeking and processing.

The highest was between information seeking and processing and behavioral intentions to participate in UNC Relay For Life ($r=.81$, $p<.05$). The answer to RQ3, then, is that there is a highly significant, positive relationship between information seeking and processing about UNC Relay For Life and behavioral intentions to participate in the event. However, additional analyses were warranted to explore RQ3 as well as to answer RQ4, which asked what variable(s) would be the strongest predictor(s) of behavioral intentions to participate in UNC Relay For Life. Although cause and effect cannot be determined, further analyses seemed warranted to explore the relationship between these variables and the proposed working model, along with other variables measured by the survey questions.

<table>
<thead>
<tr>
<th>Table 26 Correlation Matrix for Situational Theory and TRA Independent and Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td>Attitudes (AT)</td>
</tr>
<tr>
<td>Subjective Norms (SN)</td>
</tr>
<tr>
<td>Behavioral Intentions (BI)</td>
</tr>
<tr>
<td>Problem Recognition (PR)</td>
</tr>
<tr>
<td>Involvement (IN)</td>
</tr>
</tbody>
</table>
To further explore RQ3 and to answer RQ4, a multiple regression was performed. The ultimate variable of interest, behavioral intentions, was regressed onto the other variables involved in the theory of reasoned action and the situational theory of publics. Preliminary analyses were conducted, and as in other analyses, the Normal Probability Plot and Scatter Plot revealed no outliers; Tolerance and VIF showed that assumptions of multicollinearity were not violated; and Mahalanobis’ and Cook’s distance values showed that no cases had undue influence (Pallant, 2007; Tabachnick & Fidell, 2007).

The variance explained by the model as a whole was 69%, $F (6, 483) = 181.07$, $p<.001$, with four of the six predictor variables contributing significantly to the model. Information seeking and processing, the dependent variable from the situational theory of publics that was entered as an independent variable in this regression, contributed the most to the model ($\beta = .637$, $p<.001$). Table 27 shows the unstandardized regression coefficients ($B$), standardized regression coefficients ($\beta$), and the semipartial correlation coefficients ($sr^2$). The semipartial correlation coefficients indicate the unique value or contribution of each independent variable to the total $R^2$. According to these values, information seeking and processing uniquely explains 19% of the variance in behavioral intentions to participate in UNC Relay For Life, while subjective norms explains 2.4%. The other variables each explain less than 1% of the variance. However, as noted in Table 26, all of the theory variables were correlated, indicating shared variance among independent variables, which is statistically removed when they are all included in the model (Pallant, 2007).

<table>
<thead>
<tr>
<th>Constraint Recognition (CR)</th>
<th>Info Seeking &amp; Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>-.51*</td>
<td>.53*</td>
</tr>
<tr>
<td>-.53*</td>
<td>.56*</td>
</tr>
<tr>
<td>-.58*</td>
<td>.81*</td>
</tr>
<tr>
<td>-.25*</td>
<td>.37*</td>
</tr>
<tr>
<td>-.24*</td>
<td>.39*</td>
</tr>
<tr>
<td>1.00</td>
<td>-.62*</td>
</tr>
</tbody>
</table>

Note. *Correlation is significant at $p < .05$. 

<table>
<thead>
<tr>
<th>Constraint Recognition (CR)</th>
<th>Info Seeking &amp; Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>-.51*</td>
<td>.53*</td>
</tr>
<tr>
<td>-.53*</td>
<td>.56*</td>
</tr>
<tr>
<td>-.58*</td>
<td>.81*</td>
</tr>
<tr>
<td>-.25*</td>
<td>.37*</td>
</tr>
<tr>
<td>-.24*</td>
<td>.39*</td>
</tr>
<tr>
<td>1.00</td>
<td>-.62*</td>
</tr>
</tbody>
</table>
### Table 27
Summary of Standard Multiple Regression of Situational Theory and TRA Variables Predicting Behavioral Intentions

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>$B$</th>
<th>$SE\ B$</th>
<th>$\beta$</th>
<th>$sr^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>.148</td>
<td>.050</td>
<td>.091**</td>
<td>.005</td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>.192</td>
<td>.031</td>
<td>.196***</td>
<td>.024</td>
</tr>
<tr>
<td>Problem Recognition</td>
<td>.079</td>
<td>.045</td>
<td>.062</td>
<td>.002</td>
</tr>
<tr>
<td>Involvement (IN)</td>
<td>-.137</td>
<td>.039</td>
<td>-.128***</td>
<td>-.008</td>
</tr>
<tr>
<td>Constraint Recognition (CR)</td>
<td>-.083</td>
<td>.053</td>
<td>-.054</td>
<td>-.002</td>
</tr>
<tr>
<td>Info Seeking &amp; Processing (IS&amp;P)</td>
<td>.671</td>
<td>.039</td>
<td>.637***</td>
<td>.188</td>
</tr>
</tbody>
</table>

Note. $R^2 = .692$, **$p<.005$, ***$p<.001$.  

The regression analysis (above) further answers RQ3, which asked: Among UNC students, what is the relationship between information seeking and processing about UNC Relay For Life and behavioral intentions to participate in the event? Beyond the significant positive correlation between the two variables ($r=.81$, $p<.05$; see Table 26), the large, statistically significant beta weight of information seeking and processing when controlling for other variables in this model ($\beta=.637$, $p<.001$; see Table 27) indicates that information seeking and processing is the strongest contributor (over all other theory variables) to behavioral intentions to participate in UNC Relay For Life.

This analysis also answers RQ4, which asked: Among UNC students, what is the strongest predictor of behavioral intentions to participate in UNC Relay For Life? According to the regression model, information seeking and processing was by far the strongest predictor of behavioral intentions ($\beta=.637$, $p<.001$), followed by subjective norms about events like UNC Relay For Life ($\beta=.196$, $p<.001$). Involvement with cancer was the third largest predictor ($\beta=-.128$, $p<.001$); however, the relationship was negative, indicating that the more involved respondents reported feeling to cancer, the less likely they were to intend to participate in UNC Relay for Life. Attitudes also modestly yet significantly predicted behavioral intentions ($\beta=.091$, $p<.005$). The other variables in the
model, problem recognition and constraint recognition, were not statistically significant predictors of behavioral intentions to participate in UNC Relay For Life.

As a final step in answering RQ4, and to explore the observed relationships among theory variables, additional analyses were performed to examine demographic variables that were measured by the survey, including gender, race/ethnicity, class rank (first-year, sophomore, junior, senior), past participation in UNC Relay for Life, and activity/inclusion in campus groups. These variables were entered into a multiple hierarchical regression to determine their influence (if any) on behavioral intentions. First, Table 28 shows correlations among these variables. Results of regression analyses are described below.

Table 28  
Correlations Among All Independent and Dependent Variables, including Demographics  

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Gender</td>
<td>-0.022</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Race</td>
<td>0.004</td>
<td>0.95</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Past Partic.</td>
<td>-0.035</td>
<td>0.091*</td>
<td>-0.049</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Class Rank</td>
<td>-0.675*</td>
<td>-0.107*</td>
<td>-0.067</td>
<td>0.087*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. 6 of Groups</td>
<td>-0.156*</td>
<td>-0.018</td>
<td>-0.047</td>
<td>0.091*</td>
<td>0.032</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Prob. Recog.</td>
<td>-0.040</td>
<td>-0.088*</td>
<td>0.135*</td>
<td>0.160*</td>
<td>0.012</td>
<td>0.074</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Involvement</td>
<td>0.038</td>
<td>0.114*</td>
<td>0.148*</td>
<td>0.126*</td>
<td>0.035</td>
<td>0.108*</td>
<td>0.673*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Commitment</td>
<td>0.046</td>
<td>0.164*</td>
<td>0.014</td>
<td>-0.376*</td>
<td>0.026</td>
<td>-0.175*</td>
<td>-0.250*</td>
<td>-0.236*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. IS&amp;P</td>
<td>-0.076</td>
<td>-0.167*</td>
<td>-0.044</td>
<td>-0.086*</td>
<td>-0.053</td>
<td>-0.170*</td>
<td>-0.373*</td>
<td>-0.389*</td>
<td>-0.617*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Attitudes</td>
<td>-0.027</td>
<td>-0.181*</td>
<td>0.101*</td>
<td>-0.166*</td>
<td>-0.027</td>
<td>-0.097*</td>
<td>-0.251*</td>
<td>-0.264*</td>
<td>-0.511*</td>
<td>-0.528*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Norms</td>
<td>-0.102*</td>
<td>-0.094*</td>
<td>-0.107*</td>
<td>0.357*</td>
<td>-0.088*</td>
<td>-0.267*</td>
<td>0.258*</td>
<td>0.276*</td>
<td>-0.526*</td>
<td>0.562*</td>
<td>3.62*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>13. Behav. Int</td>
<td>-0.091*</td>
<td>-0.118*</td>
<td>-0.060</td>
<td>-0.313*</td>
<td>-0.136*</td>
<td>-0.161*</td>
<td>-0.276*</td>
<td>0.259*</td>
<td>-0.570*</td>
<td>0.506*</td>
<td>5.20*</td>
<td>5.83*</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Correlation is significant at p < .05.  
Gender measured as dichotomous variable where 1=male and 0=female.  
Race recorded as dummy variable where 1=white and 0=non-white.  
Past participation measured as dichotomous variable where 1=yes and 0=no.  
Class rank measured as continuous variable where 1=first-year and 4=senior.  
Variable measured on continuous scales of 1-7 where 1=low and 7=high score (as described in previous tables).
According to the correlation matrix, the demographic variables revealed significant correlations with many of the theory variables. For instance, past participation in UNC Relay for Life had higher correlations than the other demographic variables, particularly with constraint recognition ($r = -0.376, p < 0.001$), subjective norms ($r = 0.357, p < 0.001$), information seeking and processing ($r = 0.306, p < 0.001$), and behavioral intentions ($r = 0.313, p < 0.001$), meaning those who participated in the past perceived lower/less constraints, had more positive/higher perceived social norms, and were more likely to seek and process information. Age and class rank had negative correlations with attitudes, norms, information seeking and processing, and behavioral intentions, meaning those who were younger (or first-year/sophomores) reported more positive attitudes and subjective norms, and were more likely to seek and process information and/or intend to participate in UNC Relay For Life. To further explore the influence these variables might have on behavioral intentions, a multiple hierarchical regression was performed to control for demographic variables as well as the theory variables.

The demographic variables—age, gender, race, past participation, class rank, and activity in groups—were entered into Block 1 and explained 14.9% of the variance in behavioral intentions to participate in UNC Relay For Life. The theory variables—attitudes, subjective norms, problem recognition, constraint recognition, involvement, and information seeking and processing were entered into Block 2, and explained an additional 54.9% of the variance in behavioral intentions, $R^2$ change = .549, $F$ change (6, 408) = 123.30, $p < .001$. After all of the variables were entered, the total variance explained by the model as a whole was 69.7%, $F$ (12, 408) = 78.33, $p < .001$. In the final model, five of the twelve variables were statistically significant. The
independent variables that contributed the most to the dependent variable (in terms of beta weights and significance) include: information seeking and processing ($\beta=.613$, $p<.001$); subjective norms ($\beta=.199$, $p<.001$); class rank/status ($\beta=-.110$, $p<.005$) attitudes ($\beta=.090$, $p<.01$); and involvement with the health issue ($\beta=-.090$, $p<.05$). In other words, even with other variables controlled, the TRA variables (attitudes and subjective norms) and two of the situational theory of publics variables (involvement and information seeking and processing) significantly predicted behavioral intentions to participate in UNC Relay for Life. Again, involvement had a negative beta weight, indicating that the more personally involved respondents reported being with the health issue, the less likely they were to report behavioral intentions to participate in the event.

The only demographic variable that contributed to the model was class rank/status, and the beta weight was negative meaning that the more senior students were in terms of status at UNC (first-year, sophomore, junior, senior) the less likely they were to have intentions to participate in UNC Relay For Life. Age, gender, race/ethnicity, past participation, and inclusion in groups or activity on campus did not significantly contribute to behavioral intentions when controlling for other variables. This regression model helps further test H6, which suggested that inclusion in groups or activity on campus would predict behavioral intentions to participate in UNC Relay For Life. Even though there was a modest yet significant correlation between these variables ($r=.161$, $p<.05$), inclusion in groups/activity on campus did not predict behavioral intentions when controlling for other independent variables. Thus, support for H6 was limited; there was a positive relationship between the two variables, yet that relationship was not predictive when controlling for other variables.
Similar to the other correlations and regression models reported thus far, information seeking and processing was by far the strongest predictor of behavioral intentions to participate in UNC Relay For Life, accounting for 16.6% of the variance when controlling for all other variables; the beta-weight was also considerably larger than the other variables in the model (β=.613, p<.001). In other words, when controlling for demographic and other variables, the relationship between information seeking and processing and behavioral intentions was still strong. Table 29 shows the standardized regression coefficients (β), the semipartial correlation coefficients (sr_i^2) and the total/cumulative R squares. The semipartial correlation coefficients indicate the unique value or contribution of each independent variable to the total R square. According to these values, subjective norms uniquely explained 2.2% of the variance in behavioral intentions to participate in UNC Relay For Life, while the other variables each uniquely explained less than 1% of the variance in the model. However, as noted in Table 28, many the variables in the model were correlated, indicating shared variance among independent variables that is statistically removed when they are all included in the model (Pallant, 2007).

Table 29
Summary of Multiple Hierarchical Regression of All Independent Variables Predicting Behavioral Intentions

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>β^a</th>
<th>sr_i^2</th>
<th>R^2 (cum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.055</td>
<td>.001</td>
<td>.149</td>
</tr>
<tr>
<td>Race</td>
<td>-.051</td>
<td>.002</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.001</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Past Participation</td>
<td>.035</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Class Rank/Status</td>
<td>-.110**</td>
<td>.006</td>
<td></td>
</tr>
<tr>
<td>Activity/Inclusion in Groups</td>
<td>-.036</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>Block 2</td>
<td></td>
<td></td>
<td>.697</td>
</tr>
<tr>
<td>Attitudes</td>
<td>.090**</td>
<td>.005</td>
<td></td>
</tr>
</tbody>
</table>
A Clos[124]er Look at Information Seeking and Processing and Behavioral Intentions

As suspected, information seeking and processing contributed the most to behavioral intentions to participate in UNC Relay For Life in all regressions, and the two variables were the most highly correlated among all of the independent and dependent variables. Thus, we know there is a highly significant, positive correlation between the two concepts. However, it is important to note that it is impossible to know from the survey questions and the data whether information seeking and processing precedes behavioral intentions or vice versa. For example, it could be that an individual takes an interest in UNC Relay For Life, seeks information, and then decides to participate. Or, particularly with the contribution of subjective norms to the regression models, it could be that students decide to participate (because of their friends/peers participating or their perceived social norms) and then seek information to find out more about the event. Thus, it seemed necessary to further explore the relationship between information seeking and processing and behavioral intentions. Although an order effect cannot be determined, it could be that these two variables are so closely linked that they are almost the same concept, or that they are important and related components of some larger concept.

In order to explore the two variables more closely, correlations and factor analysis were performed on the original seven measures that comprised information seeking and processing, and behavioral intentions. Table 30 shows correlations among the seven
survey questions, which revealed significant coefficients of .50 and above. The Kaiser-Meyer-Okin (KMO) value was .88, exceeding the recommended value of .6, and Bartlett’s Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix.

Table 30
Correlation Matrix for Information Seeking and Processing and Behavioral Intentions

<table>
<thead>
<tr>
<th>Variable &amp; Survey Item</th>
<th>IS&amp;P1</th>
<th>IS&amp;P2</th>
<th>IS&amp;P3</th>
<th>IS&amp;P4</th>
<th>BI1</th>
<th>BI2</th>
<th>BI3</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS&amp;P1: Seek info about Relay</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS&amp;P2: Share information about</td>
<td>.77*</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS&amp;P3: Pay attention to Relay info</td>
<td>.72*</td>
<td>.71*</td>
<td>1.00</td>
<td>-</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS&amp;P4: Communicate through</td>
<td>.64*</td>
<td>.64*</td>
<td>.61*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BI1: Intend to participate in Relay</td>
<td>.73*</td>
<td>.68*</td>
<td>.62*</td>
<td>.61*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BI2: How likely participate?</td>
<td>.74*</td>
<td>.69*</td>
<td>.61*</td>
<td>.62*</td>
<td>.94*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>BI3: Feel need to become involved</td>
<td>.65*</td>
<td>.52*</td>
<td>.55*</td>
<td>.50*</td>
<td>.56*</td>
<td>.56*</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Correlation is significant at p < .05.

Factor analysis revealed the presence of only one component with an eigenvalue exceeding 1 (4.925), explaining 70.36% of the variance. Inspection of the scree plot also revealed a clear break after the first component (see Appendix G for scree plot). Table 31 shows loadings of variables on the factors, communalities ($h^2$), and percents of variance and covariance. Variables are ordered and grouped by size of loading to facilitate interpretation (Tabachnick & Fidell, 2007). Based on the factor analysis output and factor loadings, it was determined that there might be only one factor underlying both the information seeking and processing and behavioral intentions variables. Additionally, when the original seven items (IS&P1, IS&P2, IS&P3, IS&P4, and BI1, BI2, BI3) were subjected to reliability analysis, the alpha was high ($\alpha=.93$). The alpha does not increase by deleting any single item, meaning the seven-item measure is robust.

Based on all of these considerations, it can be argued that information seeking and processing and behavioral intentions to participate are part of a larger concept or possibly
a continuum of nonprofit organizational or event/initiative support. Those likely to seek
and process information about UNC Relay for Life are also likely to participate in the
event in some way, and vice versa. The key component of this continuum for nonprofits
is behavioral intentions and actual behaviors, which can also range on a spectrum from
“liking” an organization on Facebook to actually participating in the event and
fundraising. These ideas are explored a bit more below through final survey question
findings, and described more in the discussion and conclusions chapter that follows.

Table 31
Factor Loadings and Communalities for Factor Analysis on
Information Seeking and Processing and Behavioral Intentions

<table>
<thead>
<tr>
<th>Variable &amp; Survey Item</th>
<th>F1</th>
<th>h²</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS&amp;P1: Likely to seek info about Relay</td>
<td>.90</td>
<td>.81</td>
</tr>
<tr>
<td>IS&amp;P2: Likely to share information about Relay</td>
<td>.86</td>
<td>.74</td>
</tr>
<tr>
<td>IS&amp;P3: Likely to pay attention to Relay info</td>
<td>.82</td>
<td>.67</td>
</tr>
<tr>
<td>IS&amp;P4: Likely to communicate through social media</td>
<td>.78</td>
<td>.61</td>
</tr>
<tr>
<td>BI1: I intend to participate in Relay in near future</td>
<td>.86</td>
<td>.78</td>
</tr>
<tr>
<td>BI2: How likely is it that you will participate?</td>
<td>.89</td>
<td>.78</td>
</tr>
<tr>
<td>BI3: Feel a need to become more involved</td>
<td>.73</td>
<td>.53</td>
</tr>
</tbody>
</table>

Percent of Variance 70.36

In order to explore levels of support, one final set of questions was examined. One
survey question asked: “If you have participated or are participating in UNC Relay For
Life, which of the following have you done or do you plan to do? Please check all that
apply in the appropriate column.” This question was followed by a series of items, which
are shown in Table 32 along with proportions and frequencies of responses (including
“have done;” “intend to do;” “do not intend to do;” and “don’t know/not applicable.” A
final item in this series asked people to specify if they had done other things to show
support for UNC Relay For Life and/or the American Cancer Society, but only two
people typed in responses: “Syracuse Relay For Life;” and “Stop by and run to help out.”
### Table 32
Types of Support for UNC Relay For Life and the American Cancer Society (% and N)

<table>
<thead>
<tr>
<th>Type of Support</th>
<th>Have Done</th>
<th>Intend to Do</th>
<th>Do Not Intend to Do</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Register for event&lt;sup&gt;a&lt;/sup&gt;</td>
<td>20.7 (103)</td>
<td>14.5 (72)</td>
<td>17.7 (88)</td>
<td>47.1 (234)</td>
</tr>
<tr>
<td>Raise money asking&lt;sup&gt;b&lt;/sup&gt;</td>
<td>10.7 (53)</td>
<td>16.8 (83)</td>
<td>24.4 (121)</td>
<td>48.1 (238)</td>
</tr>
<tr>
<td>Participate in events&lt;sup&gt;c&lt;/sup&gt;</td>
<td>10.3 (51)</td>
<td>16.0 (79)</td>
<td>26.4 (130)</td>
<td>47.3 (233)</td>
</tr>
<tr>
<td>Recruit others&lt;sup&gt;d&lt;/sup&gt;</td>
<td>15.2 (75)</td>
<td>16.5 (81)</td>
<td>21.3 (105)</td>
<td>47 (231)</td>
</tr>
<tr>
<td>Start or lead team&lt;sup&gt;d&lt;/sup&gt;</td>
<td>5.9 (29)</td>
<td>5.7 (28)</td>
<td>39.5 (195)</td>
<td>49 (242)</td>
</tr>
<tr>
<td>Leadership position&lt;sup&gt;d&lt;/sup&gt;</td>
<td>4.7 (23)</td>
<td>2.8 (14)</td>
<td>44.5 (219)</td>
<td>48 (236)</td>
</tr>
<tr>
<td>Volunteer at event&lt;sup&gt;e&lt;/sup&gt;</td>
<td>7.9 (39)</td>
<td>17.8 (88)</td>
<td>26.1 (129)</td>
<td>48.1 (238)</td>
</tr>
<tr>
<td>Friend on Facebook&lt;sup&gt;d&lt;/sup&gt;</td>
<td>12.1 (60)</td>
<td>26.5 (131)</td>
<td>19 (94)</td>
<td>42.4 (210)</td>
</tr>
<tr>
<td>Follow on Twitter&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.4 (17)</td>
<td>11.4 (56)</td>
<td>35.3 (174)</td>
<td>49.9 (246)</td>
</tr>
<tr>
<td>Join Relay Listserv&lt;sup&gt;f&lt;/sup&gt;</td>
<td>9.8 (48)</td>
<td>12.7 (62)</td>
<td>33.5 (164)</td>
<td>44.1 (216)</td>
</tr>
<tr>
<td>Sign up ACS emails&lt;sup&gt;b&lt;/sup&gt;</td>
<td>10.3 (51)</td>
<td>8.1 (40)</td>
<td>35.4 (175)</td>
<td>46.3 (229)</td>
</tr>
<tr>
<td>Volunteer for ACS&lt;sup&gt;d&lt;/sup&gt;</td>
<td>3.9 (19)</td>
<td>17.7 (87)</td>
<td>25.4 (125)</td>
<td>53 (261)</td>
</tr>
<tr>
<td>ACS advocacy&lt;sup&gt;e&lt;/sup&gt;</td>
<td>6.3 (31)</td>
<td>23.7 (117)</td>
<td>18.8 (93)</td>
<td>51.2 (253)</td>
</tr>
</tbody>
</table>

*Note.*<sup>a</sup> Item had 497 responses. <sup>b</sup>Item had 495 responses. <sup>c</sup>Item had 493 responses. <sup>d</sup>Item had 492 responses. <sup>e</sup>Item had 494 responses. <sup>f</sup>Item had 490 responses.

Approximately 20% had registered for the event, and another 14.5% intended to register for the event, which could be considered the first step or level of actual participation on the event. Almost 11% had “raised additional money by asking family and friends to donate,” and almost 17% intended to do so; proportions were similar in response to the following item: “participate in organized fundraising events (date auctions, bake sales, etc.). Slightly more (15.2%) had recruited friends or others to participate in the event; others intended to do so (16.5%). Small proportions had started or lead a team in fundraising efforts (5.9%) or intended to do so (5.7%), while 4.7% had “assumed a leadership position or joined a Relay For Life committee,” and another 2.8% intended to do so.

Regarding the questions that addressed information seeking and processing, rather than actual participation or fundraising behaviors, 12.1% had “become a ‘friend’ or
‘liked’ UNC Relay For Life on Facebook,” and another 26.5% reported intending to take this step. Twitter was slightly less popular among this group: only 3.4% reported “following UNC Relay For Life on Twitter, and 11.4% intended to do so. Joining the Relay For Life email listserv was somewhere in between Facebook and Twitter in terms of popularity or intentions (9.8% had done so, and 12.7% intended to do so).

A few final questions asked about efforts related to the American Cancer Society, rather than UNC Relay For Life. Approximately 4% had volunteered for the ACS, and almost 18% intended to volunteer for the nonprofit. Just over 10% reported signing up for emails from the ACS, while another 8% intended to do so. Many respondents had good intentions when it comes to advocacy efforts related to the ACS: almost 24% intended to “sign a petition or participate in advocacy efforts for the American Cancer Society (other than Relay);” only 6.3% reported that they had taken this step. These and other results are discussed more in the final chapter.

To summarize results related to the final two research questions (RQ3 and RQ4), findings revealed that there may be a continuum of information seeking and processing behaviors and behavioral intentions related to supporting events like UNC Relay for Life. There were positive, significant relationships between these variables, and further analyses showed that they may indeed be part of one larger concept. Besides information seeking and processing, subjective norms had the strongest influence on behavioral intentions, followed by involvement, which had an unexpected negative relationship with behavioral intentions. Respondents’ attitudes and their year in school also predicted behavioral intentions to participate in UNC Relay for Life. The final chapter provides
additional discussion and interpretation of these and other findings reported in this dissertation.
CHAPTER 5: DISCUSSION

The purpose of the proposed study was to explore nonprofit health organizations’ communication, fundraising, and advocacy efforts, and associated stakeholder awareness, attitudes, involvement, and behaviors related to UNC Relay For Life, benefiting the American Cancer Society. Findings from the online survey revealed numerous results that deserve discussion, elaboration, and further exploration through future research.

First, this chapter discusses major findings and conclusions of this research in terms of academic implications, including proposing a new working theoretical model, as well as possible practical applications. Then, the chapter discusses next steps for building on these findings, and suggests directions for future research.

Framing and Media Advocacy

This study sought to examine framing of cancer and UNC Relay For Life in terms of audience perceptions by asking the following two research questions: Among UNC students, what sources are most frequently used for information seeking and processing related to cancer and UNC Relay For Life (RQ1)? And, Among UNC students, what frames are most salient related to cancer and UNC Relay For Life (RQ2)? Several conclusions may be drawn from the findings related to these two research questions.

First, online and interpersonal sources were used far more often than any type of traditional media source for cancer information as well as for information about UNC Relay For Life. In terms of general use, social media, text messaging, e-mail, and online news sources were the most popular of all forms of communication used by the sample
(more than television, newspapers, radio, etc.). This finding likely reflects the age of the individuals in the sample, but it is important information for communication practitioners. Organizations should use research (or conduct it, when resources allow) to determine what media channels target audiences prefer, and then spend more time and resources creating and sharing information that will work with the preferred media, as some organizations and campaigns have already acknowledged (e.g., Hanson, et al., 2008; Taubenheim, et al., 2008; Thackeray, et al., 2008; Waters & Lord, 2009; Waters, et al., 2009). Of course, the demographics of the target audience must be considered as well as the goals of the campaign relative to resources and costs (Thackeray, et al., 2008).

Interpersonal sources (friends, peers) were used the most frequently for information about events like UNC Relay For Life, which confirms previous research about the importance of interpersonal communication (Atwood & Major, 1991; Major, 1998), and word-of-mouth or “buzz” marketing related to such events. The reliance on personal sources for information is likely related to the perceived importance of others’ participation in a community event like Relay For Life, which is evident through the influence of subjective norms in much of the analyses. When an event involves group or community participation, interpersonal communication and personal sources are likely to be more popular for sending and receiving information. The popularity of social media (most notably Facebook) for information about UNC Relay For Life again underscores the social nature of nonprofit and fundraising events such as these.

When it comes to information about cancer, Internet/online sources (other than social media) were most frequently used, followed by personal sources. Of course, online sources could include news sites, like CNN.com, or more specific health-related websites,
such as WebMD. Of more traditional media sources, television was used most frequently for cancer information. These findings also may help nonprofit and health communication practitioners understand where and how best to reach their target audiences, and may help move media advocacy and framing research forward. For example, this research confirms that health communicators trying to reach young adults with information about cancer or other important health issues should rely on online sources (like blogs or news websites), while social media and other means like text messaging may be better for communicating about advocacy efforts or community events like Relay For Life. This distinction is important for understanding how people like to receive various types of information.

According to the findings of this survey, television also should not be forgotten, but newspapers and radio may not be as effective for reaching some groups, including college students. Again, considering the popularity of personal sources for cancer information seeking, key stakeholders within a community (e.g., board members involved with local nonprofits) may be important conduits of information, but such communication may happen in person, via e-mail, or through social media outlets like Facebook. As Gibson (2010) noted, there are groups gathering online to seek and share information about important issues, and as communicators, we cannot ignore these groups and sources for reaching and mobilizing publics. These findings are not completely new or surprising, but they do help confirm previous research (e.g., Hanson, et al., 2008; Taubenheim, et al., 2008; Thackeray, et al., 2008; Waters & Lord, 2009; Waters, et al., 2009) and may help practitioners focus their efforts, continue developing “best
practices,” and segment their audiences based on the most-effective means of communication, depending on the desired goals and target population.

As part of this discussion, it should be noted that the attempt to conduct the survey via Facebook (as originally planned) was not successful. However, as noted, I believe this is due to a lack of leadership and communication by the student who was to administer the survey, rather than a reflection on the limitations of social media. It would have been interesting to see the response via Facebook, however, as participants in the UNC Relay for Life Facebook community may not have chosen to participate even if it was administered properly. For many reasons, it is clear that social media is not a panacea, but it is an important source for communicators to consider and use for audiences who frequent such sites. Again, future research could help determine which types of information are best received and responded to via which communication channels.

This study also included a few survey questions designed to assess perceptions of episodic and thematic framing (e.g., Iyengar, 1991; Kim & Willis, 2007) of cancer and events like UNC Relay For Life, as well as the perceived provision of mobilizing information or “calls to action” (e.g., Kensicki, 2004; Lemert, 1984), which could have been shaped by media and/or “frame sponsorship” (Carragee & Roefs, 2004) via information provided by groups like the American Cancer Society. According to survey results, the sample perceived stories about cancer in the news to be slightly more episodic than thematic, meaning they agreed that these stories focus on one individual or family slightly more than they agreed with the idea that these stories are filled with facts, figures, and statistics. It could be that these perceptions reflect actual news coverage, but
it may also be that these types of stories are more salient to the individuals in the sample. When we consider episodic framing in relation to some of the open-ended questions about cancer, where responses often focused on specific family members and/or graphic visuals of people suffering in hospitals, etc., we can see respondents’ remembrances of the story of one individual, whether that story came through the media or personal experience.

As some research has suggested (e.g., Kim & Willis, 2007; Lawrence, 2004), episodic framing of health issues may be more salient or memorable for audiences because it is often more emotionally involving; however, thematic framing may be more useful or effective for communicating ideas such as rising or decreasing incidence levels, risk perceptions, and/or prevention measures. Future research could explore these ideas through empirical studies, including experiments designed to assess audience effects of various types of framing. For example, participants could read episodic- and thematically-framed stories about cancer (or another health issue) and then respond to questions about their perceptions and/or intentions to seek information, support a nonprofit organization, or take preventative steps such as getting a mammogram (depending on the focus of the story).

In terms of media advocacy, it is interesting to note that while survey participants thought that stories about UNC Relay For Life generally provided information about how they could get involved with the event (highest mean in terms of agreement in this battery of questions), they did not agree as strongly with the idea that stories about cancer generally provide information about things they can do to help, “such as getting involved with organizations like the American Cancer Society” (lowest mean in terms of
agreement). This finding could be reflective of actual media coverage or it could be because UNC Relay For Life is more salient than organizations like the American Cancer Society in the minds of this particular sample, an idea that emerged in open-ended responses about the nonprofit, such as “nebulous.” This may indicate that specific programs or events like UNC Relay For Life (and the individuals involved) may be doing a fine job providing mobilizing information or calls to action for audiences, while nonprofits (particularly large organizations such as the ACS) could do a better job communicating about exactly what it is that they do and how the public can help. Of course, communicating the many aspects of a large organization is no small task for practitioners, and understanding different audiences and choosing the most effective media and messages is vital for reaching various groups. Future research should continue to measure audience awareness, perceptions, and attitudes to help organizations understand different publics in order to communicate more effectively.

Indeed, one of the goals of media advocacy is advancing specific solutions, yet it has been shown that media content is not always reflective of these solutions (e.g., Hoffman, 2006; Kensicki, 2004; Lemert, 1981, 1984; Lemert, et al., 1977; Nicodemus, 2004; Weberling, 2010), and audiences notice this lack of information. It is not clear, however, whether nonprofit organizations or health communicators are not providing the information or whether media are omitting it; this is an area for future research. For example, researchers could continue to use content analysis to study news content, but also to make comparisons with information subsidies (e.g., news releases) provided to media to determine if/how/when, and where such information is being provided and/or omitted.
Some may argue over whether media are supposed to include such advocacy information or whether they need to remain more objective, providing just the facts. One study found that health reporters who consider themselves to be “audience advocates” are more likely to include such information than those who classify themselves as “skeptics” (Len-Rios, Hinnant, Sun-A, Cameron, Frisby, & Youngah, 2009), which means that it would be helpful for communications practitioners to know journalists’ preferences and priorities in terms of reporting health information. Survey respondents also thought that stories about cancer do not generally provide information about preventing or treating the disease, which is consistent with other findings (e.g., Slater, et al., 2008) about the lack of focus on prevention in much media-provided health information.

**Qualitative Responses**

The open-ended questions about the first things that come to mind when people think of cancer, UNC Relay For Life, and the American Cancer Society revealed many thoughts of death and dying, images of sickness and disease, and feelings of sadness and fear related to cancer. While these audience frames may not be surprising, this type of information is valuable for practitioners or organizations trying to communicate about a health issue. For example, despite attempts at positive marketing campaigns that may be trying to re-frame the way we think about a disease (such as the “More birthdays” campaign sponsored by the ACS that focuses on survival), the strongest or most-salient frames in people’s minds remain negative. This finding may be partially based on their experiences with friends and family, which were mentioned frequently, or it may be based on prevailing images that persist among media and the general public.
Rather than trying to “re-frame” an issue like cancer (Slater, 2006), it may simply be important for us to understand the predominant thoughts and feelings that exist related to various health issues so that we can communicate with compassion. For instance, reframing may work when the goal is health behavior change, such as quitting smoking, but health issues that are pervasive and can be very personal, such as cancer, may not be so easily reframed. Again, it is important for communicators to know their audiences and the predominant perceptions among them, along with keeping in mind the goals of the campaign, so that they can communicate effectively, whether that means trying to change perceptions and/or behaviors or simply acknowledging and accepting them.

Frames from open-ended responses about the American Cancer Society focused on research, curing cancer, supporting people, and saving lives. While these positive associations may be good and helpful for the nonprofit to know, the organization may need to focus more on connecting the research, support, and solutions it provides to the actual health issue of cancer. Frequent reporting of medical research findings, survival statistics, and resources for patients and families might help connect the organization to the health issue. Focusing on these aspects of what the organization *does* might be more effective than trying to re-frame the health issue.

It is also important to note the mentions of bureaucracy and corruption, the allusions to “nothing,” not knowing what the organization does, and the “nebulous” nature of the nonprofit. Additionally, advocacy and activism related to tobacco and anti-smoking initiatives were mentioned, but far less frequently than other frames. This finding may be valuable information for the nonprofit, depending on what the organization wants the public to know or focus on at any particular time. For example,
knowing that many people associate research with the ACS, the organization may be able to focus on its research efforts and/or progress in communicating with media and various publics. If it wants to focus on its anti-smoking initiatives, however, or to highlight the advocacy work it does to garner government funding for cancer, it may need to increase publicity and communication efforts surrounding these particular aspects of the organization.

Fundraising, fighting cancer, and running and walking were the major themes that emerged related to UNC Relay For Life. Respondents mentioned many positive memories and associations with the event, including the help and hope it provides, the fun and good times they had (or expect to have), and the teamwork and sense of community associated with the event.

Interesting issues related to race, class, and gender also emerged. For instance, many respondents wrote about the involvement of the Greek community in the UNC event, specifically the sororities and “sorority girls” involved. Several also focused on the idea that the event is for “rich white people” or “white girls.” Some of these thoughts may be related to Sha’s (2006) finding about cultural identity being an important part of involvement, communication, and participation behaviors (according to the situational theory of publics). These thoughts may be important for event organizers and/or the American Cancer Society as a whole, especially if they are hoping to diversify, increase participation in the event, or appeal to a variety of individuals and groups within the community.

The idea that the event may be a “scam” also came up, which the nonprofit or event organizers need to address. Even if the perception is incorrect, people may still
believe it and not support the event because of it, so the organization may need to address
despite that idea and work to change it. One way to guard against this notion is to ensure that
funds raised are used appropriately and that this is communicated to the public; pre-event
information and follow-up stories can and should address how much money will be or
has been raised along with how that money is used by the organization. As nonprofit
scholars have noted (Kelly 1998; 2001; Waters, 2008; 2009b), this type of responsibility
and reporting are extremely important parts of the stewardship process, and transparency
and trust are paramount for nonprofit organizations and fundraising events like Relay For
Life.

That responses related to all three open-ended questions focused so much on
marketing and on breast cancer is reflective of the environment in which nonprofit health
organizations and health communicators are operating. Clearly, the pink, purple, and red
ribbons, and other tools of branding that seem ubiquitous these days are making an
impression in people’s minds, but there may not be any deeper meaning behind these
symbols for people, and organizations may need to work harder to make their missions
clear and unique. Recognition of a color or symbol, such as the pink ribbon for breast
cancer or the Red Dress campaign for heart disease (Allrich, 2007; King, 2006;
Taubenheim, et al., 2008), may be the first step in promoting awareness, but can these
campaigns be considered successful if there is no other awareness or behavior change
associated with the health issue or organization?

Additionally, health communicators may have to fight harder amidst all this
marketing to communicate important information about certain health issues, particularly
those that are “less popular,” have lower incidence levels, increased public stigma, or
simply – less successful marketing. As King (2006), Slater, et al., (2008), and others have noted, breast cancer is receiving much more attention in terms of marketing and media coverage than other types of cancer and other diseases, and it showed in survey responses. Media and the general public may be important parts of this process; while public relations, marketing, and advertising are designed to increase awareness through paid or “earned media” attention, reporters and even the general public can do their part to communicate about important health issues that may not be getting as much attention. As we know, everyday citizens or individuals can influence what’s being talked about through social media, email, and other forms of interpersonal and online communication. As Gibson (2010) noted and this survey confirms, media advocacy is changing because of increased reliance on these sources and important conversations happening in “subaltern spheres,” such as Facebook.

This study provides support for the idea that media advocacy and framing are changing, and provides a basis for future research. First, it argues for a broader definition of and more research on media advocacy, including the influence of individuals and sources like social media and the processes of indirect advocacy (Gibson, 2010; McCarthy & Castelli, 2002). Second, it focuses on the audience salience side of framing, by asking both open- and close-ended questions designed to assess public perceptions or audience frames. Third, it provides insight and practical recommendations for nonprofit organizations and health communicators based on the findings related to media use, perceptions of cancer, and information related to a fundraising and awareness program for an important health issue. While these findings may be limited to a specific
population, they are important and warrant future research as well as possible practical application.

**Methodological Contributions**

Methodologically, this study contributes to framing research by taking an audience perspective and using both close- and open-ended questions to measure awareness and perceptions of a health issue, nonprofit organization, and a specific fundraising program that requires public support. Future research could use variations of the questions in this study to accomplish similar goals. This study also adds to existing work on the situational theory of publics and the theory of reasoned action, which will be discussed more below. The items used for some variables, namely constraint recognition, worked well in combination with each other and had high reliability, higher than many published studies, in fact (see Aldoory and Sha, 2007). These questions seemed to tap into multiple aspects of constraint recognition, including the ideas that events like Relay For Life are too time-consuming, inconvenient, and that individual’s participation does not really matter; this combination of salient ideas may have helped improve the reliability of the measure. Other variables, namely subjective norms, had lower reliability and could benefit from additional testing. It could be that questions measuring this variable were not salient or appropriate for the survey sample. For example, the statement, “Generally, I do what people who are important to me think I should do,” which has been used in previous research on the theory of reasoned action, may not have resonated with an undergraduate population and could have caused negative responses that brought down the reliability when it was combined with other measures.
One of the strongest contributions of this study is the combination of two theories that have been used frequently in different disciplines, along with the suggestion of a new working model and set of variables that should be explored through future research. The independent variables, when taken together, explained a large proportion of the dependent variables, which represent a continuum of public support. These ideas have both theoretical and practical applications, which are described more below.

**Theoretical Implications and Practical Applications**

The results related to the situational theory of publics and the theory of reasoned action suggest that the theories are more similar than previously thought, and/or that all of the theory variables are important for understanding communication and participation behaviors related to nonprofit organizations, fundraising and advocacy efforts, and possibly other situations that require public support. There were six hypotheses related to the situational theory of publics and the theory of reasoned action, and two final research questions that helped explore relationships between and among theory variables. Many of these hypotheses received support, and those that did not receive support provide additional insight for future research.

As predicted by hypotheses related to the situational theory of publics (H1 and H2), there were positive relationships between problem recognition and involvement with cancer, and information seeking and processing about UNC Relay For Life; there also was a negative relationship between constraint recognition about nonprofit fundraising events and information seeking and processing about UNC Relay For Life. However, the strongest predictor of information seeking and processing about the event was constraint recognition, not involvement, as H3 predicted. This finding tells us that perceived
constraints (limited time, money, general inconvenience of the event) may be bigger obstacles than we imagined in terms of hindering communication about and/or participation in fundraising events like UNC Relay For Life. In other words, people may care very deeply about an issue or feel their lives have been affected in many ways by a disease like cancer, but other things may get in the way when it comes to taking certain actions related to the issue. This is consistent with research on issues and actions like voting, political activity on campus, and communicating about customer service (Austin & Halvorson, 2008; Hamilton, 1992; Sriramesh, Moghan, Kwok Wei, 2007). This finding also adds to previous research on the situational theory of publics related to health issues and nonprofit organizational support (Aldoory, Kim & Tindall, 2010; Aldoory & VanDyke, 2006; Grunig, 1989a; Werder, 2006), and may have implications for nonprofit or health communication practitioners. For instance, decreasing constraints to participation or designing messages that decrease perceived constraints may help increase participation. At the same time, focusing on the emotional side of health issues like cancer, or trying to increase the perceived salience of involvement, may not matter when it comes to participating in events like Relay For Life because people already feel involved – they just don’t have the time, money, desire, etc., to participate. If organizations are able to understand the constraints that are keeping people from participating, they may be able to reduce those constraints. For example, conducting further research could reveal that the timing of the event is not good for people, or people are afraid to conduct fundraising among friends and family. Armed with this knowledge, organizations could change the timing of the event or provide more ideas or templates for fundraising and thank you letters, which might reduce barriers to participation.
Personal involvement or connections to the health issue (cancer) indeed predicted information seeking and processing about UNC Relay For Life; however, it did not predict behavioral intentions to actually participate in the event (when combining and controlling for other situational theory and TRA variables). This finding may indicate that personal involvement with a health issue will only push people so far in terms of seeking information or supporting an organizational effort. There may be other factors pushing them to take action and/or actually participate, including perceived social expectations or subjective norms, which was found to be the most predictive of behavioral intentions to participate in this type of community event. Considering this finding, it may be beneficial for the organization to increase positive subjective norms (e.g., focusing on the idea that participation is a good thing) while decreasing negative norms (e.g., minimizing the idea that friends and family will be annoyed by fundraising). Additional qualitative research, such as focus groups or interviews, could help pinpoint particular perceived norms and constraints.

Kim & Grunig’s (2011) recent suggestion about situational motivation contributing to communicative action is relevant here, too. However, while situational motivation is described as “summing up and mediating the relative contributions from problem recognition, constraint recognition, and involvement” into a single concept (p. 132), the authors admit that the items used to measure situational motivation had been used in previous studies to measure problem recognition only. The current study explores the additional independent variables of subjective norms and attitudes, which were more predictive of behavioral intentions than problem and constraint recognition and should be considered in future research. Again, considering multiple theories and variables is
important for organizations trying to understand and increase public communication and support. Not all nonprofits can conduct sophisticated primary research, but simple online surveys like this one may go a long way in helping organizations better understand various audiences.

Consistent with previous research on the theory of reasoned action (e.g., Nabi, Southwell & Hornick, 2002; Siegel, et al., 2008; Silk, Weiner & Parott, 2005; Wang, 2009), there were positive relationships between attitudes and subjective norms about nonprofit fundraising events and behavioral intentions to participate in UNC Relay For Life. As predicted by H5, subjective norms were stronger than attitudes when predicting behavioral intentions and were also one of the strongest predictors when controlling for all variables, including demographics like age and gender. Clearly, friends/peer participation, or the perception of it, is important when it comes to understanding public participation in community fundraising events like Relay For Life. This may be particularly true for certain age groups or communities, such as undergraduates on a college campus. It was interesting to note, however, that inclusion in groups or other activity on campus did not predict behavioral intentions to participate in UNC Relay For Life as Austin and Halvorson (2008) suggested. This may be because there was not much variance in campus activity/involvement among the sample (M=2.56, SD=1.66) or it may simply mean that those who are participating in UNC Relay For Life are not necessarily more active in other events on campus; they just happen to be involved with this particular event because of some of the reasons explored by other variables, such as perceived subjective norms about participation and/or involvement with the health issue.
Despite perceptions of race, gender, and class issues related to UNC Relay For Life emerging in some open-ended responses, demographic variables did not significantly predict behavioral intentions to participate in the event. The strongest contributor among demographic variables was class rank/status at UNC. According to the results, respondents in lower grades/levels (first-years, sophomores) were more likely to have higher intentions to participate in UNC Relay For Life. There are a number of explanations for this finding: it may be that they have more time; that more of their friends are participating; that older undergraduates are more focused on other issues such as trying to find jobs, etc. Past participation also predicted intentions to participate in the future. This finding, coupled with the finding about class rank/status may indicate that organizations like the American Cancer Society or events like UNC Relay For Life could increase participation by focusing on awareness and participation among younger students as well as creating positive experiences that will help sustain participation among such students. For event organizers, participating in campus events such as new student orientations or working with dormitories to communicate about the event may help recruit first-year students. These ideas relate to the reciprocity and relationship nurturing components of nonprofit stewardship (Kelly 1998; 2001; Waters, 2008; 2009b). As reflected in many of the open-ended responses, those who have participated have many positive memories, and as evident in the regression model, past participation predicts behavioral intentions to participate again in the future.

**New Working Model for Proposed Theory of Situational Support**

The final two research questions asked about the relationship between information seeking and processing and behavioral intentions, and also asked what would be the
The strongest predictor of behavioral intentions to participate in UNC Relay For Life. The results showed that there is a very strong, positive relationship between the two dependent variables, and there may not be many steps between information seeking and processing and behavioral intentions or even actual participation in an event. Instead, there may be some sort of continuum among these communication and support behaviors. As mentioned in the results chapter, it is not clear from this research which comes first; it could be that those who seek information are then more likely to participate, or it could be that those who decide to participate then seek information about the event.

This idea of a continuum of communication leading to participation may not be completely new or groundbreaking, but it helps move the situational theory of publics forward by further empirically analyzing relationships among two theories that have been written about together, yet not quite combined as they are in this study. The combination of theory variables helps explain the many factors that may contribute to support for nonprofit organizations, health issues, or other pressing social problems around which people organize and advocate funding or other forms of public support.

Figure 11 shows a revised working model that combines the situational theory of publics and the theory of reasoned action variables, and organizes the dependent variables of information seeking and processing and behavioral intentions along a continuum, rather than identifying them as two or more distinct dependent variables. More specifically, this new working model builds upon the situational theory of publics and the theory of reasoned action by combining the independent variables of problem recognition, constraint recognition, and involvement with attitudes and subjective norms. All of these variables may be relevant for predicting the dependent variables, which are...
now organized along a continuum ranging from information seeking and processing about an event to behavioral intentions to actually participate or support the event.

The proposed model should be tested through future research to help build a Theory of Situational Support, which could be useful for nonprofit, government, or other organizations that are dependent upon public support. Of course, support is a relative term and there is a range of communication and participation behaviors that could be indicative of “support.” For instance, seeking information may lead to “friending” an organization on Facebook, or it could lead to donating, participating in an event one-time or becoming a long-time volunteer, contributor, or even taking on a leadership role with the organization (as a board member, for example). People can begin anywhere along this continuum of behaviors and may move slowly, rapidly or not at all along the continuum, depending on a number of factors, including their time, resources, and ability to participate. For some, the intention to participate (alone) may be a sufficient show of support for an organization or issue, or they may never get past this point for various reasons. Understanding where people are in terms of participation and support, and their motivations, may help organizations communicate better with different groups. These ideas are worth exploring through future research; some suggestions are described below.
The next step to testing these ideas and the predictive capabilities of this model may be to use structural equation modeling (SEM) with the current data to see where the variables fall in relationship to each other in terms of causality. For instance, do attitudes and norms precede problem recognition, constraint recognition, and involvement, or vice versa? Additional research and external validation are also needed to determine whether these findings are limited to one nonprofit organization, event, and health issue, or whether the working model might also apply to other similar and/or unique situations. This study has internal validity, but the findings may be unique to the characteristics of the event or the sample. Thus, the findings, proposed ideas, and model need to be re-tested and validated through similar studies with unique populations, events, issues, and organizations.
With further research and development, the proposed Theory of Situational Support could be quite useful to nonprofit organizations, public relations and health communications practitioners, and scholars conducting research in these or related areas. Of course, the continuum of dependent variables may benefit from re-separation or the eventual parsing out of specific behaviors or steps, like Kim & Grunig (2011) have done with their six types of communicative action (i.e., information forefending, permitting, forwarding, sharing, seeking, and attending). However, this is an area for future research. Again, their research focuses on information rather than behavioral intentions and participation; one of the major points of the current study is to show that there is more to public support than information seeking and processing, and that such communication behaviors may not be that far from predicting behavioral intentions or actual support for an organization or issue. A next step would be to explore the various levels or types of support along this continuum and to try to understand the motivations that move different publics from one step to the next; this could be studied in a number of ways ranging from interviews and focus groups to experiments. The next section describes limitations and some suggestions for future research.

**Limitations and Future Research**

Like all research, this study has limitations. First, the sample was purposive and respondents chose whether or not to participate in the online survey based on unknowable factors. The sample includes undergraduates from one large, public university and may not be generalizable to other college students or other communities. Other populations would likely respond very differently to survey questions, yielding unique results. For example, faculty who may be involved with UNC Relay For Life probably would have
responded very differently than the undergraduate sample involved in this study. And universities have different demographic characteristics in terms of race/ethnicity, socioeconomic status, and other variables that may affect responses. Older populations or individuals at various stages of life or in different communities that support Relay For Life (young professionals, parents, retirees, etc.) would likely respond differently in terms of media use or toward variables such as constraint recognition or social norms. Also, as with any survey, social desirability may have been an issue for some respondents or questions. In other words, people may have reported that they intend to participate in a pro-social event like Relay For Life even if they have no intention of actually doing so, or they may have agreed with certain questions related to cancer simply because they believe it is the more socially acceptable response.

It should also be noted that the survey produced a large amount of data, which could be explored in many different ways. Although the data were examined through multiple analyses, it could benefit from additional exploration. For example, many of the relationships could be re-examined by splitting data into groups based on demographic variables, levels or types of participation. Additionally, some responses could be explored further, such as by sorting the open-ended responses into categories representing episodic or thematic frames or more specific categories using quantitative content analysis.

The survey questions were drawn from existing research on the situational theory of publics, theory of reasoned action, media advocacy and framing, but of course, there are many different ways the questions could have been asked or scales could have been structured. Some variables suffered from low alphas when all of the survey items were used (e.g., subjective norms), in which case smaller indices were created (e.g., using a
two-item measure). And many of the variables were highly correlated, indicating there may be too many similarities among some of the concepts explored by this research. However, such relationships may also be strengths of the variables involved when trying to understand a concept such as situational support. Future studies should continue to explore the reliability and validity of such measures and continue refining the best combinations of items to represent variables.

Additionally, while this study focused on important neglected areas of media advocacy and framing research—audience awareness, salience and perceptions, which are particularly important for nonprofit organizations and health issues—future research could benefit from additional open- and close-ended questions to help measure these concepts. There are also many opportunities to continue exploring combinations of the five independent variables as well as the nuances of information seeking and processing and behavioral intentions. Many of the findings and ideas could benefit from being re-tested through additional surveys or other methods, such as focus groups, interviews, or more controlled environments like those offered by experimental research.

While limited in scope, this study provides many relevant findings and suggests a new working model for developing a Theory of Situational Support, which could help nonprofit and potentially other practitioners segment publics and design campaigns to increase support for various issues or organizations. The same survey could be adjusted and/or extended and replicated with similar samples on other college campuses, or the research could be expanded to focus on other nonprofit initiatives among unique communities with different demographics. It would be interesting to see how findings might differ among older populations, for instance, and the type of health issue,
organization, or event explored would certainly affect the results. This type of replication is necessary to validate the current study’s findings and the ideas put forth in the discussion section (including the proposed working model and Theory of Situational Support). Focus groups, interviews, and even participant observations of actual campaigns or events in progress could also help build on the current study’s results.

Experimental research could also contribute greatly to the aforementioned ideas about the new working model, as well as to the findings related to media advocacy and framing. Experiments could provide additional empirical exploration by allowing for control over elements like exposure and attention to different types of communication, such as creating news stories about health issues like cancer or PSAs about events like Relay For Life that utilize different frames or focus on different aspects of the event. Experiments involving mock social media sites, such as Facebook or Twitter, could also help track participants’ reactions and reveal additional findings related to communication behaviors. Again, it is important to explore unique issues and populations using experimental research and other methods to further validate the current study’s findings.

Conclusions

In conclusion, this study contributes to our understanding of stakeholder awareness, attitudes, and involvement related to a particular nonprofit health organization’s fundraising and advocacy efforts, and communication related to cancer. It reveals findings that have theoretical, methodological, and practical applications, which warrant additional research. Media advocacy and framing are changing in the new media environment, and nonprofit organizations and individuals are influencing communication processes through outlets like Facebook in ways we are still trying to understand.
Continuing to explore these media and ideas is vital to continue expanding the field. Understanding not only how and where information is sought and presented, but also what is retained or the perceptions people have related to health issues like cancer is valuable for nonprofit organizations trying to increase public awareness and support.

Of utmost importance to nonprofit organizations, health communication and public relations practitioners are the links between awareness, information seeking and processing, behavioral intentions, and actual participation in all its various forms. This study combined two existing theories, the situational theory of publics and the theory of reasoned action, to propose a new working model and a potential Theory of Situational Support. By continuing to explore communication and participation behaviors related to nonprofit organizations and health issues, we can help bridge the gap between disparate areas of research on related concepts to better understand various types of public support.
APPENDIX A:
INTRODUCTORY EMAIL AND ONLINE SURVEY LINK

Subject: Short Survey about Campus Fundraising Events

Dear UNC Colleague:

I am conducting a short online survey about awareness, involvement, and participation in campus fundraising events. I am interested in your opinions because of your status as a member of the UNC-Chapel Hill community. The results of this research study may be useful to nonprofit organizations as well as to communication practitioners, scholars, and students.

Additionally, you have the chance to win a free i-Pod Touch. Upon completing the survey, simply enter your UNC e-mail address and you will be entered into a drawing to win the i-Pod touch. Your e-mail address will not be used for any other purpose and you will NOT be contacted again. Each address will be entered into the drawing one time.

Before you begin the survey, you will be asked to provide consent to participate in this research. Your participation is completely voluntary and your responses will be kept confidential. We may send subsequent e-mail reminders for this study.

Please follow this link to complete the survey:

Link here

If you have questions, please contact principal investigator Brooke Weberling at brooke11@email.unc.edu or the UNC Institutional Review Board at 919-966-3113.

Thank you for your time and insight.

Brooke Weberling
Richard Cole Fellow/Principal Investigator
University of North Carolina, Chapel Hill
School of Journalism and Mass Communication
APPENDIX B:
ONLINE CONSENT FORM

IRB Study #: 11-0045
Title of Study: Communicating Cancer and Increasing Involvement: Nonprofit Advocacy and Fundraising On-Campus and Online
Principal Investigator: Brooke Weberling (brooke11@email.unc.edu)
UNC-Chapel Hill Department: School of Journalism and Mass Communication

What is the purpose of this study?
You are being asked to complete a short 10-15 minute online survey. The purpose of this research study is to explore awareness of, opinions about, and involvement in campus fundraising events, such as UNC Relay For Life benefiting the American Cancer Society. You are being asked to participate in this study because of your status as a member of the UNC-Chapel Hill community.

How will your privacy be protected?
Your name will not appear with any of the survey data. If you choose to enter the drawing for the i-Pod, we will collect your UNC e-mail address, but this information will be kept separate from research data and will be not be retained after the drawing. Only UNC e-mail addresses will be entered into the drawing to prevent multiple/duplicate e-mail addresses per participant, and to ensure that the survey sample is from the UNC community. In any presentations, written reports or publications, only group results will be presented.

What if you want to stop taking part in the study?
Your participation in this survey is voluntary. You can withdraw from this survey at any time for any reason, without penalty.

What if you have questions about this study or your rights as a research participant?
You have the right to ask, and have answered, any questions you may have about this research. If you have questions, complaints or concerns, you should contact principal investigator Brooke Weberling at brooke11@email.unc.edu. If you have questions or concerns about your rights as a volunteer research subject, you may contact the Institutional Review Board at IRB_subjects@unc.edu or 919-966-3113.

Participant’s Agreement:
I have read the information provided above and have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

☐ I agree to participate.

☐ I decline to participate.
APPENDIX C:
SURVEY QUESTIONNAIRE

Thank you for taking this survey. It should take less than 10-15 minutes to complete. As mentioned in the e-mail, the purpose of this research is to survey awareness, involvement, and participation in campus fundraising events, such as UNC Relay For Life benefiting the American Cancer Society. Results of this survey may help nonprofit organizations as well as communication practitioners, scholars, and students.

Before you begin, please read the information below (see attached consent form), and indicate whether you agree to participate in this survey.

Instructions: Please answer the following questions to the best of your ability.

1. What are the first things that come to mind when you think of cancer?

2. What are the first things that come to mind when you think of UNC Relay For Life?

3. What are the first things that come to mind when you think of the American Cancer Society?
Instructions: Please answer the following questions to the best of your ability.

4. How often do you stop and think about cancer?
   - Never
   - Less than Once a Month
   - Once a Month
   - 2-3 Times a Month
   - Once a Week
   - 2-3 Times a Week
   - Daily

5. How often do you stop and think about what you can do to help with the problem of cancer?
   - Never
   - Less than Once a Month
   - Once a Month
   - 2-3 Times a Month
   - Once a Week
   - 2-3 Times a Week
   - Daily

6. To what extent do you feel personally connected to the health issue of cancer?
   - Not At All Connected
   - Disconnected
   - Somewhat Disconnected
   - Neutral
   - Somewhat Connected
   - Connected
   - Very Connected

7. To what extent has your life been affected by cancer?
   - Not At All Affected
   - Unaffected
   - Somewhat Unaffected
   - Neutral
   - Somewhat Affected
   - Affected
   - Very Affected

Instructions: Please indicate the extent to which you agree or disagree with the following statements.

8. Generally, I am very aware of the health issue of cancer.
9. Generally, I recognize that cancer is a serious health issue.
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree

10. Generally, I feel very involved with the health issue of cancer.
    - Strongly Disagree
    - Disagree
    - Somewhat Disagree
    - Neither Agree nor Disagree
    - Somewhat Agree
    - Agree
    - Strongly Agree

11. I know many people who have been affected by cancer.
    - Strongly Disagree
    - Disagree
    - Somewhat Disagree
    - Neither Agree nor Disagree
    - Somewhat Agree
    - Agree
    - Strongly Agree

12. I feel a need to become more involved with the health issue of cancer.
    - Strongly Disagree
    - Disagree
    - Somewhat Disagree
    - Neither Agree nor Disagree
    - Somewhat Agree
    - Agree
    - Strongly Agree
Instructions: Please indicate the extent to which you agree or disagree with the following statements.

13. Fundraising events like UNC Relay For Life really make a difference when it comes to cancer.
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree

14. My participation in fundraising events like UNC Relay For Life does not really matter when it comes to cancer.
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree

15. It is easy to get involved with fundraising events like UNC Relay For Life.
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree

16. Fundraising events like UNC Relay For Life are too time-consuming.
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree

17. It is not convenient to get involved with events like UNC Relay For Life.
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree nor Disagree
18. There are many constraints to participating in fundraising events like UNC Relay For Life.
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree

Instructions: Please indicate the extent to which you agree or disagree with the following statements.

19. If I needed or wanted to find information about cancer, it would be difficult to find.
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree

20. I feel a need to learn more about the health issue of cancer.
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree

21. If I needed or wanted to find information about fundraising events like UNC Relay For Life, it would be difficult to find.
   - Strongly Disagree
   - Disagree
   - Somewhat Disagree
   - Neither Agree nor Disagree
   - Somewhat Agree
   - Agree
   - Strongly Agree
22. I feel a need to learn more about fundraising events like UNC Relay For Life.
☑ Strongly Disagree
☑ Disagree
☑ Somewhat Disagree
☑ Neither Agree nor Disagree
☑ Somewhat Agree
☑ Agree
☑ Strongly Agree

23. I feel a need to become more involved with fundraising events like UNC Relay For Life
☑ Strongly Disagree
☑ Disagree
☑ Somewhat Disagree
☑ Neither Agree nor Disagree
☑ Somewhat Agree
☑ Agree
☑ Strongly Agree

Instructions: Please answer the following questions to the best of your ability.

24. How likely are you to seek information about UNC Relay For Life?
25. How likely are you to share information with others about UNC Relay For Life?
- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

26. If you see or hear information about UNC Relay For Life, how likely are you to pay attention to it?
- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

27. How likely are you to communicate about UNC Relay For Life through a social media site, such as Facebook or Twitter?
- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

28. Which sources have you used or will you use for information about UNC Relay For Life? Please respond to each source in the appropriate column.

<table>
<thead>
<tr>
<th>Source</th>
<th>Have Used</th>
<th>Intend to Use</th>
<th>Do Not Intend to Use</th>
<th>Don't Know</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspaper</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Television</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Radio</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Internet/Online</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
29. Which sources have you used or will you use for information about cancer? Please respond to each source in the appropriate column.

<table>
<thead>
<tr>
<th>Sources (NOT Social Media)</th>
<th>Have Used</th>
<th>Intend to Use</th>
<th>Do Not Intend to Use</th>
<th>Don't Know</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Media, such as Facebook and/or Twitter</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Personal sources, such as friends or classmates</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Other; Please Specify:</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

30. Generally, I am in favor of fundraising events like UNC Relay For Life.

Instructions: Please indicate the extent to which you agree or disagree with the following statements.

- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
31. I would feel good about participating in an event like UNC Relay For Life.
   ☐ Strongly Disagree
   ☐ Disagree
   ☐ Somewhat Disagree
   ☐ Neither Agree nor Disagree
   ☐ Somewhat Agree
   ☐ Agree
   ☐ Strongly Agree

32. Being involved in events like UNC Relay For Life is not important to me.
   ☐ Strongly Disagree
   ☐ Disagree
   ☐ Somewhat Disagree
   ☐ Neither Agree nor Disagree
   ☐ Somewhat Agree
   ☐ Agree
   ☐ Strongly Agree

33. Generally, I believe fundraising events like UNC Relay For Life have a positive impact.
   ☐ Strongly Disagree
   ☐ Disagree
   ☐ Somewhat Disagree
   ☐ Neither Agree nor Disagree
   ☐ Somewhat Agree
   ☐ Agree
   ☐ Strongly Agree

**Instructions: Please indicate the extent to which you agree or disagree with the following statements.**

34. People who are important to me are participating in UNC Relay For Life.
   ☐ Strongly Disagree
   ☐ Disagree
   ☐ Somewhat Disagree
   ☐ Neither Agree nor Disagree
   ☐ Somewhat Agree
   ☐ Agree
   ☐ Strongly Agree

35. People who are important to me think I should participate in events like UNC Relay For Life.
   ☐ Strongly Disagree
36. Most people who are important to me have negative attitudes toward events like Relay For Life.
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

37. Most people probably think it is good to participate in events like UNC Relay For Life.
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

38. Generally, I like doing things with people in my life who are important to me.
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

39. Generally, I do what people who are important to me think I should do.
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree
Instructions: Please answer the following questions to the best of your ability.

40. I intend to participate in UNC Relay For Life in the near future.
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

41. How likely is it that you will participate in Relay For Life in the near future?
- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

42. Have you participated in UNC Relay For Life in the past two years?
- Yes
- No

43. Are you participating in UNC Relay For Life this year (2011)?
- Yes
- No
- Maybe/Undecided

44. Do you plan to participate in UNC Relay For Life in the future?
- Yes
- No
- Maybe/Undecided
45. If you have participated or are participating in UNC Relay For Life, which of the following have you done or do you plan to do? Please check all that apply in the appropriate column.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Have Done</th>
<th>Intend to Do</th>
<th>Do Not Intend to Do</th>
<th>Don't Know</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Register for the event</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raise additional money by asking family or friends to donate</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participate in organized fundraising events (date auctions, bake sales, etc.)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Recruit friends or others to participate in the event</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Start or lead a team in fundraising efforts</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Assume a leadership position or join a Relay For Life committee</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volunteer at the event (other than being on a team or raising funds)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Become a “friend” or</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Action</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>-----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>“like” UNC Relay For Life on Facebook</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>“Follow” UNC Relay For Life on Twitter</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Join UNC Relay For Life email listserv</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Sign up for emails from the American Cancer Society (other than Relay)</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Volunteer for the American Cancer Society (other than Relay)</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Sign a petition or participate in advocacy efforts for American Cancer Society (other than Relay)</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
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<tr>
<td>Other; Please Specify:</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td></td>
</tr>
</tbody>
</table>
Instructions: Please answer the following questions to the best of your ability.

46. Do you intend to be involved with the American Cancer Society in the future?
   ☐ Yes
   ☐ No
   ☐ Maybe/Undecided

47. If you answered “yes,” how do you plan to be involved with the American Cancer Society in the future? Please check all that apply.
   ☐ Fundraising
   ☐ Advocacy
   ☐ Volunteering
   ☐ Leadership
   ☐ Internships
   ☐ Employment
   ☐ Unknown
   ☐ Other; Please Specify: ____________________

48. How would you rank the following functions or contributions of the American Cancer Society in terms of importance? Please enter a number from 1-5, where 1=least important and 5=most important.
   _____ Medical Research
   _____ Patient Treatment/Support
   _____ Political Advocacy/Activism
   _____ Public Awareness/Education
   _____ Fundraising

Instructions: Please answer the following questions to the best of your ability.

49. In your opinion, how important is the issue of cancer?
   ☐ Not at all Important
   ☐ Very Unimportant
   ☐ Somewhat Unimportant
   ☐ Neither Important nor Unimportant
   ☐ Somewhat Important
   ☐ Very Important
   ☐ Extremely Important

50. In your opinion, how important is the work of nonprofit organizations like the American Cancer Society?
   ☐ Not at all Important
   ☐ Very Unimportant
   ☐ Somewhat Unimportant
   ☐ Neither Important nor Unimportant
   ☐ Somewhat Important
   ☐ Very Important
   ☐ Extremely Important
51. In your opinion, how important are fundraising events like UNC Relay For Life?
- Not at all Important
- Very Unimportant
- Somewhat Unimportant
- Neither Important nor Unimportant
- Somewhat Important
- Very Important
- Extremely Important

52. Do you personally know anyone who has or has had cancer? Please check all that apply.
- Me
- My immediate family (mother, father, siblings)
- Extended family (grandparents, aunts, uncles, cousins, etc.)
- Friends
- Classmates, peers, or co-workers
- Acquaintances
- Other; Please Specify: ____________________

Instructions: Please indicate the extent to which you agree or disagree with the following statements.

53. When I see or hear stories about cancer in the news, they are generally filled with facts, figures, and statistics.
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

54. When I see or hear stories about cancer in the news, they generally tell the story of one individual or family.
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

55. When I see or hear stories about cancer, they generally provide positive or hopeful news.
- Strongly Disagree
- Disagree
56. When I see or hear stories about cancer, they generally provide information about preventing or treating the disease.

57. When I see or hear stories about cancer, they generally provide information about things I can do to help, such as getting involved with organizations like the American Cancer Society.

Instructions: Please indicate the extent to which you agree or disagree with the following statements.

58. When I see or hear stories about events like UNC Relay For Life, they generally include facts, figures or statistics about the health issue of cancer.

59. When I see or hear stories about events like UNC Relay For Life, they generally tell the story of one individual or family.
60. When I see or hear stories about events like UNC Relay For Life, they generally provide positive or hopeful news.
○ Somewhat Disagree
○ Disagree
○ Somewhat Disagree
○ Neither Agree nor Disagree
○ Somewhat Agree
○ Agree
○ Strongly Agree

61. When I see or hear stories about events like UNC Relay For Life, they generally provide information about how I can get involved with the event.
○ Somewhat Agree
○ Agree
○ Strongly Agree

62. On average, how many minutes per day do you spend doing the following? Please slide the bar to indicate the number of minutes for all applicable choices.
   _____ Watching news on television
   _____ Reading a newspaper
   _____ Listening to news on the radio
   _____ Reading or watching news online
   _____ Reading, sending, receiving e-mails
   _____ Reading, sending, receiving text messages
   _____ On a social media site like Facebook or Twitter

**Instructions: Please answer the following questions to the best of your ability.**

63. Please indicate your gender.
○ Male
○ Female

64. What is your age?
65. What do you consider to be your race or ethnicity?
○ White or Caucasian
○ Black or African-American
○ Asian or Pacific Islander
○ Native American or American Indian
Instructions: Please answer the following questions to the best of your ability.

66. What is your current status at UNC?
- Freshman
- Sophomore
- Junior
- Senior
- Graduate Student
- Faculty Member
- Other; Please Specify: ____________________

67. Please indicate your academic department at UNC.
- College of Arts & Sciences
- Education
- General College
- Gillings School of Global Public Health
- Kenan-Flagler Business School
- Information & Library Science
- Journalism & Mass Communication
- Nursing
- Undecided
- Other; Please Specify: ____________________

68. How many groups, clubs or organizations (outside of classes) do you belong to at UNC?

69. Which types of groups, clubs or organizations (outside of classes) do you belong to at UNC? Please check all that apply.
- Academic/honor societies
- Arts
- Cultural
- Greek (fraternities/sororities)
- International
- Professional/pre-professional
- Political
- Religious
- Service organizations
- Sports/recreation
- Student Government
Instructions: Please answer the following questions to the best of your ability.

70. How often do you smoke cigarettes?
   ☑ Never
   ☑ Less than Once a Month
   ☑ Once a Month
   ☑ 2-3 Times a Month
   ☑ Once a Week
   ☑ 2-3 Times a Week
   ☑ Daily

71. How often do you tan?
   ☑ Never
   ☑ Less than Once a Month
   ☑ Once a Month
   ☑ 2-3 Times a Month
   ☑ Once a Week
   ☑ 2-3 Times a Week
   ☑ Daily

72. How often do you exercise?
   ☑ Never
   ☑ Less than Once a Month
   ☑ Once a Month
   ☑ 2-3 Times a Month
   ☑ Once a Week
   ☑ 2-3 Times a Week
   ☑ Daily

73. Have you ever been screened for cancer?
   ☑ Yes
   ☑ No
   ☑ Maybe/Not sure

74. If yes, what type of cancer? Please specify below:

75. How did you find out about this survey?
   ☑ Email
   ☑ UNC Relay For Life listserv
   ☑ Facebook
   ☑ Twitter
   ☑ Other; Please Specify: ____________________
Thank you for your time and participation in this survey. If you would like to enter the drawing to win the free i-Pod Touch, please enter your UNC e-mail address* below:

______________________________

*Please note: Only UNC email addresses will be entered into the drawing, and each address will be entered only once. Duplicate addresses will be discarded. The winner will be contacted via email before the end of the semester. Thank You!
APPENDIX D:
INSTITUTIONAL REVIEW BOARD
INITIAL APPROVAL MEMO

OFFICE OF HUMAN RESEARCH ETHICS
Medical School Building 52
Mason Farm Road
CB #7097
Chapel Hill, NC 27599-7097
(919) 966-3111
Web site: ohre.unc.edu
https://privacy.researchunicom for IRB status
Federalwide Assurance (FWA) #0001

To: Brooke Wehring
Journalism and Mass Communication
CB: 3365

From: Behavioral IRB

Approval Date: 2/07/2011
Expiration Date of Approval: 2/06/2012

RE: Notice of IRB Approval by Expedited Review (under 45 CFR 46.110)
Submission Type: Initial
Expedited Category: 7. Surveys/interviews/focus groups
Study #: 11-0045

Study Title: Communicating Cancer and Increasing Involvement: Nonprofit Advocacy and Fundraising On-Campus and Online

This submission has been approved by the above IRB for the period indicated. It has been determined that the risk involved in this research is no more than minimal.

Study Description:

Purpose: To understand communication about and participation in the fund raising event Relay for Life, benefiting the nonprofit health organization, American Cancer Society.

Participants: Approximately 5,000 UNC-CH undergraduates, 700 participants who are members of the UNC Relay for Life listserv, 500 UNC Relay for Life Facebook friends, and 300 UNC Relay for Life Twitter followers.

Procedures: Online survey will be administered.

Regulatory and other findings:

This research meets criteria for a waiver of written (signed) consent according to 45 CFR 46.117(c)(2).

Investigator's Responsibilities:

Federal regulations require that all research be reviewed at least annually. It is the Principal Investigator's responsibility to submit for renewal and obtain approval before the expiration date. You may not continue any research activity beyond the expiration date without IRB approval. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.
**IF YOU SUBMITTED ON PAPER**, enclosed are stamped copies of approved consent documents and other recruitment materials (when applicable). You must copy the stamped consent forms for use with subjects unless you have approval to do otherwise. **IF YOU SUBMITTED ONLINE**, your approved consent forms and other documents are available online at http://irbis.unc.edu.

You are required to obtain IRB approval for any changes to any aspect of this study before they can be implemented (use the modification form at ohre.unc.edu/forms). Any unanticipated problem involving risks to subjects or others (including adverse events reportable under UNC-Chapel Hill policy) should be reported to the IRB using the web portal at https://irbis.unc.edu/irb.

Researchers are reminded that additional approvals may be needed from relevant "gatekeepers" to access subjects (e.g., principals, facility directors, healthcare system).

This study was reviewed in accordance with federal regulations governing human subjects research, including those found at 45 CFR 46 (Common Rule), 45 CFR 164 (HIPAA), 21 CFR 50 & 56 (FDA), and 40 CFR 26 (EPA), where applicable.

CC:
Lois Boynton, Journalism and Mass Communication
Francesca Carpentier (School of Journalism and Mass Communication), Non-IRB Review Contact
APPENDIX E:
INSTITUTIONAL REVIEW BOARD
MODIFICATION APPROVAL MEMO

OFFICE OF HUMAN RESEARCH ETHICS
Medical School Building 52
Mason Farm Road
CB 07017
Chapel Hill, NC 27599-7017
(919) 966-8213
Web site: unhcr.unc.edu
https://research.unc.edu for IRB status
Federal Wide Assurance #000101

To: Brooke Webster
Journalism and Mass Communication
CB: 3365

From: Behavioral IRB

Approval Date: 2/23/2011
Expiration Date of Approval: 2/20/2012

RE: Notice of IRB Approval by Expedited Review (under 45 CFR 46.110)
Submission Type: Modification
Expedited Category: Minor Change to Previously Approved Research
Study #: 11-0045

Study Title: Communicating Cancer and Increasing Involvement: Nonprofit Advocacy and Fundraising On-Campus and Online

This amendment has been approved by the above IRB for the period indicated. It has been determined that the risk involved in this modification is no more than minimal. Unless otherwise noted, regulatory and other findings made previously for this study continue to be applicable.

Substitution Description:

This amendment, dated 3/31/2011, submits a revised copy of the questionnaire.

Investigator’s Research Identifiers:

If you submitted on paper, enclose a signed copy of approved consent forms and other consent materials (when applicable). You must copy these consent forms for use with subjects unless you have approval to do otherwise. If you submitted online (Behavioral IRB only), your approved consent forms and other documents are available online at http://research.unc.edu

This study was reviewed in accordance with federal regulations governing human subject research, including those found at 45 CFR 46 (Common Rule), 45 CFR 164 (HIPAA), 21 CFR 50 & 56 (FDA) and 45 CFR 26 (EPA), where applicable.

CC:
Lauren Brantley, Journalism and Mass Communication
Prevention Carpeter (School of Journalism and Mass Communication), N and IRB Review Contact
APPENDIX F:
SCREE PLOT FOR FACTOR ANALYSIS
OF SUBJECTIVE NORMS SURVEY ITEMS

Scree Plot

Eigenvalue

Component Number

1 2 3 4 5
APPENDIX G:
SCREE PLOT FOR FACTOR ANALYSIS
OF INFORMATION SEEKING AND PROCESSING
AND BEHAVIORAL INTENTIONS SURVEY ITEMS
REFERENCES:


American Cancer Society. (2010). Facts about ACS. Retrieved from:
http://www.cancer.org/AboutUs/WhoWeAre/acrs-fact-sheet


Scheufele, D., & Tewksbury, D. Framing, agenda setting, and priming: The evolution of three media effects models. *Journal of Communication, 57*, 9-20


