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THE USE OF EXEMPLARS IN AUDIO-BASED MEDIA TO INCREASE BEHAVIORAL INTENT IN ADOPTING PREVENTATIVE SKIN-CANCER BEHAVIORS

A Thesis in Communication

by

Christine M. Lemme

Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Arts

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FACULTY APPROVAL

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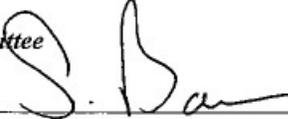
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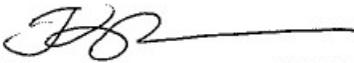
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Abstract

Skin cancer is a growing concern in the young-adult population due to the popularity of indoor ultraviolet (UV) tanning and the acceptance of numerous myths that skin cancer is not a major health concern. This thesis aims to look at the use of media exemplar perceived to be similar and credible to the target population in order to persuade the target population to adopt preventative skin-cancer behaviors. College students of both genders and various ethnicities ($N = 170$) were surveyed after listening to different radio exemplars on skin cancer. Results indicated that similarity and credibility play a key role in increasing the likelihood to change behaviors, but similarity played a larger role than credibility. Results also indicated that college-aged women were more likely to be persuaded by a similar source. However, the target audience was not transported by the exemplar. Overall, results indicated that similarity and credibility play an important role in persuading individuals to change their health behaviors; however, although similar, those roles are distinct.

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Cancer claims more than six million lives each year and, roughly, 22 million people are currently living with various forms of cancer (Viswanath et al., 2006), with skin cancer being the most common form. Over the past three decades, there have been more new cases of skin cancer than cases of breast, prostate, lung, and colon cancer combined (The Skin Cancer Foundation, 2014).

Dr. Hayes Gladstone, the director of dermatologic surgery at Stanford University, states, "Skin cancer is still viewed…as a fairly benign condition, almost as an inconvenience." As a result, "many national cancer societies have chosen to focus their efforts and limited resources on cancers with higher mortality rates, such as breast and colon cancers" (Gladstone, 2009, p. 575). Although skin cancer is an easily preventable disease and curable when caught in earlier stages, this is an inconvenient and dangerous comfort to maintain as it could lead individuals to delaying skin cancer screenings, allowing cancerous cells to become more advanced as time passes, resulting in advanced cancers that are difficult to cure and leading to disfiguring surgeries. To make matters worse, there is an alarming rise in skin cancer among people as young as 18 and as old as 39 ("Melanoma Soars among Young Adults," 2012), with more than 130 thousand cases of malignant melanoma and between two to three million cases of non-melanoma skin cancers diagnosed globally each year ("Cancer Facts & Figures," 2014).

Since media content, specifically, and mass media, in general, are often cited by individuals as important sources of information regarding health (Morton & Duck, 2001), it may be valuable to understand the effectiveness media has on sun-protective behaviors in individuals (Saraiya et al., 2004).

This study investigates the effectiveness of using media exemplars, their ability to transport audiences, and their perceived similarity and credibility as a way to deliver health-

related knowledge to encourage preventative behavior and attitude change regarding skin cancer to young adult women.

Chapter 1 Literature Review

1.1 Skin Cancer

Although the frequency of most other cancers has been declining in the United States, the number of skin cancer cases has been growing over the past few decades (Saraiya et al., 2004). The Mayo Clinic has found that the rate of potentially deadly skin cancers has grown by 800 percent among young women and by 400 percent among young men within the past four decades ("Melanoma Soars among Young Adults," 2012). There are a few possible explanations for this increase, including common misconceptions regarding skin cancer as well as the popularity of indoor tanning.

There are numerous common myths surrounding skin cancer. One of the more common is that skin cancer is an inconvenience, not a serious health risk. A second popular misconception is that Caucasians are the primary victims of skin cancer and non-Caucasian people are immune to this disease (Gladstone, 2009). However, anyone can fall prey to skin cancer, regardless of his or her skin color. By delaying detection, possibly because of these beliefs, people are diagnosed with skin cancer at later stages of the disease, meaning that possibly curable skin cancers will become advanced and potentially fatal as individuals become older (The Skin Cancer Foundation, 2014). The later individuals have skin cancer checks, the greater the likelihood that a potentially advanced and fatal form of skin cancer will be diagnosed too late.

Another possible cause for the increase in skin cancer rates, especially among college age population, is indoor tanning. Young women, in particular, are the most frequent patrons of tanning salons, with 71 percent of all patrons being women between the ages of 16 and 29

("Teen Tanners," 2014). Since women and young adults make up the majority of the tanning population, this study will look specifically at young female adults. Due to the popularity of indoor tanning, it is important to understand the dangers of skin cancer and preventative behaviors for this demographic.

The dangers of indoor tanning come from the cancer-causing ultra-violet (UV) rays emitted by tanning machines. Intense exposure to UV radiation during adolescence plays a role in the later development of skin cancer. Adolescents also have more opportunity and time to be exposed to sunlight than those older then themselves (Saraiya et al., 2004). The more UV light young people receive during adolescence, the greater their chances of developing deadly skin cancer later in life. Studies have shown that the risk of skin cancer doubles when onset use of UV tanning begins prior to the age of 35 years (Elston, 2013).

According to the Federal Trade Commission, the Indoor Tanning Association (ITA) has falsely claimed that the government has approved indoor tanning. The ITA also claimed that UV tanning "is safer than tanning outdoors because the amount of UV light received tanning indoors is monitored and controlled" and that " indoor tanning is a good source of vitamin D" ("Federal Trade Commission Settles Charges Against the Indoor Tanning Association," 2014). These claims have been refuted by many, with dermatologists stating that UV rays from tanning beds are not efficient vitamin D sources (American Academy of Dermatology, 2012), and the World Health Organization (WHO) has included UV tanning devices in its Group 1, a list of the most dangerous cancer-causing substances, alongside plutonium and cigarettes (The Skin Cancer Foundation, 2014).

The common misconceptions regarding skin cancer, as well as the popularity of and misinformation about UV tanning, highlight the importance of communicating accurate

knowledge about skin cancer and potential preventative actions. Communicating such information is critical in primary and secondary prevention strategies, such as reducing or stopping indoor tanning (Viswanath et al., 2006). However, there is a need to determine the most effective way to persuade individuals to change their behaviors.

1.2 Similarity

People often look to others for advice when they make a decision (Bandura & Jourden, 1989). One way they evaluate information from a source is through similarity between the source and themselves, as they perceive it. As such, previous research has shown that similarity is correlated with decision-making (Gino, Shand, & Croson, 2009). The more similar people perceive a source to be, the greater the likelihood they will adopt the behavior and attitude of the source. Because of this, sources that are similar to the target audience may increase the likelihood of behavior change, as they may feel that if a source, media characters for example, are like them, then they understand their attitudes and behaviors, which in turn makes them appear more credible. Because of this, the audience may be more inclined to model the source's behaviors and attitudes.

Perceived similarity refers to the degree to which an individual perceives that he or she is similar to a source (in the case of this study, a media character), which could include similar demographics, personal experiences, attitudes, and group membership (Stiff & Mongeau, 2003). In essence, similarity allows audience members to maintain their own perspective while making judgments about a character (Moyer-Gusé, 2008). Based on this concept, a source that is perceived as similar to one's self is more likely to produce an increase in the willingness to attempt the behavior than are less similar models (Slater, 2002).

Individuals are more likely to be persuaded by a source that is similar to their self, while sources that are dissimilar are less likely to be persuasive (Berscheid, 1966; Brock, 1965; Holtz 2003, 2004). Perceived similarity can be created when the source and audience share similar demographics, social characteristics, personal experiences, and group membership (Simons, Berkowitz, and Moyer, 1970). College students, for example, can establish similarity with a source by joining similar clubs or wearing similar clothing (Stiff & Mongeau, 2003). When this occurs, the audience may feel that the source is trustworthy and be more likely to be persuaded.

Perceived similarity is effective due to the idea that the "self" is our most valued possession (Howard & Kerin, 2011) and research has shown that the opinions of similar others tend to be persuasive, while the opinions of dissimilar others are discounted (Naylor, Lamberton, & Norton, 2011). It is possible that information that comes from a source perceived to be similar to the self is more credible.

1.3 Credibility

Credibility can vary between audiences, and what makes a particular source credible to one group may not be seen as credible to another. For this reason, it is important to alter source characteristics in order that they are perceived as credible as possible to different audiences. The goal is to make the source appear as similar to the audience as possible. Making the source similar to the audience increases identification (when the audience can relate to the source), which in turn can influence the source's credibility.

Indeed, identification, which occurs when the source has traits or characteristics that are similar to the self (Stiff & Mongeau, 2003), can increase perceived credibility. A meta-analysis by D.J. O'Keefe (1987) showed that when individuals did not identify with the source, perceived credibility was reduced, while audiences who identified with the source perceived them as more

credible. Previous research has also shown that the credibility of sources determines the importance people attach to information from a source (Chang, 2011). Based on this information, we can theorize that the more similar a source is to people's own self, the more they relate with the source, which means the more credible the source and information.

Major and Coleman (2012) have shown that a credible source is more effective in producing positive attitude change than a source that is not seen as credible. Spark and Rapp (2011) argue that source credibility is considered a peripheral cue, or characteristics about the source itself that impact persuasion, such as trustworthiness, attractiveness, and attractiveness (Stiff & Mongeau, 2003). When a source is perceived to be credible, the audience perceives the source to be well informed on the topic at hand, which in turn can lead the audience to perceive the source as trustworthy (Hovland & Weiss, 1951). The more similar a source is, the more credible the source may be perceived, which might lead to behavior change (Major & Coleman, 2012; Hovland & Weiss, 1951).

For this study, a tanner may not perceive a non-tanner discussing skin cancer as credible, as they do not share similar experiences or membership. A non-tanner communicating important preventative skin-cancer behaviors may not be as persuasive as a tanner may, since she or he would not be seen as credible. However, if a source is perceived as similar, this characteristic may cause the source to be seen as credible, which can increase the likelihood of behavior change.

Therefore, in order to create an effective persuasive message it is important to make the source of information as similar to the target population as possible; increasing the source is perceived credibility. Since skin cancer should be a growing concern for young adults, it is important for health communicators to make the source of preventative skin-cancer information

as similar to that target population as possible. If the source is of similar age, race, gender, and the same group membership as the target population, the more credible this population will perceive the information.

To summarize, a source seen as both similar and credible can increase the persuasive effectiveness of a message. Now, the question remains as to what type of source would be the most effective in persuading individuals to adopt preventative skin-cancer behaviors.

1.4 Exemplars and Narratives

The influence of similarity and credibility on persuasion has been the focus of much media-related research (e.g., Moyer-Gusé & Nabi, 2010; Moyer-Gusé, 2008; Murphy, Frank, Chatterjee, & Baezconde-Garbanati, 2013). The assumption driving most of this work, naturally, is that the more similar media characters are perceived to be, the more the audience identifies with them and finds them credible (O'Keefe, 1987). If a character in a media narrative is perceived to be similar and is suffering an illness, for example skin cancer, the audience will feel more vulnerable due to the assumption that if the character is like them and has something negative happen to them, they themselves are also at risk. When the character in the narrative later performs a preventative behavior and succeeds, the audience may be more confident in their ability to perform the behavior, which may increase the likelihood of the preventative behavior being performed. "Media narratives" in the research is defined as "representations of recognizable events and characters in an identifiable structure… [that] contain implicit or explicit messages about the topic being addressed" (Krueter et al., 2007, p. 222).

One problem when it comes to communicating cancer information is the audience's resistance to cancer-related messages, such as risks to developing cancer. For example, Yoo, Kreuter, Lai, and Fu (2014) argued that resistance is a particular problem in communicating

preventative cancer behaviors or information because people are generally optimistic about their own health, and rather than be challenged by cancer-related messages, they try to maintain this optimistic bias. This is a particular problem with skin cancer, due to the myths that UV tanning is harmless and that skin cancer is an inconvenience instead of a serious disease. For this reason, it is important to present the message in a way that will limit arousing resistance as much as possible. One such way could be presenting health information and facts in a more personal way, such as using media narratives.

Health narratives also help make sense of uncertain situations (typically the result of receiving a serious diagnosis), provide implicit explanations for causation, remedies, and future action, enable a sense of control in the face of serious diagnosis, and help create a sense of unity among those experiencing similar health problems (Thompson, Parrot, & Nussbaum, 2011). This, in turn, can help persuade audiences to model the behavior and attitudes depicted in the media narrative. When an individual is immersed by a story and identifies with its characters, the likelihood of attitude and behavior change increases (Kim, Bigman, Leader, Lerman, & Cappella, 2012). The reason for this stems from the idea that narratives are expected to be engaging because they are generally perceived to be less overtly persuasive, which may lower resistance (Moyer-Guse, 2008; Slater & Rouner, 2002). Narratives should also reduce resistance by reducing bias towards a message, as there is a tendency to counter-argue information if the audience is aware of its intent (Dal Cin, Zanna, & Fong, 2004). Additionally, although there is some research indicating that narratives can produce counter-arguing (e.g., Moyer-Gusé & Nabi, 2010), there is significantly more evidence that narratives help overcome resistance by reducing the amount and effectiveness of counter-arguing and by increasing identification with characters in the story (McQueen, Kreuter, Kalesan, & Alcaraz, 2011; Moyer-Gusé, 2008). Past research,

then, has clearly shown that when individuals are engaged by a narrative, the greater the

likelihood that they are persuaded by the message (Kim, Bigman, Leader, Lerman, & Cappella,

2012).

It is instrumental for health communicators to understand the most effective way to

communicate information in order to encourage preemptive behavior. Research has shown that

public education about health risks increases awareness of health and facilitates healthy behavior

and future behaviors (Viswanath et al., 2006). In the context of cancer communication,

researchers have proposed that media narratives "may reduce resistance, facilitate processing of

new and/or difficult information, create stronger attitudes, and provide social connections and

role models for behavior change" (Murphy, Frank, Chatterjee, & Baezconde-Garbanati, 2013).

Essentially, a media narrative about someone's personnel struggle with cancer will resonate with

an audience more than a campaign that focuses more on cancer information because there is a

more emotional connection with a media narrative.

For example, in a study by Murphy, Frank, Chatterjee, and Baezconde-Garbanati (2013),

Latina women were exposed to either a media narrative or a nonnarrative health-related film on

cervical cancer and preventative behaviors. The women who received the information in a

narrative format showed a significantly greater increase in knowledge compared to those who

received it in a documentary format. Those in the narrative group also reported significantly

more positive attitudes toward cervical cancer. These results demonstrated that the women who

viewed personal stories engaged in more pre-emptive behavior in regards to cervical cancer

screenings than those subjected to the nonnarrative presentation. With this in mind, it is possible

that if skin-cancer health information and preventative behavior is communicated in a narrative

format, individuals will be more prone to accept the information and change their attitudes and behaviors regarding preventative behavior.

This is important regarding skin cancer awareness because any health message on skin cancer has to fight the myths and misconceptions many in the target population may believe, such as tanning does not increase the risk of developing skin cancer and that skin cancer is an inconvenience. As stated earlier, the population under observation will be more likely to resist this message if they are aware of its presence. The best way to avoid this resistance would be to create a narrative that has an entertaining story and similar characters that will engage and transport the audience.

Schank and Berman (2002) stated that various types of narratives have certain characteristics that can elicit more or less identification by the target audience. One such characteristic is the use of an exemplar. Exemplars, the individuals in the narratives, serve as positive role models that the audience can identify with and who can highlight attitudes or behavior the audience lacks and can model (Zillmann, 1999).

Exemplars can reinforce the audience's intention to change their attitudes or behaviors by providing personal stories or experiences (Thompson, Parrott, & Nusbaum, 2011). One way exemplars share these personal stories is through a narrative format, which can present the causes, risks, and treatment of certain health-related issues (Bek, 2001; Sharf, 2005). With this in mind, an exemplar can model their personal experience in order to encourage behavior change, and the narrative formatting can present information on health-related risks and treatment.

While narratives tend to convey core information, exemplars communicate a character's goals and experiences (Kim, Bigman, Leader, Lerman, & Cappella, 2012). When these exemplars are perceived to be identifiable (such as being similar) to the audience, they can

transport them into the story, which increases the likelihood of behavior change. For this study, the focus shall be on exemplars, not narratives.

A study by Morgan, Movius, and Cody (2009) on the impact narratives had on organ donations found that an increased degree of emotional involvement in a narrative "increases attention to the story elements, the amount of imagery viewers generate, and increases cognitive processes." Based on this information, we expect that emotionally engaging narratives have a significant impact on retaining and comprehending health information because they transport audiences into the narrative and hence are more persuasive. Transportation is defined by Green and Brock (2010) as "a convergent process, where all mental systems and capacities become focused on events occurring in the narrative" and studies on transportation have found that individuals who are more engrossed in a narrative tend to develop stronger beliefs, attitudes, and intentions (Green & Brock, 2000). While this particular study focused more on the impact of narratives, the characters in these pro-organ donation narratives did not always communicate health-related information, but rather focused on the attitudes and behaviors of organ donors. These characters could be considered exemplars as they shared their personal beliefs on organ donation and were concerned with the lack of organ-donors. They showed their beliefs by explaining their experiences and attitudes, which would have the characters, function as exemplars within this narrative. In turn, this can increase the effects of transportation of the message.

Transportation by a narrative occurs when an individual becomes invested in a narrative both cognitively and emotionally; and when individuals are transported by a narrative, their behaviors and attitudes my change to match. Transportation occurs when individuals become engrossed with the narrative, accepting the narrative's world and facts as truth and distancing

themselves from real-world beliefs and knowledge (Kim, Bigman, Leader, Lerman, & Cappella, 2012). In some cases, transported individuals may block out real world distractions – such as others talking or entering their physical space – and they may not pay attention to contradictions with their own beliefs in the narrative. Past studies on transportation have found that individuals who are more engrossed in a narrative tend to develop stronger beliefs, attitudes, and intentions (Green & Brock, 2000).

Perceived similarity towards the characters in a narrative can also increase identification, allowing the audience to adopt characters' point of view and share their experience both on an emotional and cognitive level, further increasing transportation into the story (Kim et al., 2012; Kim, Bigman, Leader, Lerman, & Cappella, 2012). When audience members view these sympathetic characters, there is the likelihood that they will undergo both attitude and behavior change (Slater, 2002). In the skin-cancer setting, a character who is similar to the audience and who uses preventative health-behaviors to prevent skin cancer, such as not tanning indoors, may increase the likelihood these behaviors are modeled. When people perceive a character to be similar to them and enact preventative behaviors, it may increase their self-efficacy – or their belief that they too can enact the behavior – because as social cognitive theory would predict, seeing similar others accomplish a challenging health-behavior change will increase viewers' belief that they can model that behavior (Moyer-Gusé, 2008).

Being transported by an exemplar's narrative has been shown to increase the likelihood of intent to change behavior. For example, in a study by Kim, Bigman, Leader, Lerman, and Cappella (2012), exemplars in news articles that conveyed information on the dangers of cigarette smoking increased the intent to stop smoking, and realistic exemplars produced greater intent to change behaviors. In a different study by Kearney and Levine (2014), young women

who watched MTV's *16 and Pregnant* were more likely to later seek out information on birth control and abortion as well as post this information on social media. The study also showed that consumption of the show by young women reduced the likelihood of becoming pregnant at a young age. Kearney and Levine theorized that the show:

> Drew in teens who actually were at risk of teen childbearing and conveyed to them information that led them to change their behavior, preventing them from giving birth at such a young age. The fact that MTV knows how to make shows that teens like to watch, which speak to them in ways that resonate, presumably is critical to the show's impact. (p. 35)

These two studies show that when an individual is transported by an exemplar, the target audience was able to identify with the sources (smokers and teens), who were perceived as similar to them due to shared attitudes or behaviors. When these exemplars demonstrated the consequences of certain behaviors, the audience was more likely to adopt preventative behaviors (stop smoking and using contraceptives).

If an exemplar can transport an audience, the greater the likelihood the audiences will change their behaviors as well as learn new health information. In fact, past studies have shown a positive relationship between transportation by a narrative and persuasive outcomes, such as attitude or behavior change (Kim, Bigman, Leader, Lerman, & Cappella, 2012).

Since this body of literature has identified media narratives (and by extension, exemplars) as a key factor influencing individuals' attitudes toward health behaviors (Yoo & Tian, 2011), it is important to understand what forms of media are most effective. However, which ones would be the most effective?

As stated earlier, young adults have the greatest risk of developing skin cancer and many maintain the common misconception that developing skin cancer is an inconvenience, not a serious health risk. If they already accept these beliefs as true, a health campaign that simply presents them with facts is not likely to be effective because they have already built up a resistance to the corrective message, so we must find a more effective way to deliver information on skin cancer and preventative behaviors. By having an exemplar share their experiences with tanning and developing skin cancer in a narrative form, the target population would not expect to be informed, which would reduce the likelihood of the audience building resistance.

Presenting this exemplar in a media format can help increase the likelihood of intent because individuals learn from what they see and hear through media, media narratives could influence health behaviors in audiences, which in turn can help increase the likelihood on the intent to adopt preventative skin-cancer behaviors. However, there are numerous forms of media with their own unique characteristics, so the question becomes which one would be most fitting to communicate this message.

1.5 Radio and Audio Media

Young adults go through a process where they move from dependence on their parents for information on important issues in their lives (such as health information) and towards dependence on peers, schools, and media (Lariscy, Reber, & Paek, 2010). Social learning theories of human development suggest that most human behaviors are learned within a social context (such as family, school, peers, and media; Rew, Arheart, Thompson, & Johnson, 2013), and that these sources are the most important driving forces in adolescent health socialization. Mass media is an important source of learning about various health issues, and evidence has shown that learning influences behaviors (Lariscy, Reber, & Paek, 2010).

From a health communication standpoint, media plays an important role not only in giving adolescents' easy access to health information, but also as an agent in shaping their health beliefs. The media have also been widely used in public health programs due to their ability to reach wide audiences (Saraiya et al., 2004)

Effectively communicating health information to individuals and communities is a primary focus in public health, and timely and accurate communication has the potential to affect the awareness, knowledge, attitudes, and commitment to change behavior in individuals, communities, and societies. It is important, then, to understand the most effective way to transfer health messages to the public. Over the last decade, new technologies have emerged that have left radio underutilized in the study of health communication, yet studies have found that radio can successfully increase an individual's intent to modify health behaviors (Smith, Menn, & McKyer, 2011).

Radio broadcasting is a central and established form of mass communication in American society, serving as a low cost, passive form of communication able to reach listeners in a variety of locations such as home, work, gyms, public vehicles and other public places (Smith, Menn, & McKyer, 2011). Arbitron reports that among the various age groups, college-aged consumers tune in to one or more radio stations more than 2.6 hours per day, or 18.5 hours per week (Smith, Menn, & McKyer, 2011). A majority of the growth in radio listening has been found in online radio and audio, according to Arbitron, with roughly 39 percent of the population listening to online audio monthly, and 29 percent listening at least once a week. In 2012, 92 percent of Americans age 12 or older listened to the radio at least weekly (Santhanam, Mitchell, & Olmstead, 2013).

Health professionals have long recognized the benefits of using radio as a way to send health messages and to educate listeners on a variety of health-related topics, notably heart disease, smoking safe sex, and healthy eating and exercise (Smith, Menn, & McKyer, 2011). Lariscy, Reber, and Paek (2010) also found that radio and television were the most common media sources for health issues. Other forms of purely audio media, such as podcasts, can be just as effective as radio as they share the same benefits, such as easy audience access and ease of production. For example, 18 percent of U.S. adults listened to a news podcast downloaded to their computer, tablet, cellphone or mp3 player (Santhanam, Mitchell, & Olmstead, 2013).

Radio can be an effective way to communicate persuasive health information due to the persuasive nature of certain vocal cues. A study by Mechrabian and Williams (1969) showed that increased volume, increased speech rate, and fewer pauses are seen as more persuasive. These cues have been shown to be associated with increasing a source's credibility and persuasiveness, as well as increasing attitude change in an individual (Burgoon, 1990). Studies indicate that these characteristics may be persuasive due to the idea that individuals are so focused on processing the message that they are unable to develop counter arguments (Woodall & Burgoon, 1983), which in turn lowers resistance. This is important to note due to how individuals build up resistances to cancer-related messages. By using a radio exemplar to communicate persuasive cancer messages, the exemplar can speak faster and louder to not only increase perceived credibility, but also lower resistance and prevent counterarguments, all of which that increase persuasiveness.

A benefit of using radio in health campaigns beyond its low production costs is the lack of visuals, which eliminates biases that may be found in visual media, such as characters' race, age, appearance, and nonverbal behavior. Research has shown that perceived physical

attractiveness influences the effectiveness of persuasive communication for the better (Chaiken, 1986; Patzer, 1983), meaning that the more attractive sources of information are, the more persuasive they are. Since radio is purely auditory, it eliminates many of the visual cues that can bias listeners. A study by Mehrabian and Ferris (1967) showed that when pitting vocal and facial cues, facial cues are more influential. By removing facial cues and relying solely on the audio, listeners will have to focus on the narrative and the information it offers.

Due to the misconception that skin cancers are a Caucasian disease, eliminating a visual bias may be beneficial. Instead of having Caucasian skin cancer patients or survivors discussing the risks and preventative behaviors (which would only reinforce the notion that skin cancer is limited to Caucasians), radio and audio broadcasts would focus on the narrative and information without presenting the visual suggesting that skin cancer a race-specific disease.

The vocalic of a source of audio could have the effect of increasing perceived similarity. Based on vocal quality alone, an individual can identify others' sex, age, and even social class--characteristics that are tied in to similarity. Since skin cancer is a major concern with young adults, having an individual match the same vocal qualities of the target group can increase similarity. For example, typically, young adults speak quickly and with a high pitch. In contrast, older adults have lower pitch and speak more slowly (Hummert, Mazloff, & Henry, 1999).

Another benefit to radio broadcasting is the ability to reach people more easily than with television as well as reaching a more diverse audience. For example, radio has been used to effectively convey information on HIV/AIDS in Botswana due to the fact it can reach many demographics (Barz, and Cohen, 2011). In Malawi, radio programs about contraceptive behaviors not only reached a large population, but exposure to such programs was associated with increased discussion of contraceptive use (Meekers, Van Rossem, Silva, & Koleros, 2007).

Globally, radio stations reach large geographic areas with many stations focusing on certain demographics. Radio stations can also deliver information to individuals in nations where there is very little television access. Prosser (2013) argues that since individual stations are preprogrammed to reach specific demographics, by selecting the proper station, broadcasters will be communicating more directly to their desired target audience.

Since radio can be listened to everywhere, it can be easily accessed, and since it lacks visual cues that can affect persuasion, the target audience would be forced to rely on the audio quality and no other physical cues, which can help reduce bias. As stated earlier, when audience members identify (or are perceived to be similar) with exemplars, they are more likely to model the behaviors or attitudes (Zillmann 1999). If an exemplar sounds similar in terms of not only their stories but also their vocal qualities, they are more likely to be persuasive.

Since previous research has shown that the more similar a source is to one's own self, the more important and credible the information is perceived (Simons, Berkowitz, and Moyer, 1970), a character in narrative radio drama that is similar to members of the target population would be deemed more credible than one perceived as dissimilar. Therefore, sources that are more credible would increase listeners' intent to change behavior. With this research as a basis, I hypothesis that:

H1a: *Listeners who perceive an exemplar in a radio narrative to be similar to themselves will have an increased likelihood of intent to change their behavior.*

H1b: *Listeners who perceive an exemplar in a radio narrative to be credible will have an increased likelihood of intent to change their behavior.*

H1c: *Listeners who express an intent to change their behavior will be influenced by similarity as well as credibility.*

Since young adult women make up the majority of the indoor tanning population and are most at risk to develop skin cancer, they may deem a source similar to themselves as more credible, which would increase their intent to change their behavior. Therefore:

H2: *Young adult women who perceive a media exemplar to be similar to their self will find that exemplar credible, which will increase the likelihood of intent to change their behavior.*

Finally, studies have shown that listeners who are more engaged in the narrative will be more likely to change their behavior. Therefore:

H3: *Listeners who tan and are transported by the narrative are more likely to increase their intention to change their behaviors.*

Chapter 2 Methods

2.1 Participants

Participants were selected using convenience sampling and came from a small, private New England university. There were 170 (M = 20.4, SD = 1.45) participants with 110 males and 60 females. Participants ranged between the ages of 18 to 29, and the average age of participants was 20.4 In terms of ethnicity, 84.1 percent of participants were white, 7.1 percent were black, 4.7 were percent Asian or Pacific Islander, 3.5 percent were Hispanic, and .6 percent were Native American. In regards to tanning habits, 41.2 percent of participants tanned, while 58.8 percent did not tan.

2.2 Procedure

A short narrative was created based on a personal account developed by The Skin Cancer Foundation. The health and information content of the narrative was verified by dermatology physician assistant Tami Menard for accuracy. The narrative was in the first person, and the

speaker was a female tanner discussing her tanning habits, learning about her developing skin

cancer, and the aftermath. The exemplar's narrative was recorded twice by one actor. In one

narrative, the speaker was younger-sounding and in the other, the speaker was older-sounding. In

order to give the perception the exemplar was younger, the actor was instructed to talk with a

higher pitch, speak faster, and with fewer pauses. In order to give the perception the exemplar

was older, the actor was instructed to speak lower, with more pauses, and to speak slower. The

narrative's script can be found in Appendix D. Both narratives were the exact same and younger-

sounding narrative was four minutes and 14 seconds in length, while the older-sounding

narrative was five minutes and 34 seconds in length.

As a manipulation check to ensure that the younger-sounding version was indeed

perceived as younger-sounding and the older-sounding version was indeed perceived as older-

sounding, a simple manipulation check was performed. Two individuals with no knowledge of

this study's purpose, listened individually, to the two versions of the narrative, and in both cases,

these individuals identified younger- and older-sounding narratives accurately.

Study participants were told that they were giving feedback on a new educational

program. They were then asked to listen to one of the two randomly selected narratives and then

fill out a modified version of the instrument used by Murphy, Frank, Chatterjee, and Baezconde-

Garbanati (2013). This survey contained questions on the content of the narrative, on the

information found in the program, on liking the program, on whether or not they liked the

characters, and on the likelihood, they will seek out skin-cancer screenings. The survey can be

found in Appendix C.

2.3 Instruments

Transportation was measured using Green and Brock's (2000) 10-point Likert-type scale. Respondents were asked to rate their agreement on statements ranging from strongly agree (5) to strongly disagree (1). The alpha for transportation was .36. In order to increase reliability, the third item on the scale, ("I found my mind wandering while listening to the program") was removed, which increased reliability to .50. The first item ("I found [the program] easy to put out of my mind") was also deleted, bringing reliability to .64 (M = 16.2, SD = 3.23). Items from this scale can be found in Appendix E.

Similarity was measured using a modified version of the McCroskey (1966) 20-item character scale. Since perceived similarity has been shown to impact persuasion, perceived similarity to characters in narratives could also lead to a willingness to undergo skin cancer screenings. The 5-point items ask respondents to rate their agreement on statements ranging from strongly agrees (5) to strongly disagree (1). Items on the scale include "I liked the speaker", "I trust the speaker to tell the truth about this topic", and "I admire the speaker". Reliability for similarity was tested by comparing the means and two items ("Anna is not a good person", "I do not trust Anna to tell the truth on the topic") were recoded. The alpha was .77 (M = 3.43, SD = 52). Items from this scale can be found in Appendix E.

Credibility was measured using McCroskey's (1966) 18-item source credibility scale, which measures competence, caring, and trustworthiness. The 7-point items ask respondents to rate how strongly they feel about the speaker on different dimensions. The scale measures three aspects – competence, caring/goodwill, and trustworthiness. This scale measures these three dimensions because all three explain different factors as to what leads an individual to be perceived as credible. The reliability for credibility was .91 (M = 4.38, SD = .80)

A 6-item intent scale was created specifically for this study and items were based on Murphy, Frank, Chatterjee, and Baezconde-Garbanati's (2013) intention scale. The scale was modified to address intent to seek our skin-cancer screenings. Items on this scale include "You are confident that you could get a skin cancer screening", "You are confident are you that you could follow up for treatment if you had an abnormal mole", and "You are likely to get a full body check within the next 2 year". Removing the item "You are likely to get a full body check within the next 2 years" would have increased reliability, but the item measure the intent to adopt a future behavior, so it was kept. Reliability for intent was tested by comparing the means. The alpha was .83 (M = 4.03, SD = .64). Items from this scale can be found in Appendix E.

Chapter 3 Results

To test H1a and HIb, a two-tail Pearson correlation test between similarity, credibility, and intent was used. Correlation between similarity and credibility was statistically significant (r = .625, n = 170, p = .000) and correlation between similarity and intent was statistically significant (.r = .223, n = 170, = - .003). The correlation between intent and credibility were only slightly significant (r = 191, n = 170, p = .013). The three hypotheses were supported. A correlations table for these results can be found in Appendix F.

H1c was tested using a hierarchical multiple regression in order to assess similarity and credibility to predict intent to change behaviors. Similarity was entered at Step 1, which explained 5% of variance in intent. After entry of credibility in Step 2, and the total variance explained by the model as a whole was 5.4%, F(2, 167) = 4.8, p < .009. The two variables explained an additional 4.3 % of the variance in intent, R squared change = .043, *F* change (1, 168) = .767, p < .009. In the final model, similarity (beta = .171, p < .009) was statistically more significant than credibility (beta = .08, p < .009). Results showed that intent predicted by

similarity and credibility was overall significant; however, the variables themselves were not. A possible reason for this is multicollinearity of the variables (r = .625, p <.01). A model summary for these results can be found in Appendix F.

Hypothesis 2 was tested using a hierarchical multiple regression in order to assess similarity and credibility to predict intent to change behaviors in young women only. Similarity was entered at Step 1, which explained 6.6%, $F(2, 57) = 3.2$, $p < .05$. After credibility was entered at Step 2, the total variance explained by the model as a whole was 10%, R squared = 3.4, $F(1, 57) = 2.15$, $p < .05$. The model for similarity only was slightly more significant (b = .26, p < .05) than the model for similarity and credibility (b = .25, p < .05). A model summary for these results can be found in Appendix F.

The third hypothesis was tested by using a one-way ANOVA of tanning conditions (tan or do not tan) on transportation. Results showed that there was no significant effect of transportation on the intent to change behavior [$F (1, 168) = 2.8$, $p = .099$]. These results show that there were no significant differences between tanners and non-tanners in terms of being transported by the narrative. A model summary for these results can be found in Appendix F.

Chapter 4 Discussion

The goal of this study was to test whether or not using a narrative exemplar that was perceived to be similar and credible to a young adult audience would be more likely to encourage those young adults to take up preventative behaviors. Young adults were the chosen demographic to study because they make up the majority of the indoor tanning population and are most at risk to developing skin cancer. Respondents were asked to state whether they tanned and then to listen to one of two narratives, featuring either a younger- or older-sounding speaker. After listening to the narrative, respondents were asked to rate how transported they were by the

narrative, their perceptions of the exemplar's similarity and credibility, and their intent to take up preventative behaviors in the future.

Three hypotheses were examined, looking at the effect a perceived similar and credible exemplar had on intent, as well as the effect transportation had on intent. Hypothesis 1a and 1b stated that exemplars who were either similar (H1a) or credible (H1b) would increase the likelihood of intent to change a behavior, and results show that these hypotheses were both supported. These results support past research that similarity (Berscheid, 1966; Brock, 1965; Holtz 2003, 2004) and credibility (Stiff & Mongeau, 2003; Chang 2011) can increase a message's persuasive effect. Given these results, similarity and credibility both play a role in effectively communicating persuasive messages. These results, therefore, support previous research suggesting that sources should be credible or similar in order to increase persuasion. Hypothesis 1c stated that an exemplar that is seen as both similar and credible would increase intent, which was supported. However, similarity was a stronger influence on intent, more so than credibility.

According to the results of H1c, a source that is *first* perceived to be similar would *then* be perceived as credible, which in turn would increase the likelihood of an expression of intent of behavior change. Essentially, this study takes the stance that if a source is *not* perceived to be similar it risks being perceived as not being credible to the target population. In order to be seen as credible, the source must first be perceived as similar, not the other way around. While H1(c) was supported, the results of the model also showed that while credibility and similarity are similar measures (which will be discussed later in the limitations section), they are also very different creatures. For this reason, future research should look deeper into what makes similarity and credibility so different as well as to see if using both in persuasive messages is more

effective than simply using credibility. This, in turn, can help organizations create more effective and persuasive messages.

Hypothesis 2 stated that young adult women would perceive a similar source as more credible, which would increase the likelihood they would express likelihood to change their behaviors. The results of this study indicated that young adult women are more likely to say they will change their behaviors if they perceive a source to be more similar to themselves or credible and perceived similarity appears to be a stronger indicator for likely behavior change than similarity and credibility combined. Reasons for this could be the age of the demographic itself, as the idea that someone who is more similar is easier to relate to, as they would "understand" them more, while a source that is dissimilar wouldn't "understand" them (Howard & Kerin, 2011; Naylor, Lamberton, & Norton, 2011). Knowing that young adults are more likely to be persuaded by similar peers can help create more effective campaigns targeted to this demographic.

The results of Hypothesis 2 are important for future health campaigns designed to target college-aged individuals. If college students value similarity over credibility, then simply having a credible source is not enough. Instead, it is important to have a source be similar. For example, if a college wanted to help reduce the spread of sexually transmitted diseases and increase the use of contraceptives on college campuses, it would be best to have a college-aged student who is similar to the population discuss his or her experience with contracting a disease and the struggles living with it. Because of the similarity between the source and the population, the target population would feel that the source understands their attitudes and behaviors, making him or her appear more credible as they share similar experiences. This, in turn, will increase persuasiveness of the message.

Young adults are at risk for a variety of health concerns, ranging from contracting sexually transmitted diseases to drug abuse to alcohol abuse. Because of this, health communicators need to understand the best way to shape persuasive messages for this demographic. If young adults can develop these beneficial health behaviors early, they may maintain these behaviors as they age, which will lead to healthier lives. With this in mind, the results of this study show promise in the use of similar sources to communicate persuasive messages. Information that comes from a similar source would be just as persuasive – if not more – than a credible source. A possible reason for this is the idea that the source shares their attitudes and behaviors, meaning they understand their own attitudes and behaviors (Howard & Kerin, 2011; Naylor, Lamberton, & Norton, 2011) – simply, the source not only "walks the walk" but also "talks the talk." This, in turn, would make sources seem more credible because they not only understand the motives behind behaviors, but also have the life experiences to support their reasons for behavior change.

Outside of health concerns, these findings can also help create more persuasive campaigns in a variety of fields. For example, if a coastal state wanted to encourage male anglers to wear lifejackets, the message's exemplar could be a boater who enjoys fishing with his friends, does not feel wearing a lifejacket is important, and who nearly drowns when he accidently falls overboard. Again, the exemplar would be perceived as similar because of shared behaviors (fishing), attitude (lifejackets are not important), and the demographic (male). This makes the exemplar appear credible, since source and target share demographics, beliefs, and attitudes, so when the exemplar emphasizes the importance of wearing life jackets, the target would have an increased likelihood of modeling the behavior.

Finally, Hypothesis 3 stated that listeners who were transported by the narrative would have increased likelihood that they would change their behaviors. However, the results of this study showed that the exemplar did not transport listeners, which not only does not support the hypothesis, but also does not support past research. Past research has shown that transportation can play a role in increasing the persuasive effects of a message (Kim, Bigman, Leader, Lerman, & Cappella, 2012). In turn, this can increase the likelihood of behavior and attitude change.

Transportation was the most difficult variable to work with for this study. Most studies that looked at the impact of transportation on behavior or attitude change tended to observe television or film media (Murphy, Frank, Moran, & Patnoe-Woodley, 2011; Murphy, Frank, Chatterjee, & Baezconde-Garbanati, 2013; Moyer-Gusé, 2008; Moyer-Gusé & Nabi, 2010), but not other media forms. Seeing how radio can help spread health-related information, especially in countries with little television access (Barz & Cohen, 2011), it is important to understand how transportation in a variety of media work in order to create more effective and persuasive messages. While the literature currently has a wealth of information on the effectiveness of transportation with televised messages, there needs to be more research on transportation in other media. This study looked at how transportation could increase intent to change behaviors after listening to an exemplar, but given how audio media lacks many characteristics of visual media, it is important to understand what causes transportation in audio media to occur.

Certain aspects of the message, such as perceived similarity of the source or the entertaining or engaging nature of the message itself, can increase its beneficial effects. With this in mind, the exemplar was written to be as similar to the source a possible (a college-aged student, a tanner, and one who sees skin-cancer as an inconvenience) and with an engaging message (discovering an abnormal mole, treatment, and becoming healthy). Based on past

research, this should have increased transportation. However, the results showed that the

narrative in this study did not transport the audience. This leads to the question of what, exactly,

causes transportation. Previous studies indicated that transportation can be influenced by

characters who are sympathetic and likeable (Slater, 2002) or when the narrative is engrossing

(Green & Brock, 2000; Kim, Bigman, Leader, Lerman, & Cappella, 2012). However, there could

be certain characteristics that can cause transportation to occur, and these characters may not be

universal. For example, physically seeing a character's facial expressions may cause the

audience to feel the emotions being portrayed, which may transport them. Seeing how other

characters react to upsetting news can also effect transportation. However, these are all physical

cues, which audio might have difficulty recreating. With this in mind, future research should

look deeper into what can cause transportation in audio forms and if audio shares characteristics

with televised media that can effect transportation. By doing so, there could be a greater

understanding of transportation in different media.

Past research has shown that identification with characters and getting lost into the

narrative can transport audiences (Kim, Bigman, Leader, Lerman, & Cappella, 2012), but the

question based on these results is, "What causes identification to occur?" Namely, what causes

identification in a purely audio setting? One variable that could be studied in greater depth would

be the role of emotion. Without visual cues, listeners to an audio exemplar are forced to rely on

vocal characteristics, which could possibly require an exemplar to be more emotive in order to

capture an audience's interest in order to transport them. There is the possibility that an audience

would be more likely to be transported by an exemplar that is more emotive, compared to an

exemplar that is not as emotive. In a purely audio form of media (where many physical

indicators of emotion are absent), future research should look at how emotion could play a role in transporting an audience, especially in regards to audio-based media.

To summarize, this study has expanded on the idea that similarity and credibility can enhance the persuasiveness of messages. However, similarity and credibility were found to act as separate variables, not one in the same, which means that future research should look deeper into understanding the differences between the two. In addition, creators of future persuasive messages should also make sure that their sources should be as similar to the target demographic as possible in order to increase the persuasiveness of the message. This study also found that female college-aged student, in particular, were more likely to change their attitudes and behaviors when the source was similar to them. This indicates that for this particular demographic, similarity is a greater factor in persuasion than credibility, and that messages should have a similar source in order to increase the likelihood of persuasive effects. Finally, this study's results did not support past research where transportation increases the likelihood of behavior change. One possible reason for this is that the message was delivered in an audio format, which may mean that transportation in this format may be different from those in televised media. Since many areas do not have easy access to televised media, it is important to understand how transportation works in a purely audio environment in order to increase the persuasiveness of messages. Future research should also look into what makes transportation occur in a purely audio format.

Chapter 5 Limitations

There were a few limitations for this study. First was that there were issues with the narrative. The audio was recorded using a laptop. As a result, the audio files could have contained distracting background noises and risked being too soft to hear. Initially, the audio was

to be recorded on-campus in a recording studio, but time and scheduling conflicts prevented this. In addition, while audio was used to prevent bias towards physical appearance, it cannot be completely eliminated as people may form biases based on the vocal quality of the speaker, which could have impacted participants' responses.

In addition, the exemplar's narrative was originally written to be between two speakers, where a skin-cancer survivor would discuss her experiences tanning and its risks. The audio would have featured sound effects and background noises in order to sound like an audio drama. This was considered originally in order to transport audiences by creating an engaging storyline that audiences could recognize, as well as ensuring that audiences would have been engaged and paying attention to the exemplar. Also, by having two exemplars, one would be able to react to the other's experiences with skin-cancer, displaying shock and concern, which could have increased transportation effects. However, given the time constraint, it was difficult finding two actors with time to record, and given the difficulties in scheduling the recording time, this narrative was altered to be one exemplar in order to accommodate to the time restraints. If the study were to be redone, this procedure would have been chosen.

Another limitation regarding the recording is that the exemplar recorded the two audios in a more "neutral" tone of voice instead of displaying emotions. This could have influenced the participants' responses, as the narrative itself may not have engaged them. If the exemplar had been more passionate about her experiences, that may have captured participants' attention, which could have increased the likelihood of transportation taking place. If this study was to be redone, the exemplar would have displayed more emotion in order to see if that would have increased transportation.

Second, there were some limitations with data collection. Responses came from a small, private New England university, making the data difficult to generalize to the population at large. While respondents varied in terms of ethnic backgrounds, they were primarily from white males. There were also uneven responses between the two surveys. The sample size total was 170 participants, but there were more responses to the first survey (younger-sounding) than the second survey (older-sounding), which could have influenced the results. There were also some limitations with the survey. In order to increase reliability, numerous items were removed from the scales. While this increased reliability, it did limit what the survey was measuring. It also did not measure transportation in an audio medium, bringing the 7-item scale down to five. While this was still reliable, there were not enough items to truly measure transportation. Ideally, if this study were redone, more items would have been added in order to effectively measure effects of transportation. In addition, only 70 respondents stated they tan indoors, which could have affected the results, since non-tanners may have been more likely to adopt preventative behaviors. In an ideal study, the participants would have been predominantly tanners in order to determine the effectiveness of the message.

Another issue to note with the transportation scale is that it looks more at narrative qualities, asking participants to rate whether or not they could envision the scene in their head or if their minds wandered, not audio. These items are fine for other forms of narratives – it is easy to determine if individuals felt their mind was wandering from a television program or a newspaper article if they found themselves playing with their phone. It is more difficult to determine transportation with audio because of the fact it can be listened anywhere and it may act more as background noise. Individual may simply have audio or radio on while cleaning house or at work, so they may not automatically be paying attention. For this reason, there

should be an audio-based transportation scale. This scale should ask whether the listener was

compelled to listen to and pay attention to the audio exemplar or narrative. Ideally, this scale

would look at what sort of qualities in the audio were transporting the audience, such as

background noise or the emotional cues in an exemplar's voice. By doing so, this scale would

help future researchers understand what makes audio-based exemplars and narratives

transportive instead of relying on scales that focus on different media forms. In turn, this would

help create more effective audio and radio campaign. For this reason, if this study were to be

redone, a new transportation scale would have to be created in order to measure transportation in

terms of audio.

Another issue was the instrument. It was based on items from Murphy's 2013 study,

which were designed with telephone-based surveys in mind and allowed for greater detail (such

as asking if accents or the use of foreign were distracting or if the participant was interrupted

during the viewing). This did not translate well for online-based survey given the length (which

would have risked respondents not completing the survey); so many aspects of Murphy's

original scale were lost. If this study were to be redone, the survey would include similar items

from Murphy's scale, such as asking if the participants were distracted by their environment or

by an aspect of the audio. Items such as these could possibly help identify why transportation did

not occur.

In addition, Murphy's item sale included questions regarding the participant's knowledge

about cervical cancer. Given the length of this study's survey, questions asking participants

about information on skin cancer were not included. If this study were to be redone, these

questions should be added in order to help determine the participant's attitudes on skin cancer

and tanning prior to the start of listening to the audio. By seeing what their beliefs were prior to

and after listening to the exemplar, the resulting data could show whether the exemplar's attitudes changed, which could have affected their intent.

Another issue with the survey involved McCroskey's credibility scale. This scale was difficult to create in an online setting, which might have influenced participants' responses. The instrument is also 18-items long, which may have resulted in some participants simply checking off their responses in order to complete the survey quickly. Some items could have been deleted (such as moral/immoral, honorable/dishonorable, and untrained/trained) in order to simplify the results. However, if items are to be deleted, a focus group should be used in order to determine if the remaining items still apply to the audio.

Third, there were issues of data analysis. The reliability score for transportation was .64, indicating that respondents were not transported or engaged by the narrative, which could influence their likelihood to change their behaviors. Results also indicated multicollinearity between the variables of credibility and similarity, which could have increased the significance of the model. However, multicollinearity was at the .6 level instead of .8 or .9, indicating that the variables are similar enough, but still very different from each other.

Last, although behavioral intent can predict future behavior, it cannot guarantee it. Listeners of the narrative may not alter their behavior in the future, even though they indicate intent to change their behaviors.

Skin cancer is a growing concern among young adult tanners, especially women. Common myths about skin cancer (such as it being a non-threatening disease), as well as the popularity of UV tanning have led to increased instances of deadly forms of the disease in the young adult population. Because of this, it is important to present correct information, risks, and preventative behaviors about this disease in order to help reduce the rate of skin cancers in the

target group. Using narratives with sources perceived as similar may be an effective way to inform the target population of the risks of tanning and persuade it to take up more preventative behaviors. Finally, by using radio, these narratives can be produced at a low cost, who makes them financially effective compared to television ads, and they can reach a much wider audience. By using these cost-effective narratives, we can help spread awareness and information on a disease to a population that needs it more than ever.

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Appendix A: Consent Form

Informed Consent Form
Research Study

Investigators: *Christine Lemme*

Bryant University
(401) 480-2713
clemme@bryant.edu

YOU MUST BE EIGHTEEN OR OLDER TO PARTICIPATE IN THIS STUDY. IF YOU ARE
NOT 18, STOP IMMEDIATELY AND DO NOT ANSWER THE QUESTIONS ON THE
SURVEY.

1. Statement of purpose

You are invited to participate in a study on radio programming. We hope to learn how to
effectively create a compelling story. You were selected as a possible participant in this study
because you fit into the program's target demographic.

2. Description, Including Risks and Benefits

If you decide to participate, you will help us expand current knowledge on the effectiveness on
narrative. We will conduct an experiment involving the following procedures: You will sit and
listen to a short three to five minute radio drama about a cancer survivor. Afterwards, you will be
asked to fill out a short survey on your opinion on the drama. Completion of the survey will be
rewarded with extra credit for your class. If you feel uncomfortable with the content of the drama,
you may leave at any tie.

3. Confidentiality

Any information obtained in connection with this study will remain confidential and will not be
disclosed to the general public in a way that can be traced to you. In any written reports or
publications, no participant other than the researchers will be identified, and only anonymous
data will be presented.

This consent form, with your signature, will be stored separately and independently from the data
collected so that your responses will not be identifiable.

4. Statement that Participation Is Voluntary

Your participation is voluntary, and your decision whether or not to participate will not affect
your future relations with Bryant University or its employees in any way. If you decide to

participate, you are also free to discontinue participation at any time without affecting such relationships. However, it is requested that you notify the investigator of this.

5. Persons to Contact

If you have any questions, please contact Christine Lemme at either 401-480-2713 or at clemme@bryant.edu. If you have any additional questions later, we will be happy to answer them. You can have a copy of this form to keep.

6. Signature Indicating Informed Consent

Please sign below if you have decided to participate. Your signature indicates only that you are at least 18 years of age and have read the information provided above. Your signature does not obligate you to participate, and you may withdraw from the study at any time without consequences.

_____   _____

Signature of Participant   Date

_____   _____

Signature of Principal Investigator   Date

Appendix B: Debriefing Statement

Investigators: *Christine Lemme*

<div align="right">

Bryant University
(401) 480-2714
clemme@bryant.edu

</div>

Study of Narrative Radio Campaigns

        Thank you again for your willingness to participate in this study. Your responses will make a valuable contribution to understanding the effectiveness of narratives in an audio setting. Specifically, this study is designed to look at narratives as a way to inform others on health behaviors. If you have any questions or are interested in learning about the results of this study, please contact the principal investigator at the email address or phone number listed above.
        Hopefully, participating in this study was not upsetting to you. However, if becoming upset when thinking about cancer is completely normal. For example, it would not be unusual to feel upset discussing cancer if someone we love or know has had cancer. If you feel upset for any reason, you are strongly encouraged to contact one of the organizations listed below on this sheet, as each has the resources available to help students experiencing distress.

Nonreligious Organizations

Department of Counseling Services
Phone: (401) 232-6045

Religious Organizations

Interfaith Center
Contact: Fr. Roman R. Manchester, Rabbi Steven Jablow, Reverend Philip Deven.

Appendix C: Survey

What is your age?   _____

What is your gender?

☐ Male
☐ Female

What is your ethnicity?

☐ White
☐ Hispanic or Latino
☐ Black or African American
☐ Native American or American Indian
☐ Asian / Pacific Islander
☐ Other

Have you ever tanned at a tanning salon?

☐ Yes
☐ No

Is Ana, the woman in the narrative, younger or older than you?

☐ Younger
☐ Older

Instructions: On a scale from 1 to 5, where 1 means strongly disagree and 5 means strongly agree, please indicate how much you agree with each of the following statements.

1. *After I finished listening to the program,*   1   2   3   4   5
I found it easy to put it out of my mind.

2. *I could picture myself in the scene*   1   2   3   4   5
depicted in the program.

3. *I found my mind wandering*   1   2   3   4   5
while listening to the program.

4. *The events in the program are*   1   2   3   4   5
relevant to my everyday life.

5. While I was listening to the program, I could   1   2   3   4   5
easily picture the event in it taking place.

6. I liked the narrative   1   2   3   4   5

7. I found the narrative interesting.   1   2   3   4   5

I am now going to ask you some questions about Ana, the woman who went for a full body skin check, where 1 means strongly disagree and 5 means strongly agree, please indicate how much you agree with each of the following statements.

1. I liked Ana   1   2   3   4   5

2. I am similar to Ana   1   2   3   4   5

3. Ana is basically honest.   1   2   3   4   5

4. Ana is not a good person.   1   2   3   4   5

5. I trust Ana to tell the truth   1   2   3   4   5
about this topic.

6. Under most circumstances I would   1   2   3   4   5
be likely to believe what this speaker says
about the topic.

7. I admire Ana.   1   2   3   4   5

8. I do not trust Ana to   1   2   3   4   5
tell the truth on this topic.

On the scales below, indicate your feelings about Ana. Numbers 1 and 7 indicate a very strong feeling. Numbers 2 and 6 indicate a strong feeling. Numbers 3 and 5 indicate a fairly weak feeling. Number 4 indicates you are undecided.

		1	2	3	4	5	6	7	
1.	*Intelligent*	1	2	3	4	5	6	7	*Unintelligent*
2.	*Untrained*	1	2	3	4	5	6	7	*Trained*
3.	*Cares about me*	1	2	3	4	5	6	7	*Doesn't care about about me*
4.	*Honest*	1	2	3	4	5	6	7	*Dishonest*
5.	*Has my interests heart*	1	2	3	4	5	6	7	*Doesn't have my at heart*
6.	*Untrustworthy*	1	2	3	4	5	6	7	*Trustworthy*
7.	*Not an expert*	1	2	3	4	5	6	7	*Expert*
8.	*Self-centered*	1	2	3	4	5	6	7	*Not self-centered centered*
9.	*Concerned me*	1	2	3	4	5	6	7	*Not concerned with with me*
10.	*Honorable*	1	2	3	4	5	6	7	*Dishonorable*
11.	*Informed*	1	2	3	4	5	6	7	*Uninformed*
12.	*Moral*	1	2	3	4	5	6	7	*Immoral*
13.	*Incompetent*	1	2	3	4	5	6	7	*Competent*
14.	*Unethical*	1	2	3	4	5	6	7	*Ethical*
15.	*Insensitive*	1	2	3	4	5	6	7	*Sensitive*
16.	*Bright*	1	2	3	4	5	6	7	*Stupid*
17.	*Phony*	1	2	3	4	5	6	7	*Genuine*
18.	*Ignorant*	1	2	3	4	5	6	7	*Understanding*

Next I'm going to ask you about your feelings on certain behaviors, where 1 means strongly disagree and 5 means strongly agree, please indicate how much you agree with each of the following statements.

1. You are confident that you   1   2   3   4   5
could get a skin cancer screening

2. You are confident are you that you could   1   2   3   4   5
follow up for treatment if you had an abnormal
mole

3. Getting a full body skin check   1   2   3   4   5
is effective in preventing skin cancer

4. Getting a follow up on an abnormal mole   1   2   3   4   5
is effective in preventing skin cancer

5. You are likely to get a full body   1   2   3   4   5
check within the next 2 year

6. You would be likely to return for follow-up   1   2   3   4   5
 treatment if you have an abnormal mole

Appendix D: Script

My name is Ana and I live in Boston. I lived in Florida for a few years for school and I used to work at one of the local theme parks. I enjoy being outside so I loved living in Florida. I would swim, bike, walk, and visit the beach any time I could. When I went to the beach I tanned a lot because I wanted a nice glow. I never used sunscreen, just lathered up the tanning oil and laid out in the sun. I don't think I used sunscreen once!

When I came back home to Boston, I really missed the color and glow I would get from tanning and I hated the fact I looked so sickly pale. So I started to tan about once every two weeks when I moved back home.

My grandmother begged me not to tan because she was scared that I'd get skin cancer. I didn't believe her. I would only tan every two weeks – it wasn't like I was tanning every day and I felt prettier and thinner with a tan. It wasn't like I went tanning every single day – once or twice a week wasn't going to hurt me. Besides, I'd been vigilant about getting my skin checked once a year, because I'm pretty mole-y, and my dermatologist never saw anything odd. So why should I worry about skin cancer?

[*soft sigh*]

And then one day my dermatologist noticed a really weird lesion on my back and my foot. The way they looked just made him really uncomfortable, so he had them both removed and sent them off to be biopsied, just in case. I was a bit nervous, but when I didn't hear back from him for two days, I didn't think anything of it.

Then he called me and told me that the biopsy came back. The mole he took out of my back was in situ, which means that it was contained to the upper layer of my skin and that it's 100 percent curable with surgery. If I didn't get it removed, could metastasize

I didn't believe him at first - how could I get skin cancer? I only tanned once in a while, I told him.

That was when he told me that indoor tanning can lead to increased risk of developing melanoma by 74 percent and are 2.5 times more likely to develop squamous cell carcinoma, and 1.5 times more likely to develop basal cell carcinoma compared to people who use indoor tanning beds, and that indoor tanning was just as carcinogenic as cigarettes. He said that I was lucky that the melanoma was just on the surface of my skin – if it went any deeper, it would have become malignant and really hard to take care of.

I couldn't believe I had done that to myself by tanning. I had to tell my mom and grandma, and hear the cry. That was the most painful moment in my life.

It was a three-hour surgery, and my recovery was really painful. I couldn't sit, stand, or sleep, and my mom had to take care of me. It was so humiliating, needing to have my mom help me

walk or sit down. I couldn't even shower alone without being in pain. For a year after the surgery, I had to go to the dermatologist every three months. Now I see him every four; he's taken photos of all my moles so that he can monitor my skin for changes. I totally stopped tanning because the risk of having another melanoma case like that terrifies me.

Before my last check-up, I noticed a mole on my upper right thigh w scabbing over and itching a lot. My dermatologist had told me to tell him about moles like this. The mole on my upper back had grown a little, so he biopsied that and the one on my leg. It was diagnosed as an *atypical* mole, which can turn into skin cancer. I'll be getting that mole removed soon.

It was really disheartening, to know it developed after I stopped tanning, and it's made me realize that the damage has already been done.

It seems funny now, because I once thought I was invincible and that tanning to look good was worth the risk. Now I have a huge scar and I constantly worry that one of my moles may someday turn cancerous. Thankfully my dermatologist has found and removed a few atypical moles before they can turn cancerous. I am so thankful for this, because if I didn't bother to get that first mole checked I could have died. Tanning isn't worth that.

Appendix E: Instruments

Table 1

Transportation Scale

1. After I finished listening to the program, I found it easy to put it out of my mind.
2. I could picture myself in the scene depicted in the program.
3. I found my mind wandering while listening to the program.
4. The events in the program are relevant to my everyday life.
5. While I was listening to the program, I could easily picture the event in it taking place.
6. I liked the narrative
7. I found the narrative interesting.

Table 2

Character Scale

1. I liked the speaker
2. I am similar to the speaker
3. The speaker is basically honest.
4. The speaker is not a good person.
5. I trust the speaker to tell the truth about this topic.
6. Under most circumstances, I would be likely to believe what this speaker says about the topic.
7. I admire the speaker
8. I do not trust the speaker to tell the truth on this topic.

Table 3

Intent Scale

1. You are confident that you could get a skin cancer screening
2. You are confident are you that you could follow up for treatment if you had an abnormal mole
3. Getting a full body skin check is effective in preventing skin cancer
4. Getting a follow up on an abnormal mole is effective in preventing skin cancer
5. You are likely to get a full body check within the next 2 year
6. You would be likely to return for follow-up treatment if you have an abnormal mole

Appendix F: Statistic Tables

Table 1: H1a and H1b Correlations

Correlations

	Similarity	Credibility	Intent
Similarity		.625**	.233**
Credibility	.625**		.191*
Intent	.233**	.191*	

Note: *p < .05. ** p < .01.

Table 2: H1c
Model

Model Summary

	df	F	n	p
Model 1	1	8.823	170	.009
Model 2	2	4.789	170	.009

Notes. $R^2 = .54$ (p < .09)

Table 3: H1c Regression

Regression

	B	SE B	β
Constant	2.016	.331	
Similarity	.209	.118	.171
Credibility	.068	.077	.084

Notes. $R^2 = .54$ (p < .09)

Table 4: H2 Model Summary

Model Summary

	df	F	n	p
Similarity	1	4.076	60	.048
Similarity, Credibility	1	2.146	60	.148

Notes. $R^2 = .100 (p < .01)$

Table 5: H2 Regression

Regression

	B	SE B	β
Constant (S1)	2.053	.479	
Similarity	.295	.146	.256
Constant (S2)	2.769	.141	
Similarity	.096	.199	.084
Credibility	.195	.133	.252

Notes. $R^2 = .100 (p < .01)$

Table 7: H3 ANOVA

ANOVA

	df	F	n	p
Between Groups	1	2.756	170	0.099
Within Groups	168			