HOPE APPEALS META-ANALYSIS

by

JESSICA LEDFORD

Bachelor of Arts, 2018
University of Montevallo
Montevallo, Alabama

Submitted to the Graduate Faculty of the
College of Communication
Texas Christian University
In partial fulfillment of the
requirements for the degree of

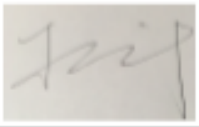
Master of Science
May 2020

BOB SCHIEFFER
COLLEGE of COMMUNICATION

HOPE APPEALS META-ANALYSIS

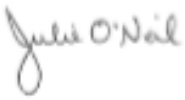
Thesis approved:

Qinghua Yang — 4/23/2020
Committee Chair — Date



Jie Zhuang — 4/23/2020
Committee Member — Date

Adam Richards — 4/23/2020
Committee Member — Date



4/23/20
Associate Dean — Date

ACKNOWLEDGEMENTS

There are many people that I would like to thank for their assistance for helping me along my educational path. I especially want to thank the members of my thesis committee, including Qinghua Yang, Adam Richards, and Jie Zhuang.

TABLE OF CONTENTS

List of Tables

List of Figures

Hope Appeals Meta-Analysis

Emotions are an essential part of the human experience and are a particular interest area for communication studies, psychology, sociology, and marketing researchers. For over thirty years researchers interested in persuasion have explored how emotions can impact and influence persuasion outcomes (Nabi, 2002). One of the most useful models for using emotions in the context of persuasion is the discrete emotion model. This model states that every emotion is separate, and can be categorized by factors including its affect, cognitive patterns, and physiological responses (Lazarus, 1999; Nabi, 2002). Discrete emotions can be utilized in persuasion in many effective ways according to Dillard and Seo (2000).

A large amount of this research has focused on emotional appeals that utilize fear and its effect on persuasion outcomes such as behavioral intent, perception of risk, and a variety of other persuasion outcomes (Nabi, 2002; Tannenbaum et al., 2015; Witte & Allen, 2000). However, using a positive emotion such as hope may provide another means of persuasion. In particular, hope as an emotional appeal has been studied comparatively little (Chadwick, 2014). In contrast to this trend in research, according to McInnes and de Mello (2005) and Chadwick (2014) hope appeals in persuasion may encourage audiences to change their behavior in accordance to individual goals, perceived importance, relevance, possibility, and the future orientation of the topic.

Hope as an emotion has been used extensively in many areas including rhetoric, marketing, and examined as a lived experience. Hope is an emotion with a myriad of meanings, but Snyder and Lazarus's definitions often earn the most academic attention. Hope as an emotion has been used in not only political campaigns such as Barack Obama's 2008 campaign, but also by religious leaders to inspire faith in their congregations. In addition, hope is often seen

as a fundamental aspect of the human condition that can be relied upon during hardships. Research detailing hope as an experience that terminally ill individuals go through is a foundational piece of some research. Of course, hope can also be used to persuade as marketers have utilized hope for many years.

Empirical studies of hope appeals have found mixed results. Some studies have found these appeals to have a positive effect on behavior (Chadwick, 2014; Chadwick, 2015). However, other studies have found that hope appeals may have very little to no effect on persuasive outcomes such as behavior (Lee, Chang, and Chen, 2017; Lu, 2016). This meta-analysis examines how hope appeals effect persuasive outcomes. Due to the lack of formal research on hope appeals this meta-analysis will help summarize and guide research. This synthesis examined 15 articles that utilized hope appeals in experimental designs and focused on persuasive outcomes. The topics of these articles were varied including health persuasion, environmental persuasion, and marketing. This meta-analysis seeks to answer 3 fundamental questions: (a) what are the overall effects of hope appeals, (b) what is the magnitude of these effects, and (c) what moderators effect the efficiency of the hope appeals.

Literature Review

Emotions

Nabi (2002) stated that modern theories of emotion trace their theoretical roots back to Darwin. According to Darwin's theory of evolution, emotions elicit specific behaviors which then serve a function to allow a species to adapt to their environment and increase their chance of survival. Emotions are an essential part of human experience and most people have some intrinsic understanding of basic emotions even if they cannot definitively state what they are or categorize them. This is also true for emotion researchers as there is surprisingly little consensus

on how emotions should be defined. Moors (2009) related the five components — motivational, somatic, feeling, cognitive, and motor. These components correspond to the four distinct functions, namely evaluating, monitoring, preparing for action, and behaving, which are often used to define emotions in research. All five components must be present for a state to be considered an emotion, and there are a variety of states that are not included within this definition. For instance, Leventhal and Scherer (1987) explained that some emotion researchers agree that reflexes cannot be considered emotions, due to their lack of cognitive component in response to a stimulus in the environment. Attempting to use a single component such as 'feeling' to describe emotions is also not sufficient, as feeling states (such as 'cold', 'hot', and 'painful') cannot be termed emotions as they also lack a cognitive component (Moors, 2009). On the other hand, attitudes are purely cognitive functions that can be positively or negatively valanced. Though attitudes may seem similar to emotions in this way, they also cannot be included in the definition as they contain no motor component (Lang, 1985; Scherer, 2005). There are various theories of emotion that can be applied throughout many disciplines and contexts that study emotions and how they interact with various outcomes. However, the discrete emotion model has been extensively used as a guide for emotion (Nabi, 2002).

Discrete Emotion Model. Nabi (2002) stated that the discrete emotion model is a functional model of emotion. Functional approaches to emotion emphasize the concept that emotions are evolutionary based adaptations that fulfill specific functions (Nabi, 2002). The discrete emotion model proposes that emotions are intense psychological and evaluative reactions to an external stimulus (Nabi, 2002; Ortony, Clore, & Collins, 1988). This model succinctly categorizes different states according to their "core relational themes", which describe various discrete emotions (Lazarus, 1991; Nabi, 2002). Each discrete emotion is comprised of a

unique physiological response, subjective feelings, motor expressions, cognitions, and behavior tendencies (Lazarus, 1991; Nabi, 2002; Ortony, Clore, & Collins, 1988). This model is useful in describing emotions, and appraisal theories are often used to create a framework for the mechanisms of discrete emotions (Dillard & Seo, 2013). Lazarus (1991) stated that emotions originate from evaluations of external stimuli in relation to personal objectives such as goals and desires. Both appraisal theories and the discrete emotion model conceptualize that emotions can be categorized by their negative or positive valence (Nabi, 2002). The negative emotion category is comprised of fear, guilt/shame, anger, disgust, and sadness. Positive emotions consist of positively valanced emotional states such as relief, pride, compassion, happiness, and hope. Persuasion researchers are led to study how emotions can be used within messages due to the specific action tendencies that discrete emotions lead to (Dillard & Nabi, 2006; Dillard & Seo, 2013).

Emotional Appeals

The use of emotions in persuasion has fascinated persuasion professionals and researchers since Aristotle (Dillard & Seo, 2013). Aristotle provided some of the earliest discussion of emotion and how to effectively use it to persuade others (Aristotle, 2007). Nabi (2002) reviewed that emotions can affect persuasion through acting as a heuristic device, by effecting information processing, and by influencing how information is processed. Emotions may be used in persuasion by acting as a type of heuristic, or a mental shortcut in order to guide decision making (Cacioppo & Petty, 1989). Emotional appeals may also influence information processing by influencing the depth and direction of the processing of the message (Nabi, 2002). Emotions may also serve to create selective information processing as Nabi (2003, 2007) stated

that emotions may be used by media to create frames for viewing and interpreting information through. Emotions can be embedded within a message in variety of ways, including framing.

Dillard and Seo (2013) summarized that emotions can be elicited through many parts of a persuasive message including its content, style (framing), and accompaniments (such as images). Emotional appeals can be made in the content of a message based on the theme, narrative, or topic that the message focuses on (Dillard & Shen, 2013; Shen & Bigsby, 2013). Emotional appeals can also be used through the style of the message. Style in a persuasive message can refer to language choices and how these choices frame the message to create a specific emotion (Dillard & Seo, 2013). Elements that accompany a message, such as an image, can also induce emotions. These additional elements are not superfluous, as they may function as powerful appeals on their own (Dillard & Seo, 2013). In general, emotional appeals have been shown through various studies to be effective persuasion devices when compared to non-emotional messages (Dillard & Nabi, 2006; Peters, Lipkus, & Diefenbach, 2006). However, emotional appeals can largely depend on message factors such as adequate message targeting and the avoidance of perceived source manipulation from the audience (Turner, 2007). Emotional appeals are often categorized by the discrete emotion that they are attempting to elicit, and due to discrete emotions being categorized by their valence, so to can emotional appeals.

Negative Emotional Appeals

Negative emotional appeals consist of several negatively valanced emotions including fear, anger, and disgust (Nabi, 2002). Of these negative emotions, fear appeals have received a large amount of scholarly research and focus (Nabi, 2002). Fear was a focus of persuasion for almost twenty years from 1953 to around 1973, and it was only later that the important factors of perceived threat and perceived efficacy were included in research on fear (Witte & Allen, 2000).

Fear is defined as a negatively valanced, high arousal emotion (Witte, 1992). Hale and Dillard (1995) stated that fear appeals emphasize the harmful consequences of not complying with the request within the message. In general, fear appeals have been shown to be effective through meta-analyses (Witte & Allen, 2000; Tannenbaum, et al., 2015). Relatedly, recent research on anger appeals suggests that they may have a small, non-significant effect on persuasion outcomes (Walter, Tukachinsky, Pelled, & Nabi, 2019).

Other negative emotional appeals that may have positive persuasive effects include guilt and sadness appeals. Overall, research tends to suggest that guilt appeals are effective, as Xu and Gao's (2018) meta-analysis found that guilt appeals were effective. Although Nabi (2002) asserted that there is little research on intentional sadness appeals, there has been some investigation about unintentional sadness appeals. Unintentional sadness appeals appear to be positively correlated with persuasive outcomes including behavioral intent and attitude change (Nabi, 2002). Although it seems that negative emotional appeals can improve persuasion, disgust appears to have primarily negative effects. According to Nabi (2002), disgust appeals have often been used in conjunction with fear appeals, especially in the context of health messages (images of decaying teeth for example). The few studies that have examined disgust appeals found that they often negatively impact persuasive outcomes such as attitude toward the object and message (Nabi, 1998; Dens, De Pelsmacker, & Janssens, 2008).

Positive Emotional Appeals

Positive emotional appeals as a whole are severely understudied. The only exception to this rule is humor appeals, which have seen an increase in research in recent years. Nabi (2002) makes a direct connection between "happiness" appeals and humor, due to the lack of any true operationalization distinguishing the two in a substantial manner. Humor was originally studied

in the earliest days of radio advertising, but it received little scholarly attention until the early 1970s (Gulas & Weinberger, 2006). According to Gulas and Weinberger (2006), there is no universally accepted definition of humor used within research in any discipline. However, researchers have made some attempts to define humor. Sternthal and Craig (1973) stated that humor can be defined by its stimulus properties, the responses elicited, and by the audience's own perceptions of the message as humor. Contemporary scholars have further refined the conceptualization of humor as Martin and Ford (2007) states that humor is a complex concept and is comprised of behavioral, cognitive, and related concepts. Meyer (2000) stated that humor is often elicited when a situation is perceived as unusual or unexpected. Humor is a popular appeal used by advertising professionals as Gulas, McKeage, and Weinberger (2010) states that as much as 70% of advertisements that air during popular events rely on humor. Humor's popularity may not be in vain as Einsend (2009) found that humor appeals appear to increase brand liking, intent to purchase the product advertised, and attention.

Compassion and empathy are related positive emotions and carry different focuses than pride. Compassion is defined as the altruistic concern for another being and is further characterized by a desire to relieve the suffering of that being (Lazarus, 1991). Empathy, however, is a slightly different emotional state. Hoffman (2008) stated that empathy is an emotional state that is triggered as a response to observing another's situation. The emotional state that is triggered in the observer closely reflects what the observer themselves would feel in the situation that the other individual is in. Both compassion and empathy can be used in different ways to improve persuasion effects. Compassion has been shown to lead to helping behaviors, and increased policy support for climate change (Condon & DeSteno, 2011; Leiberg Klimecki, & Singer, 2011; Lu & Schuldt, 2016).

Hope

Hope is an ancient concept, known specifically to the ancient Greeks, through the myth of Prometheus and Pandora. As Synder (2000) asserts this ancient myth may shine light on how hope has been regarded throughout history. Some philosophers throughout time have debated if hope should even be regarded as a virtue or is positive for humans. Some historical authors including Benjamin Franklin, Francis Bacon, and Quintilus have asserted that hope itself is a deception and an illusion (Snyder, 2000). However, this is not to say that hope has always been regarded as negative throughout history. Synder (2000), summarizing the psychological analysis of hope as a emotion, states that it was not until the 1960s and 1970s that hope began to be regarded as a positive experience. However, even though this nascent unity about hope there were fractures as to the definition of it (MacInnes and Chun, 2006). This schism has propagated to current research as discussed by both Chadwick (2014) and McInnes and Chun (2006). However, of the myriad of definitions there are two that has influenced scholarly work immensely. Synder and Lazarus approach the defining of hope in different ways, but both perspectives generate relevant research in their own turn.

Synder's definition of hope stems from the three main constructs of goals, pathways, and agency. Hope, according to Synder, Rand, and Sigmon (2002), is the belief that one can find avenues of action to achieve goals. Synder (1994) states that one of the foundational underpinnings of hope is that humans are goal directed beings and will assert actions that will further their own goals. In order to reach these goals a individual will conceptualize one or more routes to their goal. These cognitive routes or plans are referred to as pathways. An individual is motivated to seek out and complete one of these pathways through their agency. Synder states that agency within this context refers to the individual's perception of their capability to begin

and move along the pathway they have formed to their goal. It is important to note that this conceptualization of hope emphasizes the cognitive aspects, almost to the exclusion of all other components of emotion such as affect (Chadwick, 2014; Synder, 2002). However, Lazarus's definition does take these missing components into account.

Hope is a positively valanced discrete emotion that emphasizes the possibility for a better future or outcome (MacInnis & de Mello, 2005; Chadwick, 2014; Lazarus, 1991; 2001). Chadwick (2014) stated that it is an emotion that is elicited in response to relevant stimuli that is perceived as important, possible, consistent with goals, and may lead to a favorable outcome. Hope is positively correlated with other positively valanced emotions (optimism, happiness, etc.) and negatively correlated with negative emotions such as fear and anger (Smith, Haynes, Lazarus, & Pope, 1993). However, hope as an emotion is not entirely focused on positive events as Lazarus (1991) originally conceived hope as a somewhat ambiguous emotion. According to Lazarus (1991), hope carries the connotation that the hoped-for outcome may not occur or at least it has not occurred yet. Lazarus (2001) stated that hope "often arises under conditions in which we are threatened but hope for the best" (p. 65). Hope also holds the connotation that the individual recognizes some aspect of a current situation is negative, but with future expectation of improvement (Lazarus, 2001).

Hope in Rhetoric.

Hope has been used for many purposes within rhetoric. Some of the most prolific uses come from political rhetoric such as Barack Obama's 2008 many campaign speeches that alluded to the new hope for the American people if he was elected (Chadwick, 2014). In fact, hope was such a central concept to his campaign that the artist, Shepard Fairey, created a now famous poster displaying then Senator Obama's portraite with the 'hope' displayed below in large

lettering. In addition, then Senator Barack Obama's keynote speech for the 2004 Democratic National Convention. According to Atwater (2007) states that Senator Obama utilized hope by building a series of narratives for the audience that show case what the world could be like, and the implication that everyone under his American dream will prosper.

In addition, hope is often used as a rhetorical device within religious contexts. Christanity in particular carries with it the use of hope as a device for the faithful to maintain faith and empower their attendees. Specifically, in pastoral and theological research and commentary there is the concept of 'the theology of hope'. This concept was pioneered by Jorgen Moltmann in his 1964 treatise on this new theological viewpoint, *The Theology of* Hope. The theology of hope asserts that the Christian God, instead of being outside of circumstance and time, actually exists within time with humanity. Thus, God is not privy to an all-encompassing knowledge of eternity which leads to the conceptualization of possibility for a better future, i.e. hope. Within Moltmann's conceptualization the God of the theology of hope is a God who focuses on promises for the future, and the expectation for future salvation.

This use of hope as a basis for religious rhetoric has stood the test of time as Martin Luther King Jr. as well as contemporary leaders refer to hope greatly within their rhetoric. Joel Osteen, a well-known contemporary televangelist whose sermons often utilize hope both implicitly and explicitly. Sodal's (2010) analysis claims that Osteen uses images of hope as he often refers to the possibility of freedom within his congregation. In conjunction to this verbal invoking of hope and possibility he also implicitly alludes to hope through his non-verbal gestures. Sodal (2010) found that when Osteen was utilizing a particularly important aspect of hope or freedom he would hold out his right arm and hand, in a gesture not unlike the Statue of Liberty holding her torch. This use of hope as a rhetorical device within religious contexts

reflects findings from previous researchers that have found that hope can be made apparent in individuals through the human-divine connection (Rosewall, 2011).

Hope is clearly a useful resource to use within formal rhetoric such as the realms of politics and organized religion throughout history. These rhetorical actors utilize hope as a device to both inspire change as well as maintain a sense of morale or justification. Hope can be quite the powerful rhetorical agent as it was a foundational aspect of Barack Obama's 2008 presidential campaign, which may have assisted him in winning the presidency.

Hope is an important tool for persuasion within rhetoric. Hope can assist in both winning elections and in religious followers. Rhetoric is one of the oldest arts of persuasion as it was utilized in ancient Greece in order to sway politics (O'Keefe, 2003). The use of hope in rhetoric displays the inherent usefulness of this emotion for persuasion and influence. By utilizing hope in rhetoric speakers can provide an impetus of action, whether that is to vote for a specific person or to fulfill a religious duty. This is an important consideration for the use of hope in persuasion as both rhetoric and persuasion have a similar overall goal. That goal being, to inspire an internal change within an audience whether attitude, behavior, or cognition. By reviewing how hope has been used throughout rhetoric it can offer a glimpse into the persuasive power of these appeals. Hope has been used within the public sphere of rhetoric, but it has also been investigated within the context of lived experiences.

Hope as Lived Experience.

Hope is an emotion that has a significant connection to the human condition. Scholars of many different areas including psychology, communication, anthropology, and sociology have endeavored to examine how humans relate to and rely on this emotion (Lueck, 2007; Snyder,

2000; Chadwick, 2014). Hope within the context of lived experience is often studied within the similar process of coping. Individuals who are experiencing hardship, whether it occurs from societal, health, or other contexts, often experience and rely on hope.

Although many contexts may facilitate examinations of hope as a lived experience, chronic and terminal illness as it relates to hope has produced a robust amount of literature. Here we once again see a divergent definition of hope as Scanlon (1989) as it is specified as the belief that better circumstances can occur over the following moments, days, weeks, etc. This is often complicated by the nature of the context as the individuals are aware that there is ultimately a negative outcome of death. Although there is a proscribed definition of hope within this context, there has been substantial investigation into how hope is individually constructed for both patients and their families.

Qualitative analysis of terminally ill individuals has found a myriad of core concepts of hope as a response to diagnosis. Examples of these include Parse's (1999) narrative investigation which found that individuals conceived and related hope in many different ways including the expanding of horizons, and the anticipation of both possibilities and obstacles. Interestingly, Benzein, Norberg, and Saveman (2001) found that there is an overriding dialectical tension between two specific types of hope in terminally ill individuals. These authors found that there was a theme of a hope for a cure for their illness, which the authors specified as hoping for something, as well as hope that came from making peace with the fact that the inevitable end of the illness was death. This seemingly contradictory theme of hope does not involve the individual giving up on life or themselves, but instead it involves a deeply personal reconciliation with the death process.

Hope may be fostered or elicited for individuals in these trying conditions in a variety of ways. Herth (1990) and Fleming (1997) found that one strategy to increase hope was through the religious faith of the individual. In addition, interpersonal relationships may elicit hope in trying circumstances as Benzien et al. (2001) and Hail (1990) found that hope was maintained and increased through the establishment and maintenance of supportive interpersonal relationships. Hope is a diverse human experience that can alleviate the most difficult periods in an individual's life. Despite this essential human connection hope can also be used for more materialistic and monetary purposes such as marketing.

Hope in Marketing.

Marketing is a influence and persuasion driven discipline. The primary purpose of marketing and advertising is to persuade the audience to fulfill the specific behavior of purchasing a item or service. Shultz (2009) provides this definition of marketing: "Marketing is a form of constructive engagement - a societal function and a systemic set of processes for creating, communicating, and delivering value to customers and for managing customer and societal relationships in ways that benefit local and global stakeholders of these processes (p. 293)." This definition clearly highlights the foundational role of communication in the marketing process. One part of communication is persuasion which is described by O'Keefe (2008) as the changing of mental states through communication. As both marketing and persuasion explicitly rely on communication to enact change it is important to include it within our discussion of hope appeals. In fact, hope appeals have been theorized about within the context of marketing since McInnis and DeMello (2005).

McInnis and DeMello (2005) laid some of the most effective foundational work for the definition and utilization of hope within a practical persuasive context. Specifically, the use of

hope in marketing and advertising has been used in a colloquial context for many years (McInnis and DeMello, 2005). The advertising world provides many examples of hope used to help inspire the public to reach their goals by consuming their product or relying on a brand. McInnis and Chun (2006) state that consumers experience hope as related to marketing on an individual level, outcome level, and product level. Individual level goals primarily focus on self-concept and how individuals relate to time and experiences.

Actual selves are rooted within the individual's present time and experiences, while other selves such as the feared self and the hoped-for self are more concerned with a future orientation of time. Specifically, the feared self is based on the possibility of negative outcomes in relation to the individual's goals. In contrast, the hoped-for self is comprised of future, positive, goal congruent outcomes. This is an important concept within marketing as prior research has found that consumers often utilize a vision of the hoped-for self rather than the current self when making specific brand purchasing decisions (Markus and Nurius 1986). This dependence on future orientation and goal congruence is later emphasized and further detailed by Chadwick (2014) in the creation of persuasive hope theory. The other two levels that MacInnis and Chun (2006) assert are outcome and product levels. Hoped for outcomes are primarily concerned with what specific end is being achieved by the individual. Whereas, hoped for products focuses not on the outcome or the self-concept that will be achieved through the purchase, but instead on the product itself and what it represents to the individual in relation to their goals.

Brands can manipulate consumer's hope as it relates to products in order to achieve a more positive view of the brand in question (Fazal-e-Hasana, Ahmadib, Mortimerc, Grimmera, and Kelly, 2018). Although hope within a marketing context may be seen as inherently positive it can be mismanaged to induce negative outcomes. Specifically, hope can be reduced when

consumers begin to lose confidence in either findings or obtaining a product that will achieve their goals (de Mello, MacInnis, and Stewart, 2007). According to the same authors when hope in products is threatened individuals will experience negative affect, and will seek out more information through motivated seeking.

Overall, hope as an emotion appears to have a great foothold in marketing and advertising. As previously discussed, hope relates to many different levels of the consumer experience including on self-concept level, outcome level, and product level. Hope is thus used in marketing to as a way to help the consumer achieve their individual goals such as health, beauty, or popularity. However, hope can be threatened for specific brands which may shake consumer's confidence that their goals will be met. Although hope is often used within marketing, according to Chadwick (2014) it is not often empirically studied within persuasive contexts. However, the use of hope as a discrete emotional appeal may have important effects (Chadwick, 2014).

Hope Appeals.

Hope has often been casually used in marketing and rhetoric, as both products and politicians often promise improvement and better futures. Despite this, hope has received little empirical research (Chadwick, 2014; Nabi, 2002). However, there are theoretical justifications for using hope as a persuasive strategy. MacInnis and de Mello (2015) theorized that hope in persuasive messages could be used to influence a variety of persuasive outcomes such as perceived importance and attention. Hope may be persuasive because it is a future-oriented emotion that may provide an impetus to act to achieve a goal (Chadwick, 2014; MacInnis & de Mello, 2005). Because hope can be an effective mechanism in persuasion, it is important to operationalize how hope can be included in messages.

As O'Keefe (2003) suggests, it is not effective to simply define an emotional appeal by the emotion that is elicited by the message. O'Keefe (2003) suggests that emotional appeals should be defined by their intrinsic elements instead. Chadwick (2014, 2015) stated that hope can only be felt when four appraisals are made about a message. In order for a message to elicit hope, it must be evaluated by an individual as (a) possible, (b) goal congruent, (c) important, and (d) that it will lead to a positive outcome. First, possibility is a multifaceted element of hope, as it is necessary for the outcome to not be certain but instead only perceived as possible. It should be noted that for hope to occur the perception of the degree of possibility for a specific outcome does not need to be accurate in order for hope to be present. Second, goal congruence refers to the degree to which the possible outcome will help an individual achieve their goals. Third, for hope to be elicited there also must be some element of importance for the individual involved. Finally, hope can only be elicited if there is a positive future outcome that can be expected by the individual by taking an action. Chadwick (2014) used these appraisals to operationalize hope in persuasive messages.

Hope appeals can be constructed through presenting an opportunity for an outcome and the presentation of actions to achieve it (Chadwick, 2014). Chadwick (2014) advised that an effective hope appeal must emphasize these appraisal components (i.e., possibility, goal congruence, importance, and future expectation) as well as providing recommended actions. As previously stated, hope has been used casually by in marketing and rhetoric, and has received little empirical attention (Chadwick, 2014; Nabi, 2002). However, some scholars have devoted time to examining hope and its persuasive effects.

Mixed Effects of Hope Appeals

The relatively little studies concerning hope appeals have found conflicting and varied results. Several studies seem to point to hope appeals having some positive effects on persuasion outcomes (Kemp, Min, & Join, 2017; Kemp, Bui, Krishen, Homer, & LaTour, 2017) However, there has been some discrepancy in findings on behavioral intention as Chadwick (2014) and Chadwick (2015) found that hope appeals did not increase behavioral intention, while Peter and Honea (2012) and Kemp, Bui, Krishen, Homer, and LaTour, (2017) found that a message including hope did increase behavioral intent. Some have also found that hope appeals produce substantial positive effects only when paired with another variable such as efficacy and framing, and some studies have found that hope appeals are not as effective as other emotional appeals (Lee, Chang, & Chen, 2017; Lu, 2016; Nabi & Prestin, 2016). In addition, hope appeals have been found to produce negative effects by increasing stigma (Thainiyom & Elder, 2017). It is this discrepancy in findings, as well as the nascent nature of the research on hope appeals, that demands further scholarly attention for the subject.

Given the mixed empirical evidences of hope appeal in persuasion, a meta-analysis of the experiments that have been conducted so far on hope appeals will benefit the scholarly community. A meta-analysis on this subject will fulfill three purposes: (a) to establish if hope appeals truly effect persuasive outcomes, (b) to examine the magnitude of this effect if it is present, and (c) to explore the moderating factors of the persuasive effectiveness of hope appeals.

Method

Meta-analysis is a form of systematic review that uses statistical analysis to summarize and analyze data (Borenstein, Hedges, Higgins, & Rothstein, 2009). A systematic review uses systematic methods to identify, select, evaluate, and examine the data from studies that are focused on a specific subject (Moher, Liberati, Tetzlaff, & the PRISMA Group, 2009). Relevant

literature was examined to investigate conceptualizations of hope, and specific terms related to its conceptualization. In particular, Chadwick (2015) and Lazarus' (1991) conceptualizations of hope were used to guide the generation of search terms.

A comprehensive search of five databases (i.e., Communication Source, Academic Search Complete, PsycINFO, Medline, and PubMed) was conducted to identify potential eligible published and unpublished studies, such as peer-reviewed journal articles, conference papers or proceedings, theses and dissertations. The keywords that were used to complete the comprehensive search are as follows: *hope*, *optimis**, *future-orient**, *persua**, and *appeal*, and were used in combination with one another in order to retrieve all pertinent literature possible. Additional studies were obtained from Google Scholar and reference sections. Further additional studies will be solicited from CRTNET and will be coded for inclusion accordingly.

After retrieving these articles, a codebook to determine inclusion and exclusion was developed based on the scope and focus of the analysis (Appendix A). Two researchers then coded 5% of the studies to establish intercoder reliability. In total, 1,303 studies were retrieved from this search which were then coded for inclusion according to the criteria described in Appendix A. After excluding studies that were duplicated (n = 161), not empirical (n = 537), not quantitative (n = 58), did not involve human subjects (n = 61), did not manipulate hope (n= 333), did not contain results (n= 6), or did not measure persuasive effects (n = 132), 15 qualified studies were found. Figure 1 displays the PRISMA flow chart summary of screening.

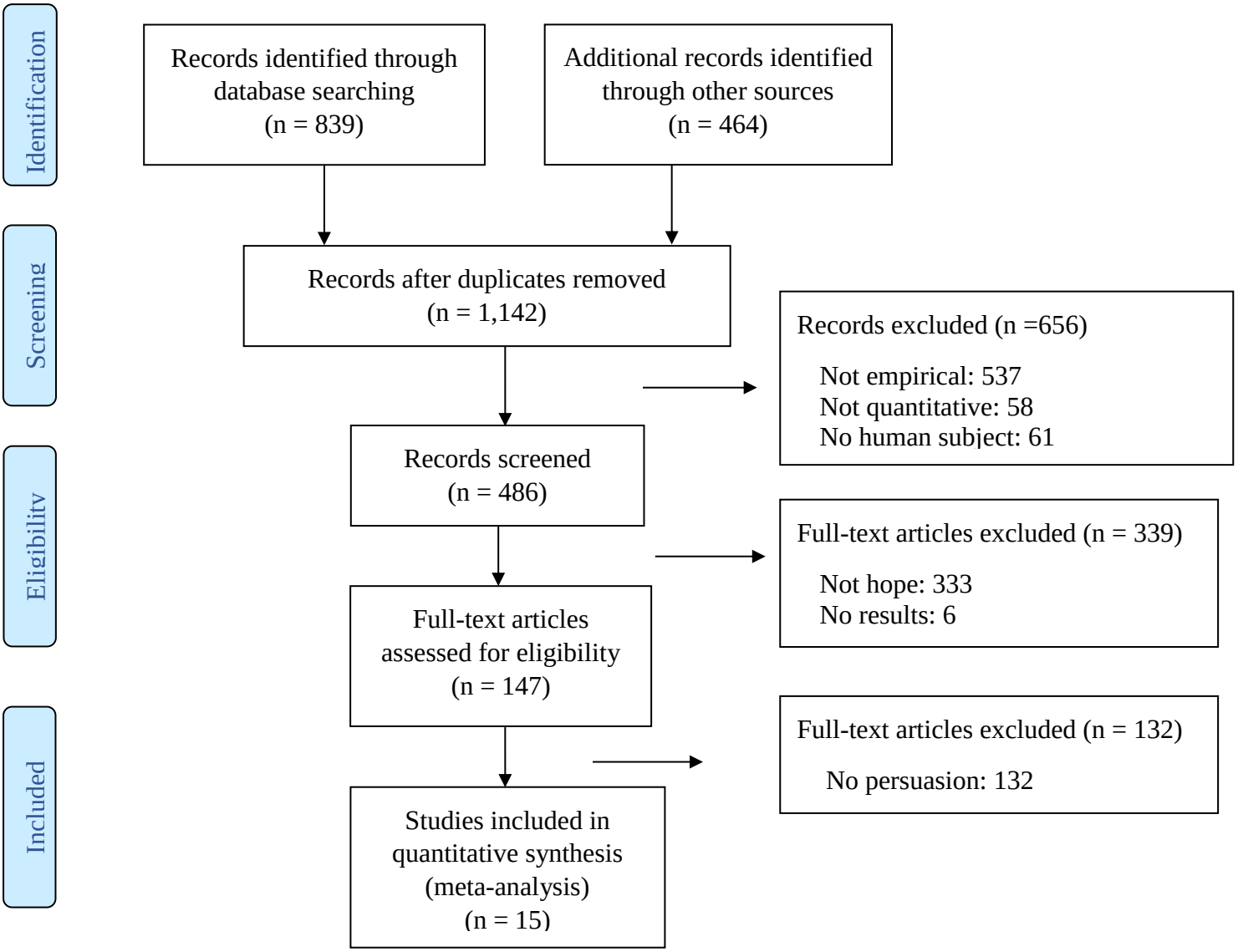


Figure 1. Summary of selection process used in current study.

15 qualified studies were then coded for their effect sizes (Cohen's d) based on relevant dependent measures and demographic data (Appendix B). The moderators chosen for coding were based on common elements of prior meta-analyses focusing on persuasive appeals and effects. The effect sizes for 5% of the studies were independently coded by two researchers. Inter-coder reliability was established after 2 training sessions. The effect sizes were coded using the following

formula provided by Lipsey and Wilson (2001) for computing standardized mean differences in groups: $ES'_{sm} = 1 - \frac{3}{4N-9} ES'_{sm}$. This was computed by weighting the unbiased effect size by the inverse of its variance. These effect sizes were then computed using the variance-weighted analysis facilitated by the program *R*.

Results

A total of 15 studies were included in the current meta-analysis (see Table 1), with 52 ESs computed following Schmidt and Hunter's approach (1995). The total number of participants under investigation in these studies was 3,445.

Overall Analysis

The *Q* statistic was significant (Q_{total} (*df* = 51) = 291.20, $p < .001$) under the FEM, indicating that the ESs were not homogeneous. Thus, the mean ES was estimated under the REM using Restricted Maximum Likelihood Estimation method. Under the REM, the sample weighted mean for standardized mean difference was 0.07 in Cohen's *d* (95% CI [-.01, .15]), which is a small ES (Cohen, 2013) and marginally significant ($p = .08$). The overall analysis suggested that the experiments manipulating hope appeals did not obtain significantly better persuasive outcomes, which answered *RQ*1. I^2, an index representing the ratio of true heterogeneity to total variance across observed ESs, was 85.96%, indicating large between-study variance (Higgins, Thompson, Deeks, & Altman, 2003). In the same vein, Birge's ratio, another index to quantify the magnitude of heterogeneity (computed as *Q*/*df* = 291.20/51 = 5.71), was larger than one (the ratio when all the variance comes from sampling error), indicating large between-study heterogeneity. Sampling error variance ($S_e^2 = 0.0154$) only accounted for 25.16% of the total variance ($S^2 = 0.0612$), suggesting the presence of moderator(s). Therefore, the moderators proposed in *RQ2* and *RQ3* were analyzed.

Moderator Analyses

Outcomes. Under MEM, the outcome variable was not a significant moderator ($Q_{between}$ (df = 3) = 4.28, p = .23). However, post-hoc pairwise comparison indicated that the weighted mean ES of hope appeal messages on perceived message effectiveness (d = .23, p <.05) was significantly higher at .05 level than the weighted mean ES of hope appeal messages on behavior or behavioral intention (d = .00, p = .96). In addition, hope appeal messages significantly enhanced participants' health information seeking on the targeted topic (d = .09, p <.01), but did not influence participants' attitude (d = .06, p =.26) at a significant level.

Control Group Design. The design of the control group was found as a significant moderator (MEM, $Q_{between}$ (df = 2) = 11.99, p <.01). Specifically, when studies involved a control group, which contains a non-hope emotional appeal (d = -.04, p = .46), the weighted mean ES was significantly lower at .05 level than those in the studies that either did not include a control group (d = .58, p < .001), or included a rational message without any emotional appeal (d = .17, p < .01).

Implementation. How the experiments were implemented turned out to be a marginally significant moderator (MEM, $Q_{between}$ (df = 1) = 2.92, p = .09). Specifically, the experiments conducted online (d= .11, p < .05) produced marginally higher weighted mean ES at .10 level than the experiments conducted on a paper-and-pencil basis (d = -.03, p = .64).

Non-significant Moderators. Besides the outcome variables, control group design, and study implementation, we also examined a series of categorial (i.e., sample [students or nonstudents], topic [health- or environmental-related], measurement of outcome variable [categorical or continuous]) and continuous moderators (i.e., mean age, percentage of male

participants, percentage of participants who were White), which were found as not significant in moderating the weighted mean ESs.

Publication Bias

Multiple techniques were applied to check for the presence of potential publication bias, which may exist when the publication status is dependent on the statistical significance of study results (Sutton, 2009). First, we examined whether ESs from smaller studies show more variability than those from larger studies from a funnel plot (see Figure 2).

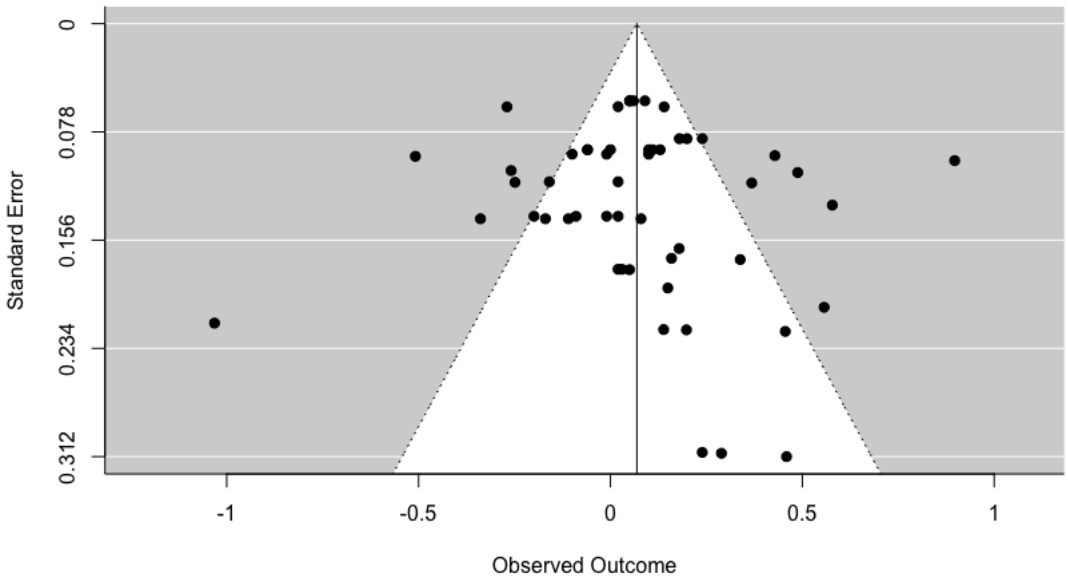


Figure 2. Funnel plot of effect sizes to check publication bias for current study.

Although the funnel plot of ESs was generally symmetric, the interpretation is susceptible to subjectivity. Therefore, the Egger's regression test (Egger, Smith, Schneider, Minder, 1997) for funnel plot asymmetry was conducted and not statistically significant (z = .69, p = 0.49), indicating that publication bias was unlikely to exist in this sample. We further conducted the test

of Rosenthal's (1979) Fail-safe *N*, which was 311 and larger than the tolerance level ($5k + 10 = 270$), which further confirmed the absence of publication bias.

Discussion

This meta-analysis contributes to the wider persuasive research in a variety of ways. The analysis revealed that although hope appeals themselves seemed to have almost negligible effects on persuasive outcomes, this effect was moderated by several factors. Predominately these factors were the outcome focused on within the individual studies. As seen within the results section of this report hope appeals did not have overall significant outcomes except when the outcome was message effectiveness. Ergo, this study did not find that hope appeals had a significant effect on behavior intention or actual behavior or on attitude.

However, this analysis found that hope appeals did effect perceived message effectiveness and information seeking significantly. Perceived message effectiveness was coded within this analysis under individual studies using that term for similar measures such as how persuasive participants perceived the message as being, how effective it was, how useful it was, etc. The use of hope may have increased attention for the message itself, thus creating a higher sense of perceived message effectiveness. On the other hand, the use of a positive emotional appeal may have shifted the mood or current emotion of the participants in such a way that they were more willing to accept the peripheral cues surrounding the message, but not the actual attitude or behavior itself. Additionally, this meta-analysis found that hope appeals increased information seeking behavior. Due to the positive outlook provided by the hope appeal and the potentially increased agency it could provide, participants may have been inspired to seek information about the topic itself rather than the behaviors to achieve the outcome. In this sense, Nabi's (2002) warning that hope appeals may in fact lead to participants declining to act due to

the assumption that the situation will turn out positively appears consistent with this study's findings.

Theoretical Implications

This meta-analysis provides important implications for theoretical conceptualizations of hope and how scholars study it. According to various scholars, hope should act as a catalyst for behavior change in order to reach a desired goal (Lazarus, 1999; Snyder, 2000; Chadwick, 2015). However, this study found that hope appeals did not seem to have a significant impact on behavior. It appears that hope as a emotion alone is not enough to spark needed behavioral change, or the attitude change that is often a precursor to behavior. Much of the use for hope appeals in persuasive contexts derives from its theorized behavioral effects, and in the absence of this finding through the topics studied, scholars may wish to consider alternative effects of hope appeals such as its impact on information seeking.

As previously stated, this study found that hope appeals significantly increased information seeking in relation to the topic. In addition, this synthesis found that hope appeals had a significant impact on the perceived message effectiveness of the persuasion stimuli. Hope appeals may function to increase information seeking as it may spark interest in the topic itself due to the non-threatening and even uplifting nature of hope appeals. Similarly, perhaps hope appeals increased perceived message effectiveness for a similar reason.

Practical Implications

The findings of this study provide a wealth of information and guidance for practical applications. This meta-analysis suggests that hope appeals, while not significantly impacting behavior or attitude, do have a significant effect on perceived message effectiveness and

information seeking. Practitioners whose primary goal is to increase knowledge or awareness about a topic, and who wish to avoid negative emotional appeals such as fear, may wish to consider using hope appeals. As previously discussed, hope appeals may encourage individuals to seek more information about a topic as it is presented in an uplifting and optimistic manner. In addition, hope appeals can increase the visibility of a campaign due to its effect on perceived message effectiveness. Advertisers, health and environmental campaign designers, and marketers may all be able to utilize hope appeals in order to spark information seeking and visibility for their topic and goals.

This finding may be of great use to both practitioners and scholars as it sheds light on how hope appeals may be used most effectively. Practitioners may be able to utilize this finding when the main goal of a campaign is not to induce a behavior or behavior change, but is instead to increase knowledge about an issue or action due to the perceived message effectiveness. This meta-analysis helps advance the field of persuasion by examining the state of and results of hope appeals. This study also forwards the empirical knowledge of hope appeals by synthesizing the results of a myriad of studies that focus on hope appeals and their persuasive effects.

Limitations and Future Work

This study had many limitations. First, this study was limited by the small number of studies that were synthesized. This led to a related limitation of coding specific behavior due to the lack of studies. Another limitation included the exclusion of concepts or constructs related to hope, such as gain-loss framing and empathy appeals. In addition, this study only synthesized studies that focused on persuasive measures. This excluded possibly related aspects such as felt emotions in relation to the message. In addition, this meta-analysis contains the same limitations that all synthesizes contain. This study could not control for the quality of the individual studies

that were incorporated into the analysis, thus any study design flaws or limitations have been preserved within the synthesis and may affect the results.

In addition, this meta-analysis included some studies that incorporated hope in addition to other emotions. For example, Volkman and Parrott (2012) did not manipulate hope explicitly and as a discrete emotion. Instead this study attempted to induce an overall positive persuasive message with hope being one of the emotions they specifically attempted to elicit. In addition, Passyn (2014) was a similar case in which hope was not individually manipulated but instead it was categorized with high accountability emotions. These studies may confuse the results of this meta-analysis as these studies lack a proscribed hope appeal and elicitation. However, these studies did specifically aim to induce hope in response to the manipulation. In this way the persuasive appeal could be categorized as a hope appeal, as it was designed to elicit hope as well as other positive emotions.

In addition, this study has some amount of missing data. In several cases a study's author could not be contacted to provide demographic data or clarification about the research method. In other cases, circumstances out of the original author's control resulted in the demographic data being lost. This may result in an inaccurate analysis of demographic moderators due to the lack of data that several studies provided.

There is a deep resource of future directions that can come about from hope appeals. As stated by Chadwick (2015) there has been little empirical study concerning hope appeals. Future directions for research should study potential moderators more closely. Potential moderators could include trait hope, temporal relationship, and the effects of combining hope appeals with other related emotions such as empathy. Other variables of interest may include temporal framing, gain/loss framing, and other framing effects. Perhaps framing may inspire more direct

behavioral change in a audience? In addition, more work must be done to establish the link between hope and behavior that has been theorized but not found in this meta-analysis.

Conclusion

Emotional appeals can be powerful persuasive tools, and have been utilized in rhetoric since Aristotle. While there has been a wealth of research detailing how fear appeals function and their effects there has been considerably less research on the various positive emotional appeals. Hope, as a positive emotion, is theorized to facilitate pathway building toward overall goals (Chadwick, 2014). However, Nabi (2002) warned that the use of hope as a persuasive appeal may be counterintuitive as it may lead to a lack of action due to the perception that no immediate change or action is needed. However, these findings also provide a wealth of opportunity for future scholarship investigating hope appeals. In addition, practitioners may be able to use hope appeals to great effect when their goal coincides with hope appeals persuasive strengths.

References

Aristotle. (2007) *On rhetoric: A theory of civic discourse.* (George A. Kennedy, Trans., 2nd ed.). New York, NY: Oxford University.

Atwater, D. F. (2007). Senator Barack Obama: The rhetoric of hope and the American dream. *Journal of Black Studies, 38,* 121-129. doi: 10.1177/0021934707305431

Benzein, E., Norberg, A., & Saveman, B. I. (2001). The meaning of the lived experience of hope in patients with cancer in palliative home care. *Palliative medicine, 15*(2), 117-126. doi: 10.1191/026921601675617254

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. West Sussex, UK: John Wiley & Sons.

Cacioppo, J. T., & Petty, R. E. (1989). The elaboration likelihood model: The role of affect and affect-laden information processing in persuasion. In Cafferata, P. & Tybout, A. M. (Eds.), *Cognitive and Affective Responses to Advertising* (69-89). Lexington, MA: Lexington Books.

Chadwick, A. E. (2014). Persuasive hope theory and hope appeals in messages about climate change mitigation and seasonal influenza prevention. Available from EBSCOhost; psyh. (2014-99170-320). Retrieved from http://lib.tcu.edu/PURL/EZproxy_link.asp?url=http://search.ebscohost.com/login.aspx?direct=true&AuthType=cookie,ip,uid&db=psyh&AN=2014-99170-320&site=ehost-live

Chadwick, A. E. (2015). Toward a theory of persuasive hope: Effects of cognitive appraisals, hope appeals, and hope in the context of climate change. *Health Communication, 30,* 598-611. doi:10.1080/10410236.2014.916777

Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. Waltham, MA: Academic press.

Condon, P., & DeSteno, D. (2011). Compassion for one reduces punishment for another. *Journal of Experimental Social Psychology*, *47,* 698-701. doi: 10.1016/j.jesp.2010.11.016

De Mello, G., MacInnis, D. J., & Stewart, D. W. (2007). Threats to hope: effects on reasoning about product information. *Journal of Consumer Research, 34,* 153-161. doi: 10.1086/519144

Dens, N., De Pelsmacker, P., & Janssens, W. (2008). Exploring consumer reactions to incongruent mild disgust appeals. *Journal of Marketing Communications, 14*, 249-269. doi: 10.1080/13527260802141231

Dillard, J. P., & Nabi, R. L. (2006). The persuasive influence of emotion in cancer prevention and detection messages. *Journal of Communication, 56,* 123–139. doi: 10.1111/j.1460-2466.2006.00286.x

Dillard, J. P., & Seo, K. (2012). Affect and persuasion. In Dillard, J. P., & Shen, L. (Eds.). *The sage handbook of persuasion : Developments in theory and practice.* (150-166). Retrieved from https://ebookcentral.proquest.com

Egger, M., Smith, G. D., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *BMJ*, *315*(7109), 629-634. doi: 10.1136/bmj.315.7109.629

Fazal-e-Hasan, S. M., Ahmadi, H., Mortimer, G., Grimmer, M., & Kelly, L. (2018). Examining the role of consumer hope in explaining the impact of perceived brand value on customer–brand relationship outcomes in an online retailing environment. *Journal of Retailing and Consumer Services*, *41*, 101-111. doi: 10.1016/j.jretconser.2017.12.004

Flemming, K. (1997). The meaning of hope to palliative care cancer patients. *International Journal of Palliative Nursing*, *3*(1), 14-18. doi: 10.12968/ijpn.1997.3.1.14

Gulas, C. S. & Weinberger, M. G. (2006). *Humor in advertising: A comprehensive analysis.* Armonk, N.Y: M.E. Sharpe, Inc.

Hale, J.,& Dillard,J.P.(1995).Fear appeals in health promotion campaigns. In E. Maibach & R. L. Parrott (Eds.), *Designing health messages* (65-80). Thousand Oaks,CA:Sage.

Hall, B. A. (1990). The Struggle of the Diagnosed Terminally Ill Person to Maintain Hope. *Nursing Science Quarterly*, *3*, 177-184. doi: 10.1177/089431849000300410

Herth, K. (1990). Fostering hope in terminally-ill people. *Journal of advanced nursing*, *15*(11), 1250-1259. doi: 10.1111/j.1365-2648.1990.tb01740.x

Higgins, J. P., Thompson, S.G.,Deeks, J. J., &Altman, D. G. (2003). Measuring inconsistency in meta-analyses. *BMJ*, *327*, 557–560. doi:10.1136/bmj.327.7414.557

Hoffman, M. (2008). Empathy and prosocial behavior. In M. Lewis, J. M. Haviland-Jones, & L. F. Barrett (Eds.), *Handbook of Emotions* (pp 440-455). New York, Guilford Press.

Kemp, E., Min, K. S., & Joint, E. (2015). Selling hope: The role of affect-laden health care advertising in consumer decision making. *Journal of Marketing Theory and Practice*, *23*, 434-454. doi: 10.1080/10696679.2015.1049688

Kemp, E., Bui, M., Krishen, A., Homer, P. M., & LaTour, M. S. (2017). Understanding the power of hope and empathy in healthcare marketing. *Journal of Consumer Marketing, 34*, 85-95. doi:10.1108/JCM-04-2016-1765

Lang, P. J. (1985). The cognitive psychophysiology of fear and anxiety. In A. H. Tuma & J. D. Maser (Eds.), *Anxiety and the anxiety disorders* (131-170). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Lang, P. J. (1994). The motivational organization of emotion: Affect-reflex connections. In S. H. M. Van Goozen, N. E. Van de Poll, & J. A. Sergeant (Eds.), *Emotions: Essays on emotion theory* (61-92). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Lang, P. J., Bradley, M. M., & Cuthbert, B. N. (1997). Motivated attention: Affect, activation, and action. In P. J. Lang, R. F. Simons, & M. T. Balaban (Eds.), *Attention and orienting: Sensory and motivational processes* (97–135). Hillsdale, NJ: Lawrence Erlbaum Associates.

Lazarus, R. S. (2001). Relational meaning and discrete emotions. In Scherer, K. R., Schorr, A., & Johnstone, T. (Eds.), *Appraisal processes in emotion: Theory, methods, research* (37-67). New York, NY: Oxford.

Lazarus, R. S. (1991). Cognition and motivation in emotion. *American Psychologist, 46*, 352-367. doi: 10.1037/0003-066X.46.4.352

Lazarus, R. S. (1999). Hope: An emotion and a vital coping resource against despair. *Social Research, 66*, 653–678. Gale Academic Onefile, Accessed 15 November. 2019.

Leiberg, S., Klimecki, O., & Singer, T. (2011). Short-term compassion training increases prosocial behavior in a newly developed prosocial game. *PloS one, 6,* e17798.https://doi.org/10.1371/journal.pone.0017798

Leventhal, H., & Scherer, K. (1987) The relationship of emotion to cognition: a functional approach to a semantic controversy. *Cognition and emotion, 1*, 3-28, doi: 10.1080/02699938708408361

Lee, Y., Chang, C., & Chen, P. (2017). What sells better in green communications: Fear or hope? It depends on whether the issue is global or local. *Journal of Advertising Research*, 57, 379-396. doi:10.2501/JAR-2017-048

Lipsey, M. W. and Wilson, D. B. (2001). Practical Meta-Analysis. Sage. Thousand Oaks, California.

Lueck, M. A. (2007). Hope for a cause as cause for hope: The need for hope in environmental sociology. *The American Sociologist*, *38*(3), 250-261. doi: 10.1007/s12108-007-9017-7

Lu, H. (2016). The effects of emotional appeals and gain versus loss framing in communicating sea star wasting disease. *Science Communication*, 38, 143–169. doi: 10.1177/1075547015619173

Lu, H., & Schuldt, J. P. (2016). Compassion for climate change victims and support for mitigation policy. *Journal of Environmental Psychology, 45*, 192-200. doi: 10.1016/j.jenvp.2016.01.007

Markus, H., & Nurius, P. (1986). Possible selves. *American psychologist*, *41*(9), 954.

Martin, R. A. & Ford, T. E. (2007). *The psychology of humor: An integrative approach*. Burlington, MA: Elsevier Academic Press.

MacInnis, D. J., & De Mello, G. E. (2005). The concept of hope and its relevance to product evaluation and choice. *Journal of Marketing, 69,* 1-14. doi: 10.1509/jmkg.69.1.1.55513

MacInnis, D. J., & Chun, H. E. (2007). Understanding hope and its implications for consumer behavior: I hope, therefore I consume. *Foundations and Trends® in Marketing*, *1*(2), 97-189. http://dx.doi.org/10.1561/1700000005

Meyer, J. C. (2000). Humor as a double-edged sword: four functions of humor in communication. *Communication Theory, 10*, 310–331. doi: 10.1111/j.1468-2885.2000.tb00194.x

Moher, D. Liberati, A., Tetzlaff, J., Altman, D. G, & the PRISMA Group. (2009). Reprint—Preferred reporting items for systematic reviews and meta-analyses: The PRISMA Statement. *Physical Therapy, 89,* 873–880. doi: 10.1093/ptj/89.9.873

Moltmann, J. (1993). *Theology of hope: On the ground and the implications of a Christian eschatology*. Fortress Press.

Moors, A. (2009) Theories of emotion causation: A review. *Cognition and Emotion, 23*, 625-662, doi: 10.1080/02699930802645739

Nabi, R. L. (1998). The effect of disgust-eliciting visuals on attitudes toward animal experimentation. *Communication Quarterly*, *46*, 472-484. doi: 10.1080/01463379809370116

Nabi, R. (2002). Discrete Emotions. In J. P. Dillard & M. Pfau (Eds), *The Persuasion Handbook: Developments in Theory and Practice* (289-303). Thousand Oaks: Sage.

Nabi, R. L. (2003). The framing effects of emotion: Can discrete emotions influence information recall and policy preference? *Communication Research, 30,* 224–247.

Nabi, R. L. (2007). Emotion and persuasion: A social cognitive perspective. In D. R. Roskos-Ewoldsen & J. Monahan (Eds.), *Social cognition and communication: Theories and methods* (377–398). Mahwah, NJ: Lawrence Erlbaum Associates.

Nabi, R. L., & Prestin, A. (2016). Unrealistic hope and unnecessary fear: Exploring how sensationalistic news stories influence health behavior motivation. *Health Communication,* 31, 1115–1126. doi: 10.1080/10410236.2015.1045237

O'Keefe, D. J. (2003). Message Properties, mediating states, and manipulation checks: Claims, evidence, and data analysis in experimental persuasive message effects research. *Communication Theory, 13,* 251–274. doi: 10.1111/j.1468-2885.2003.tb00292.

O'keefe, D. J. (2008). Persuasion. The International Encyclopedia of Communication.

Ortony, A., Clore, G. L., & Collins, A. (1988). *The cognitive structure of emotions*. New York: Cambridge University Press. doi:10.1017/CBO9780511571299

Peters, G. J. T., Ruiter, R. A. C., & Kok, G. (2013) Threatening communication: a critical re-analysis and a revised meta-analytic test of fear appeal theory. *Health Psychology Review, 7,* 8-31. doi: 10.1080/17437199.2012.703527.

Peter, P. C., & Honea, H. (2012). Targeting social messages with emotions of change: The call for optimism. *Journal of Public Policy & Marketing, 31*, 269–283. doi: 10.1509/jppm.11.098

Peters, E., Lipkus, I., & Diefenbach, M. A. (2006). The functions of affect in health communications and in the construction of health preferences. *Journal of Communication, 56,* 140–162. doi: 10.1111/j.1460-2466.2006.00287.x

Rosenthal, R. (1979). The file drawer problem and tolerance for null results. *Psychological Bulletin, 86*(3), 638–641. doi: 10.1037/0033-2909.86.3.638

Rosewall, A. L. (2011). Pastoral Theology of Hope: Listening in El Salvador. *Journal of Pastoral Theology, 21*(2), 2-1. doi: 10.1179/jpt.2011.21.2.003

Scherer, K. R. (2005). What are emotions? And how can they be measured? *Social Science Information, 44*, 695-729. doi: 10.1177/0539018405058216.

Schmidt, F. L., & Hunter, J. E. (1999). Comparison of three meta-analysis methods revisited: An analysis of Johnson, Mullen, and Salas (1995). *Journal of Applied Psychology*, *84*(1), 144-148. doi:10.1037/0021-9010.84.1.144

Shen, L. (2010). Mitigating psychological reactance: The role of message-induced empathy in persuasion. *Human Communication Research, 36*, 397–422. doi: 10.1111/j.1468-2958.2010.01381.x.

Shen, L., & Bigsby, E. (2012). The effects of message features. In Dillard, J. P., & Shen, L. (Eds.). *The sage handbook of persuasion: Developments in theory and practice.* (20-35). Retrieved from https://ebookcentral.proquest.com

Sternthal, B., & Craig, C. S. (1973). Humor in advertising. *Journal of Marketing, 37*, 12-18. doi: 10.1177/002224297303700403

Smith, C. A., Haynes, K. N., Lazarus, R. S., & Pope, L. K. (1993). In search of the "hot" cognitions: Attributions, appraisals, and their relation to emotion. *Journal of Personality and Social Psychology, 65*, 916–929. doi:10.1037/0022-3514.65.5.916.

Snyder, C. R. (1994). *The psychology of hope: You can get there from here*. Simon and Schuster.

Snyder, C. R. (2000). The past and possible futures of hope. *Journal of social and clinical psychology*, *19*(1), 11-28. doi: 10.1521/jscp.2000.19.1.11

Snyder, C. R., Rand, K. L., & Sigmon, D. R. (2002). Hope theory: A member of the positive psychology family. In C. R. Snyder & S. J. Lopez (Eds.), Handbook of positive psychology (p. 257–276). Oxford University Press.

Sødal, H. K. (2010). "Victor, not Victim": Joel Osteen's Rhetoric of Hope. *Journal of Contemporary Religion*, *25*(1), 37-50. doi: 10.1080/13537900903416804

Sutton, A. J. (2009). Publication bias. In B. S. Cooper, L. V. Hedges and J. C. Valentine (Eds.), *The handbook of research synthesis and meta-analysis* (pp. 435-452). New York, NY: Russell Sage Foundation.

Tannenbaum, M. B., Hepler, J., Zimmerman, R. S., Saul, L., Jacobs, S., Wilson, K., & Albarracín, D. (2015). Appealing to fear: A meta-analysis of fear appeal effectiveness and theories. *Psychological bulletin, 141*, 1178–1204. doi:10.1037/a0039729

Thainiyom, P., & Elder, K. (2017). Emotional appeals in HIV prevention campaigns: Unintended stigma effects. *American journal of health behavior, 41,* 390-400.

Turner, M. M. (2007). Using emotion in risk communication: The anger activism model. *Public Relations Review, 33,* 114–119. doi: 10.1016/j.pubrev.2006.11.013.

Walter, N., Tukachinsky, R., Pelled, A., and Nabi, R. (2019). Meta-analysis of anger and persuasion: An empirical integration of four models. *Journal of Communication, 69,* 73–93. doi: 10.1093/joc/jqy054.

Witte, K. (1992) Putting the fear back into fear appeals: The extended parallel process model. *Communication Monographs, 59*, 329-349. doi: 10.1080/03637759209376276

Witte, K., & Allen, M. (2000). A meta-analysis of fear appeals: Implications for effective public health campaigns. *Health education & behavior, 27*, 591-615.

Xu, Z. and Guo, H. (2018) A meta-analysis of the effectiveness of guilt on health-related attitudes and intentions. *Health Communication, 33*, 519-525, doi: 10.1080/10410236.2017.1278633.

Appendix A

Exclusion Criteria (label as "no")

	Explanation	Examples	Reason Label
1.Duplicated articles	Same articles were retrieved		Duplicate
2.Studies not empirical	no primary data were or will be collected	editorial, commentary, systematic review, meta-analysis	Not empirical
3.Emprical Study without results	The article includes only a proposal, but no result	study protocol	No results
4.Not quantitative study	Results are textual but not numerical data	qualitative study such as focus group, interviews	Not quantitative
5.Quantitative Study without human participants	The studies didn't involve any participant	Content analysis	No human subject
6. Hope not focus of study	Study not related to hope or did not manipulate	Focused on fear, guilt, humor, etc.	Not hope
7. Study did not target persuasion as primary outcome	studies with primary outcome unrelated to persuasion	Outcome not related to persuasion	No persuasion

Note

1. For studies that hope appeal is measured but not manipulated make a note
2. 1=yes, 0=no

Appendix B

Effect Size Code Book

Basic Information

1. Study # (alphabetical order of the last name of the 1st author)
2. Study ID (first author_year)
3. Journal Title
4. Journal rank (search in the Web of Science database)
5. Country (where study was conducted)

Detailed Information about Study

Variable	**Explanation**	**Code**	**Example**
#_condition	Total # of conditions (exact)		4
Condition (specify)			2 (hope appeal x fear appeal)
Sample Size	How many participants total?		N= 250
Method	What was the method used in the study?	1= experiment 2= quasi-experiment 3= survey 4= mixed	
Theory	What theory was used to guide the study?	Specify	
Sampling_1	Student vs. non-student	1= general population 2= students	
Sampling_2	Healthy vs. at-risk	1= healthy population 2= at-risk population or their caregiver	
Sampling_3	specify		
Setting	Was study conducted in lab?	1= lab 2= field 3= web-based	
Implementation	How was the study implemented?	1= online survey (web) 2= phone 3= paper-pencil survey (including mailed) 4= mixed	

Control Group	Presence of control group in study?	1= one group pre-post (no control group) 2= yes no message exposure 3= message exposure, not emotional appeal in control 4 = message exposure, with emotional appeal (not hope) in control	
Control Group (specify)	Describe the control group		
IV* manipulation	How was IV (hope) manipulated (specify)?		
DV* (specify)	What was the DV?		
DV Measure_1	How many items were used?		
DV Measure_2	How was DV measured?	1= continuous (ratio, interval, ordinal) 2= categorical	
DV Measure_3	How was DV measured	Specify	
DV measure reliability (Cronbach's alpha)			
% male	What is percentage of male participants?	Percentage	
Ethnicity	What percentage is each group?	Percentage(s)	
Age	Mean and SD		

Effect Sizes

ES ID (first author last name_year_#)	
ES Type	(d, r, OR, RR, etc.)
ES Value	(d or other)
Variance of ES	

*IV= independent variable (hope)
*DV= dependent variable (measured variables)
DV of interest include:

1= actual behavior or behavioral intention
2= perceived effectiveness
3= attitude, self-efficacy

Table 1: List of Studies

Study	*d*	v	*N*	Sample	Topic	Outcome	Control	Theory	Age (M)	Male (%)	White (%)
1. Chadwick (2014) [a,b]	0.28	0.004	427	Undergraduate students	Climate change	Perceived message effectiveness	No control	Persuasive hope theory	20.15	48.6	75.1
2. Chadwick (2015) [b]	0.048	0.0031	650	Undergraduate students	Influenza prevention	Behavior	Fear	Persuasive Hope Theory	19.4	49.4	87.5
	0.0523	0.0031				Behavior	No Emotion				
	0.0482	0.0031				info-seeking	Fear				
	0.129	0.0031				info-seeking	No Emotion				
3. Kemp (2017) [b]	0.20	0.0069	293	General Public	Healthcare provider	Behavior	No Emotion	——	38	——	——
	0.29	0.0963				Behavior					
	0.24	0.0069				Attitude					
	0.46	0.0978				Attitude					
	0.18	0.0069				Message Effectiveness					
	0.24	0.0959				Message Effectiveness					
4. Kemp (2015) [b]	1.20	0.2250	21	Undergraduate students	Healthcare Provider	Behavior	No Emotion	——	36	42	——
	0.58	0.0587	71	Mturk		Behavior	No Emotion		35	49	
5. Kemp (2015)_2 [b]	0.46	0.0501	82	General Public	Healthcare Provider	Message Effectiveness	No Emotion	——	34	44	——
6. Krishen (2015)	0.34	0.0292	139	General Public	Exercise/food choice	Behavior	Fear		32	53	

	0.16	0.0289				Behavior	Fear				
7. Lee (2017) [c]	0.14	0.0495	81	General Public	Environmental protection	Attitude	Fear	framing	26.05	48	____
	0.02	0.0317	126			Attitude	Fear		28.48	58.7	
	0.20	0.0496	81			Behavior	Fear		26.05	48	
	0.05	0.0318	126			Behavior	Fear		28.48	58.7	
	0.03	0.0317	126			Behavior	Fear		28.48	58.7	
8. Lu (2016) [b]	0.14	0.0036	555	General Public	Sea star wasting	info-seeking	Sadness	framing	33.31	58.2	____
	-0.27	0.0036	555			Behavior	Sadness				
9. Nabi (2016) [b]	0.49	0.0116	178	Undergraduate students	HPV	Behavior	Fear	emotion as frame	19.31	35	61
	-0.26	0.0113				Behavior	Fear				
10. Passyn (2006) [c]	-1.04	0.0473	96	Undergraduate students	Cancer Prevention	Behavior	High accountability		50	20.5	
11. Peter (2012) [c]	0.18	0.0265	154	Undergraduate students	Disposable plastic bottles	Behavior	No Emotion	TTM			
12. Simmunich (2008) [b]	0.10	0.0089	225	Undergraduate students	Recycling	Behavior	No Emotion	TRA/TPB	23	39	74.2
	-0.51	0.0092				Behavior	Guilt				
	0.90	0.0098				Message Effectiveness	No Emotion				
	-0.01	0.0089			CFL bulbs	Message Effectiveness	Guilt				
	0.43	0.0091				Attitude	No Emotion				
	-0.10	0.0089				Attitude	Guilt				
13. Thanyiom (2017) [b]	0.02	0.0036	240	General Public	HIV prevention	Attitude	No Emotion	____	33	55	____

	0.15	0.0365				Attitude	No Emotion				
	0.11	0.0083				Attitude	No Emotion				
	-0.06	0.0083				Behavior	No Emotion				
	0.00	0.0083				Attitude	Fear				
	0.13	0.0083				Attitude	Fear				
	0.10	0.0083				Attitude	Fear				
	-0.06	0.0083				Behavior	Fear				
14. Underhill (2012)[a b]	0.02	0.0131	153	Undergraduate students	Personal finance	Message Effectiveness	No Emotion	Dual process/appraisal	20	36	64
	-0.16	0.0131	153			Message Effectiveness	Fear	____			
	0.37	0.0133	153			Attitude	No Emotion				
15. Volkman (2012) [c]	-0.25	0.0132	153	Female Undergraduate students	Osteoporosis	Attitude	Fear		19.92	0	82.7
	-0.17	0.0199	204			Behavior	No Emotion				
	-0.09	0.0194	207			Behavior	Negative				
	0.08	0.0199	204			Message Effectiveness	No Emotion				
	0.02	0.0194	207			Message Effectiveness	Negative				
	-0.01	0.0194	207			Attitude	egative				
	-0.11	0.0199	204			Attitude	no emotion				
	-0.20	0.0194	207			Attitude	negative				
	-0.34	0.0199	204			Attitude	no emotion				

[a] Categorical outcome variable.
[b] Experiment was implemented online.
[c] Experiment was implemented using a paper-and-pencil approach.

Note. Control = Control group design. A dash (‘‘—’’) indicates that information was not available or reported in the research report

VITA

Personal Background	Jessica Ledford May 22, 1996 Cullman, Alabama Son of Gina and Timothy “Lee” Ledford
Education	Diploma, Vinemont High School, Vinemont, Alabama, 2014 Bachelor of Science, Communication Studies, University of Montevallo, Montevallo, Alabama Master of Science, Communication Studies, Texas Christian University, Fort Worth, Texas
Experience	Lab Instructor, Texas Christian University, 2018-2020
Professional Memberships	National Communication Association

ABSTRACT

HOPE APPEALS META-ANALYSIS

by Jessica Ledford, M.S., 2020

Department of Communication

Texas Christian University

Thesis Advisor:

Dr. Qinghua Yang, Assistant Professor of Communication

Dr. Adam Richards, Professor of Communication

Dr. Jie Zhuang, Assistant Professor of Communication

The study of persuasive emotional appeals has historically been focused on negative emotional appeals. However, positive emotional appeals may also be effective in persuasive health message design. Hope is a positive emotion that focuses on the possibility of a favorable outcome, even if that outcome may be unlikely (Lazarus, 2001). An investigation on the persuasive effects of hope appeals and their moderating variables is called for. A comprehensive search of six databases was conducted to identify potential eligible published and unpublished studies. The keywords used to retrieve the literature include *hope*, *optimis**, *future-orient**, *persua**, and *appeal*. In total, 1,303 studies were retrieved from this search which were then coded. 15 qualified studies were found. These studies were analyzed and results found that although hope appeals did not have an overall significant effect on persuasion outcomes, the control and outcomes measured did. Specifically, when a hope appeal was paired with a control group using a non-emotional appeal the hope appeal had a positive effect. Similarly, hope appeals increased both perceived message effectiveness and information seeking.