An Explication and Assessment of Motivational Supportive Communication in the Weight Management Context for Middle-aged and Older Adults

DISSERTATION

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By

Elizabeth Brooke Jones

Graduate Program in Communication

The Ohio State University

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Dissertation Committee:
Susan L. Kline, Advisor
Jesse Fox
Brandon Van der Heide
Abstract

This investigation conducted an initial test of motivational supportive communication in the weight management context for middle-aged and older adults. This examination was comprised of two studies. In Study 1, 28 middle-aged and older adults participated in in-depth interviews concerning their weight management experiences, and perceptions of weight management-related communication. Findings from these interviews were used to hypothesize about dimensions of weight management messages likely associated with positive weight management motivation. These dimensions included person-centeredness, dissolving misconceptions, self-worth affirmation, and call to action. Each message dimension was conceptualized as varying in level of message quality (high quality/low quality).

In Study 2, 415 participants completed a message perception study testing the utility of the four message dimensions in terms of motivational outcomes. Results indicated that high quality messages were generally evaluated as more effective than low quality messages. However, not all message dimensions were evaluated as equally useful in facilitating weight management motivation. The implications of this investigation in terms of theoretical contributions to the supportive communication domain and practical contributions for those who are attempting to manage their weight or help a loved one are presented.
Dedication

This work is dedicated to my parents, my husband, and my precious gifts from God.
I am indebted to so many people who have aided me on my journey to this point. First, I thank my parents, David and Kyle Thompson, who have supported me tirelessly throughout my life. I especially thank them for instilling a love of learning in me, which was nurtured as they homeschooled me, grades 1-12. I am also grateful for the ongoing support of my extended family, especially my two grandmothers. Gram has always been a source of unconditional love. Although Grandma Thompson is gone now, her example many years ago of earning her MA and establishing a meaningful career while nurturing six children is an inspiration.

I am also incredibly grateful to my best friend and love, Jeff. I’m not sure if he knew what he was getting into when we married, but nonetheless Jeff has been an unending source of encouragement, support, and joy. At many points during my graduate career, Jeff has managed the bulk of the responsibilities at home (including diaper duty for our little ones) while working full time and excelling in his career. He has been my shoulder to cry on, and I love him more than words can express.

I also thank my children Eliana, 4, and Judah, 2, for their ongoing support of “Mommy”. I began my PhD work when Eliana was 8 months old, and Judah was born in the middle of my program. This was definitely not easy. However, the privilege and joy...
of being a Mommy to these kiddos far outweighs any challenges. My children have been incredibly patient and generous when I have had to find time to work, and often during this dissertation process, Eliana has encouraged me by saying “Mommy, I promise you can finish writing your paper!”. Her belief in me encouraged me to keep moving forward. I also offer thanks to my family through marriage (including my second mother, Donna Jones) and extended family for their love and support.

In addition to family, I also must thank my advisor, Dr. Kline. She is a true scholar and I have benefited tremendously from her rich knowledge of our field. Further, I could not have asked for a better travel companion as I embarked on the study of motivational support. At many moments when I felt weary or unsure, Dr. Kline was there with the perfectly-crafted motivational message to reenergize me. I also thank my committee members, Dr. Fox and Dr. Van der Heide, for their mentorship and support during my program, and for the opportunities they have afforded me to work with and learn from them. I extend these thanks to Dr. Lee as well. I thank my past teachers and mentors – especially Dr. James Chesebro and Dr. Dan Brown – for shepherding me along this academic path.

Further, I am indebted to the Ohio State School of Communication for its generous support of my Study 2 data collection. The sample used in this study was secured by funding provided by the Time-sharing Experiments for the School of Communication program. It would have been impossible to recruit this sample of middle-aged and older adults without such an award. I also could not have advanced this project without the support of my grad school friends and colleagues, with a special word for my
friend Margaret Rooney. I offer gratitude to my UALC small group for their ongoing prayers, and extend thanks to my interview participants from Zumba Columbus and Greensburg First Baptist Church.

Although difficult at times, I am truly grateful for the opportunity I have had to learn about this tiny sliver of the universe during the dissertation process. I thank Him.

The world is charged with the grandeur of God.

It will flame out, like shining from shook foil.

It gathers to a greatness, like the ooze of oil

Crushed.

Gerard Manley Hopkins
Vita

May 2001 ........................................... High School, Home Educated

2005 .................................................. B.A. Communication Studies, Grove City College

2007 .................................................. M.A. Telecommunications/Digital Storytelling, Ball State University

2010 to present .................................. Graduate Teaching Associate, Department of Communication, The Ohio State University

Publications


Fields of Study

Major Field: Communication
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Interpersonal communication in day-to-day life plays a central role in promoting or hindering optimal health, particularly later in the lifespan, when “...the importance of communication to the successful aging of those coping with age-related losses cannot be underestimated” (Cline, 2003; Hummert & Nussbaum, 2001, p. xiii). Healthy weight management throughout the lifespan is an important health behavior associated with physical wellbeing and vitality in later life (Rillamas-Sun et al., 2014). Although weight management may refer to attempts either to gain or lose weight, this investigation is concerned with fostering motivation to support intentional weight loss by middle-aged and older adults.

Supportive communication, a functional interpersonal communicative activity, plays a central role in healthy weight management. As a subcomponent of the umbrella concept of social support, supportive communication refers to communicative interactions designed to either seek or provide help (MacGeorge, Feng, & Burleson, 2011). Social support, broadly conceived, has been associated with positive weight management outcomes (e.g., Dube & Stanton, 2010; Wing & Jeffery, 1999; Wolfe, 2004). Meta-analyses and systematic reviews of weight management interventions incorporating social support largely affirm this contention (Black, Gleser, & Kooyers, 1990; Kelsey, Earp, & Kirkley, 1997; McLean, Griffin,
Toney, & Hardeman, 2003; Verheijden, Bakx, van Weel, Koelen, & van Staveren, 2005). However, claims of the positive influence of social support in weight management must be qualified. As Verheijden et al. (2005) noted, findings from various social support weight management interventions are difficult to compare across studies because social support is not clearly defined. For example, social support is sometimes conceptualized as a form of structural support (i.e., embeddedness within a social community) and sometimes as a form of functional support (i.e., a perception of support availability and/or provision) (Verheijden et al., 2005; Wills & Shinar, 2000). Comparing findings is thus challenging because these definitions may reflect differences in underlying mechanisms producing beneficial effects (Cohen & Wills, 1985).

Approaching the topic of weight management from a supportive communication perspective suggests a different approach, in which specific communicative interactions intended to seek or provide aid are examined (Burleson, Albrecht, Goldsmith, & Sarason, 1994; Burleson & MacGeorge, 2002; Goldsmith, 2004). While some have tested the efficacy of weight management messages in promoting various instrumental or relational outcomes (Dailey, McCracken, & Kluever Romo, 2011; Dailey, Kluever Romo, & McCracken, 2010; Dailey, Richards, & Kluever Romo, 2010, Mooney Thompson, Kluever Romo, & Dailey, 2013), much remains unknown about the specific dimensions of weight management supportive communication messages that motivate middle-aged and older adults. This dissertation is specifically concerned with forwarding motivational support as a
unique supportive communication activity particularly relevant to weight management for the population of interest. The central question is this: *How are supportive weight management messages optimally crafted in order to motivate middle-aged and older adults to persist in weight management efforts?* Or, more broadly: *What are the features of effective motivational support messages?* These questions are addressed in this study. Such an explication of motivational support advances supportive communication theory and responds to a practical exigency.

In the theoretical formulation of motivational support, communication is understood as a creative social activity in which messages are produced and interpreted in order to create shared meaning, construct social reality, and accomplish goals (Berger & Luckmann, 1966; Burleson, 2010; Delia & Grossberg, 1977). Communication is not conceptualized as a linear dissemination of information, but instead as a complex, cooperative activity in which participants coordinate their actions in order to make their internal states known to one another (Delia, O’Keefe, & O’Keefe, 1982). Communicative activity is informed by the speech codes operative within a given speech community (Philipsen, 1992), as well as by each participant’s social perceptual interpretive processes (Delia et al., 1982). Working from this understanding, communication functions to accomplish many tasks of social interaction, including maintaining relationships, influencing others, and, most relevant here, supporting persons (Burleson, 2010).

Focusing on the support function, Burleson and MacGeorge (2002) proposed that supportive communication is characterized by three features. First, supportive
communication interactions are conceived as contributing directly to the support provider and/or support recipient’s health and wellbeing. Second, supportive communication accomplishes a primary instrumental goal (e.g., providing help, lessening distress in comforting interactions), but also has relational and identity implications for both interactants (O’Keefe & Delia, 1982). Third, supportive communication is understood to be normative. In other words, there are specific features of supportive messages that are relatively better or worse at accomplishing intended support goals in various situations. Several programs of research over the past three decades have worked under this assumption of normativity, considerably advancing knowledge about the specific features of messages that are associated with more and less successful outcomes. Research has tended to focus on a subarea within the supportive communication domain, and has also concerned itself with theorizing about the cognitive and/or affective mechanisms linking message features with outcomes (Burleson & MacGeorge, 2002). Some of these research lines include work on comforting (e.g., Burleson, 2003; Burleson, 2008), esteeming, (e.g., Holmstrom & Burleson, 2011), advising (e.g., Feng & MacGeorge, 2010; Goldsmith, 1994), and celebrating (e.g., McCullough & Burleson, 2012). Missing from this cannon is sustained empirical effort focused on supportive communication as a means of motivating the other, despite acknowledgement of the need to better understand this process (MacGeorge et al., 2011).

This dissertation responds to this gap in the supportive communication literature by using theories from motivational psychology and human development to
inform hypothesizing about effective features of motivational support messages. Motivation is typically understood as some sort of psychological force or impetus spurring action. For example, Graham and Weiner (1996) defined motivation as “…why people think and behave as they do” (p. 63). Heckhausen (1991) explained motivation as “…an orientation toward a particular goal, at a particular time, by a particular individual” (p. 3). Despite these concise contemporary definitions of motivation, scholars’ conceptions of this concept have changed significantly since motivational theory emerged as an area of study around 1930. In the ensuing years, popular consensus shifted from a view of motivation in which humans possess little volitional control to an understanding of humans as agentic actors capable of purposeful goal striving (Graham & Weiner, 1996). Self-determination theory (SDT; Deci & Ryan, 1985) is an example of theorizing working from these more current assumptions about motivation, and is useful in understanding the psychological processes associated with sustained weight management motivation. The definition of motivation used throughout this investigation emerges from SDT and is as follows: motivation is an energizing force, varying in quality, which directs action (Deci & Ryan, 2002).

Weight management presents itself as a meaningful context for developing and testing a model of motivational support. In terms of practical exigency, obesity is a complex health issue affecting many individuals. The growing rate of overweight and obesity in the U.S. is well known, with governmental organizations like the Centers for Disease Control launching public health campaigns to curb the “obesity
epidemic” (CDC, 2014). Approximately 35% of the U.S. general population is obese (Ogden, Carroll, Kit, & Flegal, 2012). These trends persist in the older adult demographic, with more than one third of adults over 65 obese (Fakhouri, Ogden, Carroll, Kit, & Flegal, 2012). Of older adult women, who comprise a majority of the older adult population, 40% of women 65-74 and 29% of women 75+ are obese (Rillamas-Sun et al., 2014). Troubling health implications are often associated with overweight and obesity, and may be exacerbated for middle-aged and older adults.

For example, obesity is considered a modifiable risk factor associated with cardiovascular disease, diabetes mellitus, some cancers, stroke, arthritis, and limited mobility (Hooymann & Kiyak, 2011; Housten et al., 2009; Rillamas-Sun, 2014). Recent longitudinal data suggests that overall and abdominal obesity in older women is associated with greater incidence of developing a major chronic disease, developing a mobility limitation, or dying relative to normal-weight women (Rillamas-Sun et al., 2014). Further, obesity has also been bi-directionally linked with mental health disorders like depression (Luppino et al., 2010). These obesity-related issues may exacerbate normal age-related changes. Significant changes in body composition occur throughout the lifecourse. Fat mass tends to increase relative to muscle mass during middle age and into older adulthood (Villareal, Apovian, Kushner, & Klein, 2005). Thus, obesity in older adulthood may contribute to or worsen the effects of sarcopenia, a “gain in body fat but loss of muscle mass and functional capacity” (Han, Tajar, & Lean, 2011, p. 169).
On an economic level, the costs associated with caring for overweight and obese older adults, who may co-present with other health conditions associated with biological aging, are significant (Anderson, Wiener, Finkelstein, & Armour, 2011). Because the number of older adults in the U.S. is growing, and older adults are projected to represent 19% of the population by 2030 (Administration on Aging, 2013), these costs may continue to rise. Therefore, economic impetus exists to reduce overweight and obesity in middle-aged and older adults. On an individual level, it seems that in the middle and later phases of the lifespan, maintaining a healthy weight may help prevent or delay chronic disease, improve psychological wellbeing, and promote independence and vitality. In sum, deleterious health and economic outcomes have been associated with rates of overweight and obesity for middle-aged and older adults. Entities like the World Health Organization have launched extensive public health efforts to this end. However, reducing rates of overweight and obesity proves challenging.

One component of this challenge is that obesity is a chronic multifactorial disease encompassing genetic, physiologic, metabolic, dietary, environmental, socioeconomic, cultural, psychological, and behavioral components (National Institutes of Health, 1998). Research is nascent in genetic, physiologic, and metabolic factors associated with obesity, and little is yet known about how such knowledge could be optimally applied. Currently, common treatment options for overweight and obesity include behavioral lifestyle modifications (e.g., monitoring diet, increasing physical activity), pharmacology, and bariatric surgery (Fabricatore
This investigation focuses solely on behavioral weight management approaches. Individuals wishing to lose weight through behavioral modification may do so informally, using resources like past knowledge, weight loss books, or online weight management tools. Individuals may also join commercial weight loss programs, like Weight Watchers or Jenny Craig. Persons wishing to lose weight may also use the services of a researcher or health care professional (e.g., physician, registered dietician) who provides a structured intervention or individualized counseling.

Given the challenges associated with health behavior change generally (Ryan, 2009) and weight management behavior change specifically, there has been a recent push to use theory-based behavioral modification approaches within weight loss interventions (Connor & Norman, 2005; Spahn et al., 2010). Such approaches allow for the identification of key mediating variables (e.g., self-efficacy) at work in the process adopting a given health behavior. These variables then become foci for intervention implementation and evaluation (Connor & Norman, 2005). Some of the most widely used frameworks in the weight management context include the transtheoretical model (Prochaska & DiClemente, 1983; Prochaska & Velicer, 1997), health belief model (Becker, 1974), theory of planned behavior (Ajzen, 1985, 1991), and social cognitive theory (Bandura, 1986).

Two recent systematic reviews of intervention studies using the transtheoretical model (Mastellos, Gunn, Felix, Car, & Majeed, 2014; Tuah, Amiel, Qureshi, Car, Kaur, & Majeed, 2011) reported that the transtheoretical model was
not successful in promoting sustained weight loss. The health belief model also been identified as less than optimally effective (Daddario, 2007). The theory of planned behavior seems fairly strong in predicting intention to lose weight, which is then moderately correlated with actual short-term weight loss behavior (Godin & Kok, 1996; Schifter & Ajzen, 1985). Social cognitive theory, and specifically the concept of self-efficacy, has been linked with fairly successful short-term weight loss outcomes (Palmeira et al., 2007; Spahn et al., 2010). In general, weight loss interventions that incorporate behavioral and/or cognitive strategies are more effective in short-term weight loss than interventions that emphasize only diet and/or exercise modifications (Shaw, O’Rourke, Del, & Kenardy, 2009).

Unfortunately, gauging the efficacy of such weight loss interventions en masse is difficult due to imprecision in the measurement of theoretical constructs, insufficient reporting of methods, and lack of longitudinal data. Further, while somewhat piecemeal findings exist regarding the efficacy of various structured weight loss interventions, very little is known about population-wide weight loss attempts (using informal and/or commercial methods), the efficacy of such attempts, and long-term weight loss maintenance. Only a rough portrait of general trends in weight loss efforts and success can be sketched.

In terms of individuals currently attempting weight loss, a recent Gallup Poll (2013) reported that 51% of U.S. adults wanted to lose weight at the time of the survey, and 25% of U.S. adults described themselves as seriously working toward that goal. Few studies exist that investigate population-wide weight loss maintenance
over time. One oft-quoted statistic is that 95% of people who initially lose weight gain back what they have lost. This number is based on a 1959 study by Stunkard and McLaren-Hume; however, this study has been criticized as both outdated and limited in explanatory power because of its small sample size of 100 obese individuals. A somewhat more recent random digit dialing survey of 500 U.S. adults found that approximately 20% of those who had lost weight had maintained a clinically-significant weight loss for at least 1 year (McGuire, Wing, & Hill, 1999). A clinically-significant weight loss was defined in this study as a loss of at least 10% of one’s starting weight. Even this modest weight reduction has been associated with multiple health benefits (Wing & Phelan, 2005).

The National Weight Control Registry was founded in 1994 by researchers Wing and Hill and is comprised of over 10,000 self-identified long-term weight loss maintainers. It is impossible to know what proportion of total persons attempting to lose weight these registry members represent, and findings produced from the study of this group inherently suffer from self-selection bias. However, this registry does attest to the possibility of long-term weight maintenance for some individuals. The National Weight Control Registry website (2014) reports that almost all registry members successfully lost and maintain their weight by modifying their food intake and by exercising (usually walking) for about one hour each day. Thus, both short-term weight loss and long-term weight maintenance are possible, but often difficult.

Given the challenges associated with successful weight management, the need for motivational support becomes clear. Many overweight and obese persons
face a motivational dilemma in weight management. On the one hand, overweight and obesity are associated with a range of health risks, and healthy weight management is important. However, weight loss can be difficult for the many complex reasons previously described (e.g., genetics, structural environment), making it difficult to persist in healthy weight management behaviors.

A middle-aged or older adult navigates these tensions within a contemporary socio-cultural milieu that is not always optimally supportive. Anti-fat attitudes are prevalent in the U.S., and overweight and obese people may encounter prejudicial behavior or stigma in interpersonal, organizational, and health care settings (Puhl & Brownell, 2001; Puhl, Andreyeva, & Brownell, 2008). Part of this prejudice seems to stem from attributions of controllability prevalent in individualist cultures like the U.S. (Crandall, D’Anello, Lazarus, Nejtardt, & Feather, 2001). Working from Heider’s (1958) attribution theory, Crandall et al. (2001) argued that “Because people are motivated to have affectively consistent perceptions…, when fat is bad, ipso facto a fat person is bad. Weight becomes an outward symbol of inner value” (p. 35). Thus, overweight and obese persons may be viewed as personally lazy, weak, or lacking in willpower. Research suggests that these kinds of negative attributions may become internalized for overweight and obese people, and obesity has been linked through this internalization with detrimental psychological outcomes like depression, social isolation, and suicidal thoughts (Puhl, Schwartz, & Brownell, 2005).

Further, while some may intend rhetoric associated with the “war on obesity” to be inspirational or motivational, it appears that this kind of language use may
foster further stigmatization of overweight and obese individuals (Bomback, 2014). This stigmatization, in turn, is unhelpful in spurring weight loss. Instead, stigmatization has been associated with poorer eating habits, greater inactivity, and more disordered eating for overweight and obese individuals (Bomback, 2014). This stigmatization has also been documented in health care settings, suggesting overweight and obese individuals may receive poorer quality care (Puhl & Heuer, 2009).

Adding lifespan considerations to the discussion of motivational dilemmas in weight management adds additional complexity. First, middle-aged and older adults have received insufficient attention in the weight management literature, so less is known about the safety and efficacy of various weight loss strategies for these groups (Felix & West, 2013). Second, older adults in general are a stigmatized group that encounters prejudice and stigma in interpersonal, organizational, and health care settings (Kite, Stockdale, Whitley, & Johnson, 2005). Third, common myths about aging may prevent the enactment of important health behaviors in later stages of the lifespan. Some of these myths applicable to health behavior adoption include: 1) to be old is to be sick, 2) you can’t teach an old dog new tricks, and 3) the horse is out of the barn (i.e., it’s too late to change old habits) (Rowe & Kahn, 1998). Fourth, some middle-aged and older adults may also have long individual histories of body dissatisfaction, weight cycling, or disordered eating informing their current weight loss attempts.
Within this cultural context, it seems likely that many overweight and obese individuals know what behaviors are associated with weight loss (e.g., restricting calories, increasing exercise). A failure to actualize these behaviors is thus not primarily about a lack of knowledge (although this may affect some individuals). Many people attempting weight loss intend to enact healthy weight management behaviors; however, these actions may not subsequently transpire. This kind of discrepancy has been studied as an example of a knowledge-action gap in the reasoned action theory framework (RAT; Fishbein & Ajzen, 2010). Two potential explanations for such a gap emerge from this framework that are especially applicable to motivational support in a weight management context. First, individuals may form an intention to adopt health behaviors when they are not faced with the emotions and drives present in the moment the actual decision to enact the given behavior surfaces (Fishbein & Ajzen, 2010). Second, individuals may not perceive their weight management behaviors as within their volitional control (Fishbein & Ajzen, 2010).

A slightly different explanation for the gap between intentions and behavior is captured by the philosophical concept of akrasia. Owens (2002) explained akrasia as:

...[A]n agent’s ability to do, freely and deliberately, something that he [sic] judges he [sic] ought not to do...The akratic agent is not a compulsive; an akratic agent has the ability to control his [sic] action, to make it conform to
his [sic] judgment, but fails to exercise that ability. The akratic freely and deliberately gives in to temptation. (p. 381)

Thus, in an akratic scenario, the individual trying to lose weight knows he or she “shouldn’t” eat three slices of chocolate cake, and knows he or she is not being compelled to do so; however, he or she eats the cake anyway. The question of why a person would act against her or his best judgment has been debated extensively by philosophers, and relates to larger discussions on the nature of rationality (e.g., Arphaly, 2000; Rorty, 1997). Knowing what one wants to do and yet not doing it seems to be a perennial human issue broader than the weight management domain. As the Apostle Paul lamented two thousand years ago, “For what I want to do I do not do, but what I hate I do” (Romans 7:15, NIV). The concept of akrasia nicely captures the subjective experience of many people trying to lose weight, but it also may serve to reinforce negative self-attributions for the overweight individual (e.g., Why am I so weak? Why don’t I have any willpower?). As previously discussed, such cognitions may be counterproductive in the weight management context.

In sum, it is fruitful to recognize the many motivational dilemmas faced by some middle-aged and older adults intentionally trying to lose weight. Namely, healthy weight management is important, but it can be challenging for an individual for a number of reasons. Further, attempts to lose weight occur within a socio-cultural context in which overweight and obese individuals may be stereotyped as weak and/or lazy. Individuals trying to lose weight within this milieu may confront an intention/behavior gap and/or feelings of akrasia. Given this complex situation,
motivational supportive communication emerges as a helpful and positive way to imbue persons with the energizing force to pursue healthy weight management behaviors.

This dissertation tests the claim that skillfully-provided motivational support serves the instrumental function of motivating healthy weight management behaviors. This effort will advance supportive communication theory by proposing features of effective motivational support messages, informed by work in motivational psychology and human development across the lifespan. This study will focus on middle-aged and older adults, who have traditionally been understudied in communication research (Pecchioni, Wright, & Nussbaum, 2005).

To address these questions, this dissertation used a mixed-methods sequential design (Creswell & Plano Clark, 2011). First, in-depth interviews with middle-aged and older adults were conducted. These interviews were carried out to learn participants’ perceptions of the weight management context and features of effective motivational support messages. Building on these interview findings and extant literature, a model of effective motivational support was then constructed and tested.

**Preview of Chapters**

This study consists of the following chapters. Chapter two provides a review of literature relevant to the topic of motivational support in a weight loss context for middle-aged and older adults. Given the complex motivational dilemmas previously described, four theoretical perspectives and their respective findings are especially useful in understanding optimal motivational support. These perspectives include
reasoned action theory (Fishbein & Ajzen, 2010), self-determination theory (SDT; Deci & Ryan, 1985), lifespan developmental frameworks, and supportive communication. These categories are large, and thus, the discussion of each is specifically focused on its applicability to the weight management context, the population of interest, and the motivational support construct.

Chapter three consists of Study 1, which used in-depth qualitative interviews to elicit participants’ conceptions of effective motivational support practices. The justification for this study, research questions, methods, analyses, and findings are presented. The implications for these findings in terms of constructing a model of motivational support are discussed.

Chapter four details the conceptual bases for the proposed model of motivational support, drawing from Study 1 findings and the literature reviewed in Chapter two. First, the theoretical foundation for this study’s understanding of communicative activity is presented. Second, message dimensions hypothesized to be associated with increased high-quality motivation are offered, with corresponding hypotheses and research questions.

Chapter five presents the methods used to test the model of motivational support. A quantitative message perception paradigm was employed (Burleson & MacGeorge, 2002). The process of constructed message development is described, and a pilot study that tested if manipulated messages worked in the intended manner is reported. Then, participants, procedures, and measures for the main Study 2 are discussed.
Chapter six is a presentation of Study 2 findings resulting from the analysis of the proposed hypotheses and research questions. A summary of these findings is offered. Chapter seven then concludes with an overarching summary and discussion of the dissertation investigation in its entirety, with attention to theoretical and practical implications, limitations, and future research directions.

In sum, this dissertation seeks to better understand ways communication can be instrumentally employed to lessen motivational weight management dilemmas for middle-aged and older adults. Thus, motivational support message dimensions are identified which are thought to energize action toward healthy weight management behaviors. Extant literature relevant to this endeavor is presented next.
Chapter 2: Review of Literature

This review presents domains of literature that are germane to the development of a model of motivational support. In this endeavor, literature related to health behavior change, motivation, lifespan development, and social support will be examined. The extant literature in each of these areas is large, and is thus curated here by focusing on specific theoretical perspectives which inform how supportive weight management messages may be optimally crafted in order to motivate middle-aged and older adults to persist in weight management efforts. Further, this review is organized by focusing on aspects of the challenge related to weight management, and are as follows: 1) forming an intention to lose weight and acting on that intention, 2) fostering high-quality, ongoing motivation to persist in weight management, 3) understanding what aspects of lifespan development influence weight management, and 4) understanding the role of social interaction, and specifically, social support and supportive communication in the weight management context.

Weight Loss Intention and Behavior

As described in Chapter one, theories and models of behavior change have been used to explain and target health behavior adoption. These perspectives assume that people have at least some control over their own health behaviors, and that limiting harmful health behaviors or promoting protective health behaviors is
beneficial for society (Conner & Norman, 2005). Social scientists and health researchers have focused on cognitive variables in these health processes as “the most important proximal determinants” of enacting a health behavior (Conner & Norman, 2005, p. 2). Thus, such approaches have been labeled social cognition models (SCMs). As discussed in chapter one, several SCMs have been used widely in weight management research. Reasoned action theory (RAT, Fishbein & Azjen, 2010), and its predecessors, the theory of reasoned action (TRA, Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), and the theory of planned behavior (TPB, Ajzen, 1985, 1991), are selected as specific SCMs useful in a formulation of motivational support. Reasoned action approaches (including RAT, TRA, and TPB) have been widely tested and have proven fairly successful in predicting initial weight loss, healthy eating, and exercise behaviors (for reviews, see Baranowski, Cullen, Nicklas, Thompson, & Baranowski, 2003; McEachan, Conner, Taylor, & Lawton, 2011; Palmeira et al., 2007).

**Reasoned Action Theory**

Reasoned action theory (RAT, Fishbein & Ajzen, 2010), is a parsimonious model of the determinants of volitional behavior. Volitional behavior refers to actions over which persons have at least some measure of control in implementing. The RAT as a general model is useful for persons interested in promoting behavior change, because it identifies the determinants of behavior as multiple possible sites for persuasion (O’Keefe, 2002).
According to RAT, the determinants of whether or not to perform an action are comprised of three different kinds of beliefs. The first of these belief categories involves a person’s outcome evaluations; that is, how good or bad they think the results of performing a given action will be. These beliefs are said to contribute to a person’s attitude toward a behavior, whether generally positive or negative. A second kind of belief involves perceptions of valued others’ opinions about performing behaviors as well as judgments regarding the ubiquity of such actions (i.e., injunctive and descriptive norms, respectively). These function together to create a perceived norm, or “…social pressure to engage or not engage in the behavior” (Fishbein & Ajzen, 2010, p. 20). Finally, beliefs about personal and situational factors that could lesson one’s ability to perform the given action contribute to perceived behavioral control. Thus, attitude, subjective norm, and perceived behavioral control, although varying in relative weight or importance depending on individual and behavioral domain factors, are predicted to determine one’s behavioral intention (i.e., whether or not one intends to perform the action in question).

In the RAT formulation, behavioral intention is seen as “[t]he most immediate determinant” of behavior (O’Keefe, 2002, p. 101), and theoretically captures how motivated one is to actually perform a behavior (Ajzen, 1991). Thus, stronger intentions should be associated with increased behavior performance outcomes (Fishbein & Ajzen, 2010). In this model, although intention is posited as the most proximal determinant of behavior, it is acknowledged that a lack of perceived behavioral control (PBC) and/or actual control (e.g., skills, resources) may
prevent people from acting on their intentions even after a positive intention is formed (Fishbein & Ajzen, 2010). Thus, for example, a person may intend to eat a healthy diet; however, if he or she lives in an area where little fresh produce is available, he or she may be unable to act on that intention.

A brief discussion of PBC is warranted here. Ajzen (1985) originated the theory of planned behavior by adding this construct to the theory of reasoned action to improve the model’s predictive validity when behaviors were seen as more challenging to implement (e.g., weight management). As currently formulated, PBC is defined as: “…[T]he extent to which people believe that they are capable of performing a given behavior, that they have control over its performance” (Fishbein & Ajzen, 2010, p. 155). Thus, this idea is seen as almost identical to Bandura’s (1977, 1997) concept of self-efficacy (Ajzen, 2002a). Fishbein and Ajzen (2010) further assert that both PBC and self-efficacy likely reflect two lower-level factors of perceptions of capacity and autonomy. They also note that perceived behavioral control theoretically encompasses both internal and external resources and obstacles individuals may perceive as affecting their behavior, arguing that “whether these resources and obstacles are internal or external to the person is immaterial” (Fishbein & Ajzen, 2010, p. 169).

These models have been used to examine a wide range of volitional health behaviors (for a review, see Ajzen, Albarracin, & Hornick, 2007). The TRA and TPB have been shown to be relatively effective in predicting various health behaviors; including, for example, condom use (Albarracin, Johnson, Fishbein, &
Mullerleile, 2001) and health screening (Cooke & French, 2008). In general, these perspectives have accounted for approximately 40-50% variance in intention and 19-38% variance in behavior, respectively (Armitage & Conner, 2001). A meta-analysis of specifically health behaviors reported similar findings, without about one third of the variance in behavior attributed to intentions and perceived behavioral control (Godin & Kok, 1996). It is noted, however, that adding the construct of perceived behavioral control does add predictive power, especially when the behavior is challenging (Ajzen & Albarracín, 2007). As discussed in chapter one, it seems reasonable to suppose that weight management behaviors are indeed challenging to implement for many individuals.

Reasoned action perspectives are useful in explaining and predicting weight management behaviors as well, including broad intentions to lose weight and more specific intentions to eat healthy foods or increase physical activity. In terms of weight loss, an early application of TPB to this context did find that attitude, subjective norm, and PBC predicted young adult women’s intentions to lose weight, which was in turn moderately associated with weight loss six weeks later (Schifter & Ajzen, 1985). Perceived behavioral control was the single strongest predictor of actual weight loss. The authors note that weight management is a context in which actual control factors may exert influence, which may change intentions or perceptions of behavioral control (Schifter & Ajzen, 1985). In a meta-analysis of the efficacy of the TPB in prospective tests for health behaviors, McEachan, Conner, Taylor, and Lawton (2011) found that the TPB explained 23.9% of the variance in
physical activity behaviors and 21.2% of the variance in diet behaviors. A study by Nejad, Wertheim, and Greenwood (2004) of college-aged women found that TPB determinants accounted for 77% of the variance in intention to diet and 46% of the variance in follow-up dieting. In the realm of physical activity, a meta-analysis by Hagger, Chatzisarantis, and Biddle (2002) found good support for the predictive validity of the TPB in the physical exercise domain. In addition to these studies and meta-analyses which examine the predictive validity of reasoned action in formulating intentions and acting on behaviors, other research lines have examined the beliefs about losing weight, eating healthy, or exercising which comprise the attitude, subjective norm, and perceived behavioral control determinants.

Investigations that focus on the belief-based determinants of behavior are commonly known as elicitation studies. These have been recommended as an important first step in designing instrumentation to measure the efficacy of intervention work (Ajzen, 2002b). These are valuable because “assessing belief based determinants…allows identification of the underlying beliefs that distinguish between individuals who perform (or intend to perform) and individuals who do not perform (or do not intend to perform)” (White, Terry, Troup, & Rempel, 2007, p. 486). This was demonstrated by, for example, Armitage and Conner (1999) who found significant difference between low-fat diet intenders and non-intenders for behavioral and control beliefs. Examining beliefs related to exercise for a community-dwelling sample of older women, Conn, Tripp-Reimer, and Mass (2003) found both behavioral beliefs (e.g., exercise is good for my health) and control
beliefs (e.g., exercise is difficult because I am not committed to exercise; exercise is
difficult because I am too tired) were associated with exercise behavior. A study by
White, Terry, Troup, and Rempel (2007) similarly found that behavioral and control
beliefs were significant predictors for both physical activity and low-fat diet. A meta-
analysis of elicitation studies using the TPB framework for the physical activity
domain also found them to be fairly accurate in predicting attitude, subjective norm,
and perceived behavioral control (Downs & Hausenblas, 2005). A qualitative study
by Robertson, Mullan, and Todd (2014) reported barriers as limited time and life
changes or transitions. Younger adults reported accessibility to unhealthy foods as a
barrier, while older adults reported that it was challenging to find time to implement
to planning needed to eat healthy and exercise. Both groups reported uncertainty
about their ability to stay motivated and follow-through on their intentions.

In sum, several insights relevant to formulating a model of motivational
support emerge from the previous discussion of RAT and weight management. First,
while the RAT general model is fairly predictive for short-term weight management
behaviors, it is suggested here that focusing communicative effort on PBC will be
most beneficial in motivating middle-aged and older adults in persisting in weight
management efforts. This argument is forwarded in part because of the
characteristics of the motivational dilemmas and the population of interest. Although
not definitively known, middle-aged and older adults who desire to lose weight (the
group focused on in this study) likely already have a positive attitude toward losing
weight (e.g., think weight loss would be valuable). Also, although variability likely
exists among individuals, it is probable that in contemporary U.S. culture many may feel social pressure to lose weight (i.e., subjective norm). However, given the challenges associated with losing and maintaining weight, it appears especially important to bolster control beliefs and PBC in order to encourage people to feel that they can manage their weight. As further discussed in Chapter Four, this is seen as occurring communicatively through dispelling faulty beliefs persons may hold about their inability to persist in the midst of weight management challenges. RAT is helpful for understanding communicative foci relevant to motivational support for middle-aged and older adults in the weight management context.

However, gaps between intention and actual behavior emerge. A meta-analysis of 47 interventions using different behavior change frameworks revealed that a “medium-to-large change in intention leads to a small-to-medium change in behavior” (Webb & Sheeran, 2006, p. 260). The magnitude of the association between intentions and actual behavior may be influenced by intention-behavioral measurement incompatibility (Fishbein & Ajzen, 2010). Or, when faced with a hypothetical scenario in a research setting, people may report intending to enact a behavior, which occurs at a time when they are not actually confronted with the drives and emotions they would face in situ. Further, as previously referenced, a dearth of actual or perceived control may preclude action.

Added to these explanations is the following consideration relevant to the task of conceptualizing motivational supportive communication. As Hagger and Chatzisarantis (2009) argued:
…like many social cognitive theories, the TPB is not explicit in the reasons that these beliefs [behavioral, norm, and control] are pursued (Deci & Ryan, 1985), For example, the theory does not make the distinction between beliefs about outcomes that people choose to seek and are related to their true sense of self (self-determined outcomes) and beliefs about outcomes that people feel compelled to engage in out of a sense of obligation or duty (controlled outcomes). (p. 277)

Researchers working from a self-determination theory perspective have argued that including the concept of high-quality motivation is crucial in fostering sustained weight management.

**Motivation and Weight Management**

Motivation has been recognized as an important factor in successful weight management (Teixeira, Silva, Mata, Palmeira, & Marklad, 2012). One often-used theory that has been fruitfully applied to the weight management domain is self-determination theory (SDT; Deci & Ryan, 1985; Deci & Ryan, 2002), an organismic macrotheory of human motivation. The overall SDT framework posits that humans are active organisms facilitating their own development. Further, humans are situated within social contexts which may either support or thwart this development (Gorin, Powers, Koestner, & Wing, 2014). A fundamental premise of SDT is that people possess three basic, universal psychological needs: competence, relatedness, and autonomy. In brief, competence is defined as a “felt sense of confidence and effectance in action” (Deci & Ryan, 2002, p. 7). Relatedness refers to a feeling of
connection and caring and being cared for and accepted by others (Deci & Ryan, 2002). The autonomy need involves being the perceived origin of one’s own behavior (Deci & Ryan, 2002, p. 8). When organisms are situated within an environment that facilitates the satisfaction of these needs, they will likely thrive.

Situated under these basic SDT premises (i.e., organismic/dialectical perspective, the centrality of three basic needs), mini-theories relevant to more specific topical foci have been developed. These include cognitive evaluation theory (CET), organismic integration theory (OIT), causality orientations theory (COT), basic psychological needs theory (BPNT), goal contents theory (GCT), and relationships motivation theory (RMT). In addition to these formally-articulated mini-theories, a number of other processes have been examined through a SDT lens. Some of these include mindfulness, vitality, effects of nature on self-development, and eudaimonic wellbeing. Several facets of SDT will be employed in this study. The component most directly relevant to the conceptualization of communicative motivational support is the OIT mini-theory and its corresponding conception of autonomy support.

OIT was developed to explain why people choose to engage in (i.e., are motivated to perform) behaviors that, simply, are not much fun (think flossing). Indeed, these kinds of goals are often instrumental in that they are undertaken to fulfill a purpose perceived as important. Within SDT and OIT, motivation is seen as an energizing force, varying in quality, which directs action (Deci & Ryan, 1985, 2002). In other words, it is not the amount of motivation one possesses that is
important in terms of enacting a given behavior; rather, it is the quality of motivation that counts (Deci & Ryan, 2008). This idea is quite central to this study’s conceptualization of motivational support. In terms of kind and quality of motivation, autonomous motivation is positioned as superior to controlled motivation.

OIT posits that motivational quality exists along a continuum of internalization, the degree to which individuals “…tend to take in the regulation [from external others] and integrate it with their sense of self” (Deci & Ryan, 2002, p. 15). At the far left side of this internalization continuum resides amotivation, or the lack of intention to act. This state represents a condition of non-regulation. Moving along the continuum to the right, several progressive stages of extrinsic motivation reside. A state of extrinsic motivation occurs when an individual is prompted by “significant others or salient reference groups” (Deci & Ryan, 2002, p. 15) to engage in an activity they do not naturally find fun or interesting (e.g., eating a low-fat, low-salt diet). Extrinsic motivation occurs when, influenced by these external prompts, people self-regulate their behavior. Moving along the continuum from left to right, these forms of external motivation include external regulation (i.e., behavior in response to externally-granted rewards or punishments), introjected regulation (i.e., behavior enacted to avoid shame, boost ego, etc.; Deci & Ryan, 2008, p. 182), identification (i.e., action taken because perceived as valued and a component of the self; Ryan & Deci, 2000) and integration (i.e., behavior is perceived as important and hierarchically-integrated with other important values,
goals and aspects of the self). *Intrinsic motivation* exists at the far right on the continuum, and is comprised of intrinsic regulation. This form of motivation involves performing an activity for its sheer pleasure and enjoyment, not for any kind of external reward. Thus, most instrumental actions (e.g., health behaviors) fall outside the domain of intrinsic motivation. Indeed, Deci and Ryan (2002) argue that very few activities past early childhood easily fall into the intrinsic motivation category. Thus, in terms of the focus of this research project, an individual will not experience intrinsic regulation in terms of weight management behaviors. The identified and integrated forms of regulation comprising extrinsic motivation have been associated with many positive psychological and physical health outcomes, and share many of the same benefits as intrinsic motivation (Deci & Ryan, 2008). Thus, in sum, external and introjected forms of regulation comprise controlled motivation; identified, integrated, and intrinsic motivation comprises autonomous motivation (Deci & Ryan, 2008).

Research has “…shown varied advantages to being autonomously motivated, relative to controlled, including more volitional persistence, better relationships in one’s social groups, more effective performance, and greater health and well-being” (Deci & Ryan, 2002, p.19). More recently, SDT has articulated the role of motivation in close interpersonal relationships, where much motivational support likely occurs. Deci and Ryan (2014), for example, argued that people want to fulfill the relatedness need when fully functioning to develop intimate relationships with others. However, autonomy support and autonomy satisfaction must also be present.
Thus, these close relationships may be a vehicle through which weight management autonomous motivation emerges.

SDT positions persons’ social contexts as central in facilitating more autonomous forms of motivation through *autonomy support*, the degree to which social contexts support the fulfillment of basic needs and thus foster the integration of regulation from more extrinsic and introjected to more identified and integrated forms. More specifically, autonomy support has been defined as, “the interpersonal style of significant others who provide instruction and feedback with regard to goal-directed behaviours” (Hagger, Chatzisarantis, Hein, Pihu, Soós, & Karsai, 2007, p. 633). The construct of autonomy support was not developed from a communicative perspective; however, this body of research does suggest general interaction strategies that should be helpful in fostering high-quality motivation. For example, Deci, Eghrari, Patrick, and Leone (1994) identified three markers of autonomy-supporting interactions: providing a meaningful rationale, acknowledging the actor’s perspective, and conveying choice rather than control. Perceptions of autonomy support are typically measured through climate questionnaires tailored to the behavioral domain of interest. For example, sample items from the Health Care Climate Questionnaire include “I feel my physician has provided me choices and options,” “I feel my physician accepts me,” and “my physician encourages me to ask questions”. Other climate questionnaires tailor items for the topical domain of interest, reflecting the same general lines of autonomy supportive behavior.

Coinciding with SDTs’ recent push to better understand motivational dynamics in
relationships (see Weinstein, 2014), a climate questionnaire has been validated which involves perceptions of important others in a person’s life (Williams, Lynch, McGregor, Ryan, Sharp, & Deci, 2006).

Perceived autonomy support has generally been linked with positive mental and physical health outcomes (Deci & Ryan, 2002). The importance of autonomy support in fostering more self-determined forms of regulation has been documented in many contexts, including sport (e.g., Chatzisarantis, Hagger, & Smith, 2007; Hagger & Chatzisarantis, 2009), education (e.g., Black & Deci, 2000), healthcare (e.g., Williams, Freedman, & Deci, 1998), the workplace (e.g., Baard, Deci, & Ryan, 2004), and older adult residential care facilities (e.g., Kasser & Ryan, 1999). A recent study by Ng, Ntoumanis, and Thorgersen-Ntoumani (2013) reported that when participants viewed their important others as autonomy supportive, they reported more autonomous forms of motivation and weight management, which in turn was associated with greater levels of physical activity and healthier eating behaviors. The converse was reported when participants viewed their important others as controlling rather than supportive.

SDT constructs have been widely used in health behavior adoption theorizing and research. Ryan, Deci, Patrick, and Williams (2008), for example, proposed a model of health behavior change in which an autonomy supportive versus controlling healthcare climate, individual-level personality differences in autonomy, and intrinsic versus extrinsic life aspirations influenced whether or not the basic needs for autonomy, competence and relatedness were fulfilled. The satisfaction of these
needs was then proposed to predict better mental and physical health outcomes, including successful weight management. The claims forwarded by this model have received empirical support in the weight management domain (Teixeira, Silva, Mata, Palmeira, & Markland, 2012).

For example, a study by Williams, Grow, Freedman, Ryan, and Deci (1996) found that participants engaging in a weight loss intervention who were more autonomously motivated demonstrated greater intervention adherence, and lost more weight in both the short and longer-term. Similar results emerged in a randomized control trial when an autonomy supportive climate was manipulated in the intervention, facilitating greater weight loss and levels of physical activity (Silva, Vieira, Coutinho, Minderico, Matos, Sardinha, & Teixeira, 2010). Further, a 1-year randomized controlled trial suggests that promoting general and exercise autonomous motivation may have spill over effects which translate into greater eating regulation, as their study suggested (Mata, Silva, Vieira, Carraca, Andrade, Coutinho, Sílvia, & Teixeira, 2009). Autonomous motivation, perceived competence and perceived autonomy support were shown to predict change in glycemic control (mediated by self-management behaviors) for patients with Type 2 diabetes in a randomized trial (Williams, McGregor, Zeldman, Freedman, & Deci, 2004).

In terms of implications for a model of motivational support, SDT is viewed here as a perspective that highlights the importance of using communication to foster high-quality forms of motivation in the weight management domain. Motivational
support messages should, therefore, feature dimensions that emphasize the support
target’s autonomy and competence, rather than external goads.

**Integration of TPB and SDT Frameworks**

It is worth noting that some have suggested that reasoned action perspectives
and SDT can be integrated to form a more thorough explanation of volitional
behavior (e.g., Hagger & Chatzisarantis, 2009; Hagger, Chatzisarantis, & Harris,
2006). Hagger and Chatzisarantis (2009) argue that the organismic theory of SDT
informs the antecedents of TPB, by linking more self-determined forms of
motivation with more positive attitudes about a given behavior and greater
perceptions of perceived behavioral control. According to this theoretical integration,
motivational quality should be negatively associated with or unrelated to perceptions
of subjective norms. Using the example of physical exercise, they argue that:

For some people exercising to lose weight may be self-determined because
they value being healthy and view it as representative of their true self (self-
determined). They are therefore likely to actively seek opportunities to
exercise to lose weight. For others losing weight may be to look good for
others, an external contingency (controlling). In such cases, they are not
likely to pursue exercise to lose weight or may even avoid it. (p. 277)

Thus, in essence, these researchers are arguing that having an intention to lose
weight may be insufficient in fostering long-term health behavior change if the
motivation to perform these intentions are low in quality (i.e., controlled).
In sum, both SDT and RAT shed light on the various challenges associated with weight management. In different ways, each of these perspectives point to the importance of the social environment (RAT discusses perceptions of social norms or social pressure; SDT discusses autonomy-supportive social contexts and how these can support or thwart basic needs; e.g., Ng, Ntoumanis, Thorgersen-Ntoumani, Scott, & Hindle, 2013). Because this investigation is concerned with formulating motivational support for middle-aged and older adults, it is also important to one’s embeddedness within the lifespan into account.

**The Role of Lifespan in Weight Management**

Weight management is an incredibly complex lifespan issue. On one level, the interplay of genetics and social environment influencing one’s weight begins in utero and continues throughout childhood and adolescence, exerting influence across the lifespan (e.g., Dietz, 1998). In addition to these factors, later in the lifecourse, biological aging may influence the process of intentional weight loss (see Chapter one). Indeed, more research is needed on the safety and efficacy of various weight loss strategies for older adults, although it appears that intentional weight loss following a sensible regime is beneficial for middle-aged adults and older adults (Felix & West, 2013). On yet another level, the social context, roles, and norms associated with aging may influence persons’ weight management behaviors. Finally, work in developmental psychology suggests that lifespan factors may also generally influence motivational processes. This is relevant to the weight management context because these motivational processes hold implications for
middle-aged and older adults’ health related behaviors. In formulating a model of motivational support, it seems most appropriate to focus on how lifespan factors may impact motivational processes.

Lifespan developmental frameworks provide insight into weight management motivation for middle-aged and older adults. Like RAT’s PBC and SDT’s autonomy concept, these lifespan developmental theories tend to emphasize how older adults may retain a sense of control later in life. In terms of health outcomes, “Entering later life with a strong sense of control over one’s life should prepare the individual to meet the challenge, health and otherwise, that are likely to arise” (Skaff, 2007, p. 204).

One of these frameworks is selective optimization with compensation (SOC, Baltes & Baltes, 1990), which posits that the entire lifespan presents both gains and losses, and that control (i.e., successful development) is attained through maximizing gains and minimizing losses. SOC argues that three potential goals “guide developmental investments” across the lifespan: namely, growth, maintenance, and the regulation of loss. Resources are defined as “…the entirety of physical, mental, social, and external resources and behaviors that individuals command in the pursuit of personal goals” (Baltes, Freund, & Li, 2005, n.p.). The theory argues that across the lifespan, a general shift occurs in which resources are withdrawn from growth goals and are instead directed toward maintenance and regulation. Thus, SOC posits that adaptation occurs throughout the lifespan as older adults coordinate the three processes of “selection (contexts, goals), optimization (means/resources), and
compensation (substitutive means/resources)” in order to continue adaptation (Baltes et al., 2005, n.p.). In brief, selection involves the choosing of attainable and desirable goals, optimization includes “the acquisition and refinement of means for achieving desired outcomes and attaining higher levels of functioning” (Baltes et al., 2005, n.p.), and compensation refers to the use of alternate means to counteract losses (e.g., using a hearing aid to cope with hearing loss). The example provided by Baltes (1997) to illustrate these processes was the expert pianist Arthur Rubinstein, who, as an older adult, continued performance at an excellent level because he included fewer pieces in his repertoire than when he was younger (selection), practiced them more often (optimization), and played certain parts of the pieces more slowly to contrast with the faster parts (compensation). Thus, working from this framework, a successful model of weight management support should communicatively facilitate these three processes by facilitating the selection of realistic, attainable weight management goals, optimally honing current physical and cognitive resources toward these ends, and finding strategies to overcome challenges that may preclude the attainment of goals.

A complementary perspective is Heckhausen, Wrosch, and Schulz’s (2010) motivational theory of lifespan development, based on the earlier developed lifespan theory of control (Shulz & Heckhausen, 1996). The authors (2010) noted:

An individual’s developmental potential is won or lost by mastering the challenges of regulating motivational processes. This is accomplished by selecting, pursuing, and adapting developmental and personal goals to reflect
changes in life-course opportunities, staying ahead of the game by
anticipating emergent opportunities for goal pursuits, activating behavioral
and motivational strategies of goal engagement, disengaging from goals that
have become futile and too costly, and replacing them with more appropriate
goals. (p. 32)

Thus, from this perspective, development occurs throughout the lifespan because
people are motivated foremost to attain primary control (i.e., influencing the
environment to attain desired outcomes). The researchers argued that secondary
control (i.e., changing internal states to cope with environmental press) occurs more
frequently across the lifespan as age-related change may inhibit primary control
striving for some. However, secondary control striving may be a very adaptive and
philosophical appraisal of the aging process (Skaff, 2014). Thus, similar to the SOC
perspective, in terms of weight management, weight management motivational
support should help individuals find ways to obtain primary control in this domain.

Given the importance of control for people throughout the lifespan, the
emphasis on autonomy in SDT seems especially relevant. The important relationship
of resiliency and motivation (Resnick, 2011) and motivation’s mediating role
between adversity and health outcomes (Wright, Zautra, & Going, 2008) have also
been noted. Heckhausen et al (2010) noted the synchrony of the motivational theory
of lifespan development and SDT, by arguing that both perspectives agree that
universal components underlying individuals’ pursuit of action are the satisfaction of
basic needs including control, autonomy, or mastery. Next, a more thorough
examination of social interaction’s role in weight management will be provided, with an emphasis on supportive communication.

**Social Interaction and Weight Management**

The importance of focusing on the broader social environment of a person attempting behavior change has increasingly been recognized. Social ecological approaches to weight management, for example, recognize the interconnections of higher level governmental organizations, social communities, family and friend systems, and intrapersonal processes in weight management (Baranowski, Cullen, Nicklas, Thompson, & Baranowski, 2003). Part of the impetus for this trend is the hope that more social interaction/environment-focused interventions will be useful promoting long-term weight maintenance (La Gaurdia & Patrick, 2014). The role of relationships, and especially close relationships, in the promotion of health behavior has also recently received attention (Gorin, Powers, Koestner, & Wing, 2013; La Gaurdia & Patrick, 2014). Social facilitation or inhibition for healthy weight management behaviors may be at play. For example, research by Kiernan and colleagues (Kiernan, Moore, Schoffman, Lee, King, Taylor, Kiernan, & Perri, 2012) examined the general lines of social support and sabotage experienced by friends or family, and found that women who experienced frequent family and friend support were more likely to experience clinically-significant weight loss than people who never experienced family support. Perceptions of social norms for eating and exercise may also be associated with individuals’ own eating and exercise behaviors (Ball, Jeffery, Abbott, McNaughton, & Crawford, 2010).
Of particular interest to the formulation of motivational support is the role of communication in supportive interpersonal interaction. Within the specific context of weight management, social support, broadly conceived, has been linked with the adoption of healthy weight-management behaviors (Black, Gleser, Kooyers, 1990; Wing & Jeffery, 1999). For example, social support is associated with increased physical activity (Anderson, Wojcik, Winett, & Williams, 2006; Tamers, Beresford, Cheadle, Zheng, Bishop, & Thompson, 2011), fruit and vegetable consumption (Tamers et al., 2011), adherence to a heart healthy diet (Aggarwal, Liao, Allegrante, & Mosca, 2010), and initiating and maintaining healthy eating behaviors (Dube & Stanton, 2010). It is important to note that social support has been operationalized differently across these studies, making comparing findings challenging.

Despite the seeming importance of social support generally in weight management behaviors, some evidence suggests that a large proportion of people report never receiving weight management-related social support (Kiernan et al., 2012). Here, social support is proposed as one mechanism through which individuals may be encouraged to adopt and persist in weight management behaviors. Within this view, other complimentary and contrasting social interaction processes will also be addressed.

**Social support.** Social support has been widely recognized as an important construct in the social sciences from roughly the mid-1970s to the present. Seminal pieces by Caplan (1976) and Cobb (1976) linked conceptions of social network embeddedness to positive health outcomes. Since these initial formulations,
thousands of scholarly articles (Saranson & Sarason, 2009; Wright & Query, 2004) have been published establishing the association between social support and mental and physical wellbeing (for a review, see Uchino, Cacioppo, & Kiecolt-Glaser, 1996). However, these findings are somewhat challenging to interpret because the vast scope of the social support construct facilitates differing operationalization, methodological approaches and measurement instruments (Vangelisti, 2009). In distilling this vast body of literature, three overarching social support perspectives emerge: sociological, psychological, and communicative (for reviews, see Burleson & MacGeorge, 2002; Cohen, Gottlieb, & Underwood, 2000; MacGeorge, Feng, & Burleson, 2011). The sociological and psychological traditions will be briefly addressed with most attention being directed to the communication perspective.

Broadly, the sociological tradition emphasizes how an individual’s integration within a wider social network contributes to mental and physical health outcomes. Social network integration is understood as “the extent of [one’s] ties to friends, family, and the community” and is often operationalized through items indicating a person’s marital status, number of friends, and participation in religious and social clubs (Kiecolt-Glaser, Gouin, & Hantsoo, 2010, p. 35). A foundational study by Berkman and Syme (1979), for example, demonstrated that individuals with greater social network integration, even when controlling for confounding variables, had lower mortality rates nine years after initial measurement than those with lesser social integration.
Research in the sociological tradition has investigated if social support conceptualized as network integration leads to positive health outcomes because it provides a buffering effect (i.e., provides greatest benefit to individuals during times of high stress by facilitating coping) or produces a main effect (i.e., is proactively beneficial regardless of stress level). A meta-analysis of social support literature by Cohen and Wills (1985) demonstrated that both of these effects may, and probably do, occur under differing circumstances. More current work continues to investigate social support as intended to facilitate the stress-coping process, or to facilitate other positive benefits through social integration (Cohen, 2004).

Scholars in the sociological tradition continue to grapple with explanations of the precise mechanisms linking social network integration to demonstrated health outcomes. One potential explanation may be social control (Lewis & Rook, 1999), a concept which proposes that the members of an individual’s social network encourage that individual to adopt healthy lifestyle behaviors. Indeed, this idea is conceptually similar to perceived pressure in RAT and autonomy supportive vs. controlling environments discussed in SDT. An independent line of investigations on the concept of social control has developed in the behavior change and weight management domain.

Within social control research, some have resisted broad definitions of social support as “any process through which social relationships might promote health and wellbeing” (Cohen, Gottlieb, & Underwood, 2000, p. 4). Instead, Lewis and Butterfield (2005) argued that positive health behaviors can also be fostered through
the distinct social control processes. Health-related social control is defined as “…interactions between social network members that involve explicit attempts to regulate and influence health behaviors” (Lewis & Butterfield, 2005, p. 416). A person telling his or her romantic partner that he or she should not eat so many deserts because they are unhealthy would illustrate one manifestation of social control. These kinds of interactions are posited as occurring because one party has breached the health behavior norms for his or her role. This is seen as operating through different mechanisms than social support and having different purposes. Empathy and affirmation are thought to promote coping through social support, and social control is seen as occurring in order to regulate behavior (Lewis & Butterfield, 1999).

Similar to studies on autonomy support vs. controlling environments in SDT, social control tends to be measured through questionnaires in which people report their experience of either positive or negative lines of controlling behavior (Lewis & Rook, 1999). This tactic was adopted in part from interpersonal work on social influence, and scholars in this area note that the lack of research on social influence in the relational weight management context is surprising given the important role of health-related social influence in many relationships. Social control from one’s overall social network (which could be seen as conceptually similar to a controlling SDT climate) was associated with fewer health enhancing and more health compromising behaviors (Lewis & Rook, 1999). However, in the same study, within a specific interpersonal relationship, positive social control strategies were associated
with increased health behaviors and greater sadness/guilt, while negative control strategies were unrelated to health behavior change but did produce greater sadness/guilt and hostility/irritation (Lewis & Rook, 1999). It appears that relational expectations may play a role in perceptions of these control processes. For example, for people with the chronic health condition of type 2 diabetes, it seems that expectations of patient involvement are associated with more positive interpretations of social control from a spouse than other attempts (Rook, August, Stephens, & Franks, 2011). Similarly, Stephens, Rook, Franks, Khan, and Iida (2010) did a dyadic study where they examined social control for partners and dietary adherence for diabetics and found better adherence for more positive influence attempts (encouragement) than negative influence attempts (warnings).

In addition to social control, other concepts being investigated largely from a sociological perspective involve critical periods of support intervention throughout the lifespan (Ertel, Glymour & Berkman, 2009; Rook, 2009; Uchino, 2009) and the role of physiological inflammation in the network integration and health outcome association (Kiecolt-Glaser et al., 2010).

The psychological perspective, generally conceived, takes a somewhat different approach to the study of social support. Scholars in this tradition tend to focus on individual’s perceptions of available (i.e., perceived) social support – in other words, a person’s belief that, hypothetically, help would be there should they ever need it. Interestingly, people’s perception of whether or not help will be available when needed, and not necessarily support that has actually been received,
has been repeatedly linked to positive affective and health outcomes (Goldsmith, 2004). One explanation for this somewhat counterintuitive finding is that a person’s *perception* of support may be beneficial because it taps “the availability of functions that help people deal with stressful experiences” (Wills & Shinar, 2000, p. 94), thus enabling individuals to deal more positively with stress. Arguing along these lines from a lifespan perspective, Uchino (2009) noted that, in contrast to received support measures, perceived support may reflect “personality processes, such as attachment style, optimism, and hostility” (p. 55) that are established early in the lifespan within the family environment. Thus, children raised in nurturing homes with healthy interpersonal connections (e.g., attachment) and physical adequacy (e.g., good nutrition) probably develop both a psychological and physical “coping toolbox” somehow related to later measurements of perceived support available and subsequent health outcomes (Uchino, 2009).

It is important at this point to note that both the sociological and psychological perspectives provide valuable insights into social support. In fact, the construct of social support is multidimensional and bidirectional in its mechanisms (Sarason & Sarason, 2009), and a single explanatory perspective will likely be inadequate. As Goldsmith (2004) argued:

Progress in understanding how social relationships promote well-being is not likely to occur by attempting to integrate all these diverse features and functions of relationships into a single conceptualization of social support. Instead, we are most likely to progress when researchers clearly identify a
particular facet of support and then develop and test theoretical explanations of how that facet works. (p. 13)

Thus, in heeding this advice, scholars within the communication perspective – while being sensitive to and informed by the other traditions previously discussed – have claimed the study supportive communication as their exploratory ground within the social support landscape. As discussed in Chapter one, supportive communication can be defined as “verbal and nonverbal behavior produced with the intention of providing assistance to others perceived as needing that aid” (MacGeorge et al., 2011, p. 317). Supportive communication scholarship thus focuses on communicative interactions and messages responsible for more or less effective support seeking and provision.

**Supportive communication.** This study is primarily concerned with the communication perspective within the social support tradition. Supportive communication constitutes a form of enacted support; that is, verbal and nonverbal messages intended to seek or provide aid (MacGeorge et al., 2011). Supportive communication scholarship thus focuses on communicative interactions and messages responsible for more or less effective support seeking, provision, and reception (Burleson & MacGeorge, 2002; MacGeorge et al., 2011).

Within this tradition, the interaction structure of supportive communication exchanges has been investigated. Barbee, Rowatt, and Cunningham’s (1998) sensitive interaction systems theory (SIST) identifies a four stage interaction structure: 1) direct or indirect support activation behaviors, 2) interactive coping
behaviors by the recipient and provider (i.e., support provision), 3) immediate seeker reactions, and 4) supporter and seeker relationship outcomes (Barbee, Rowatt, & Cunningham, 1998). In thinking about the communicative messages occurring within the support provision phase within a supportive interaction, several typologies have been devised describing kinds of social support that may be offered (i.e., support types). One popular typology that has been forwarded and widely adopted comes from Cutrona and Russell (1990) and Cutrona and Suhr (1994), who, building on previous social support literature, created the Social Support Behavior Code (SSBC). These support types were generally conceived as being offered to others during times of distress (Leach & Braithwaite, 1996). The support types proposed by the SSBC include tangible, esteem, emotional and network support, each with sub-categories illustrating instances of the broader support type category (e.g., emotional support behaviors include, among others, physical affection, prayer, empathy, and listening). These five categories can be more broadly organized into two groups, with one group of social support types classified as action-facilitating and the other classified as nurturant support. The authors (1994) argued that certain kinds of support should be optimally beneficial (i.e., optimally matched) to certain kinds of stressors, thereby reducing stress by facilitating coping. Although at least some fit between problem and support provision rendered is important, matching models of supportive communication have not fared over well because they fail to attend to message quality and potential moderating effects (Goldsmith, 2004; MacGeorge et al., 2011). More recent scholarship on supportive communication has argued for a functional
view of supportive communication, with conceptually distinct support practices with their own foci and concerns, including emotional (Burleson, 2008), esteem (Holstrom & Burleson, 2011), advice (Feng & Burleson, 2008; Feng & MacGeorge, 2010), and celebratory support (McCullough, 2010). In this study, motivational support is forwarded as a unique supportive communication function.

A sizeable body of communication research has focused on comforting messages and processes, which are tied to conceptions of emotional support. Burleson and Goldsmith (1998) defined comforting as “encompassing communicative attempts to alleviate the emotional distress of another” (p. 246). When attending to comforting message features, one persistent predictor of message evaluation is the level of person-centeredness of a given message. Working from a constructivist perspective, person-centered messages are “…scaled for the extent to which the feelings and perspective of a distressed other are explicitly acknowledged, elaborated, and granted legitimacy…” (Applegate, 1980; Burleson & Goldsmith, 1998, p. 251). As will be further discussed in Chapter four, varying levels of person-centeredness in comforting messages have consistently been associated with variance in message evaluation, with low person-centered messages receiving lower evaluations on dimensions such as sensitivity or effectiveness. Other variables, including demographic variables (e.g., age, sex, ethnicity) have been shown to impact different evaluations of messages varying in levels of person-centeredness, but not greatly (i.e., 1-3% of the variance; Burleson, 2008).
Burleson and Goldsmith (1998) investigated the comforting process by building on an appraisal view of emotion (Lazarus, 1991). The authors thus proposed that comforting works by “…discursively constructing useful appraisals of particular person-environment configurations, not by simply matching the right type of support to a predefined and static environmental circumstance” (p. 251). Thus, skilled conversations comfort by helping the person needing support reappraise the situation in a more positive manner. Although this insight is valuable, in later work, Burleson (2010b) reflected that one limitation of this theory of conversationally-induced reappraisals is that it works well in explaining why optimal comforting messages work, but does not adequately explain why sometimes an unsophisticated comforting message also helps a person feel better. Thus, he noted that “a complete theory of supportive message effects needs to specify multiple distinct mechanisms through which various comforting messages influence the emotions of recipients” (Burleson, 2010b, p. 184). Toward this goal, Burleson and some of his students proposed a dual-process theory of supportive communication outcomes that, building on dual-process models of persuasion, argued that ability and motivation impact message reception outcomes (MacGeorge et al., 2011). In other words, evaluations of comforting messages may vary depending on the cognitive processing resulting from the interactions of sender, receiver, message, and comforting interaction variables. The dual-process theory of supportive communicative outcomes continues to be refined, with, for example, Bodie, Burleson, and Jones (2012) testing linkages
between messages evaluations and affective outcomes from a dual-process perspective.

Another concern of supportive communication research is how supportive communication constitutes and contributes to relationships. The previous summarized research focuses on the identification of message features and cognitive mechanisms underlying the provision and reception of more or less effective support, although some have argued that the ongoing social support undergirding more mundane daily interactions within close relationships and resultant support and relationship outcomes have been understudied (Leach & Braithwaite, 1996; Leatham & Duck, 1990; Sarason & Sarason, 2006). Working from this relationship framework, some scholars have identified social support seeking as potentially risky for interactants with danger of negative relationship outcomes (Goldsmith & Parks, 1990). La Gaipa (1990) also noted that issues of obligation and inequity within relationships may result in deleterious outcomes when support is sought or provided. Scott, Martin, Stone, and Brashers (2011) have indicated the complexity of managing multiple goals when navigating supportive interactions. Scott et al. (2011) found that in the organ transplant context, social support could sometimes be perceived as increasing unwanted uncertainty between relational partners, or in creating undesired feelings of obligation. Another relational context includes face-to-face self-help support groups, which have been identified as sites for supportive relationships and interactions with positive mental and physical health outcomes (White & Dorman, 2001). In sum, supportive communication research investigates
the messages, interactions, and relationships involved in social support (Burleson, Albrecht, Goldsmith, & Sarason, 1994).

**Communication and weight management.** Although several different theoretical perspectives have investigated general lines of interaction behavior that may support or thwart weight management endeavors, few studies have explicitly investigated the communicative dimensions of weight management. Further, even fewer of those studies have specifically investigated ways to promote more autonomous forms of motivation through weight management messages. Some of the studies which take a communication perspective on related issues of interest are reviewed here. For example, a trio of studies by Goldsmith and colleagues (Goldsmith, Bute, & Lindholm, 2012; Goldsmith, Gumminger, & Bute, 2006; Goldsmith, Lindholm, & Bute, 2006) highlighted the importance and complexity of message interpretation in the process of lifestyle behavior change conversations. These studies used interviews to elucidate communication practices of romantic partners talking about lifestyle changes (e.g., exercising, eating a low-fat diet) following a cardiac event. These interviews were analyzed using a rhetorical, multiple-goal perspective on supportive communication to examine how patients more or less successfully managed sometimes-competing goals task, identity and relational goals. The findings from these studies suggested that conversations between romantic partners about behavior change are prone to misunderstandings and hurt feelings and must therefore be skillfully navigated. For example, one documented dilemma was that romantic partners who experienced the cardiac event
sometimes perceived their partners’ encouragement to pursue a healthy lifestyle as controlling rather than motivating.

Work by Anderson, Cornachionne, and Maloney (2013) proposed that one possible explanation for the challenges associated with weight management communication may stem from differing beliefs about the descriptive and subjective norms about weight loss communication, and attitudes toward weight loss communication. The researchers also investigated if individuals would be willing to provide weight management advice to a hypothetical friend when solicited. These responses were then coded for topical focus and support type (i.e., informational, networking, emotional, esteem, and tangible). Results indicated that weight loss communication was perceived as non-normative in that participants thought it was unusual or somewhat inappropriate to suggest weight loss. However, individuals had generally positive attitudes about weight loss conversations with their friends. Further, almost all participants provided social support (as operationalized by this study) to the friend presented in the hypothetical scenario, which typically focused on health rather than appearance, and most commonly presented informational and networking social support types (Anderson, Cornachionne, & Maloney, 2013).

Other lines of work have investigated messages about weight management drawing from different theoretical traditions. One program of research particularly relevant to this study involves work by Dailey and her collaborators (Dailey, McCracken, & Kluever Romo, 2011; Dailey, Kluever Romo, & McCracken, 2010; Dailey, Richards, & Kluever Romo, 2010). These studies used confirmation theory
(Buber, 1965) to identify effective weight management messages between relational partners. Working from a confirmation theory perspective, the researchers posit that weight management messages vary in levels of two theoretically important dimensions: acceptance and challenge. In brief, acceptance refers to an interpersonal validation of a person’s worth and affirmation, while challenge refers to encouragement to strive for more than one’s current state (Dailey et al., 2010). Items used to measure acceptance included: [this message] “shows she/he cares about me;” “is conveyed in a friendly voice,” and “accepts my feelings.” Items used to measure challenge included: [this message] “presents new information, ideas, or options about diet or exercise,” and “pushes me to set goals regarding my weight management,” (Dailey et al., 2010).

The researchers predicted that messages high in either acceptance or challenge would be perceived as more effective in facilitating the enactment of healthy diet or exercise choices than messages low in either acceptance or challenge. Message effectiveness in these studies was measured through self-report items like “This message would be effective in getting me to enact or maintain healthy diet or exercise habits.” Study predictions regarding acceptance and challenge were largely supported. Dailey et al. (2010) found that constructed hypothetical messages low in both acceptance and challenge were rated as least effective. Messages high in acceptance/low in challenge, and high in challenge/low in acceptance were rated as more effective, respectively. Messages high in both acceptance and challenge were rated as most effective. Dailey et al. (2010b) reported that although participants’
ratings of weight management messages’ level of acceptance and challenge predicted message effectiveness individually, the interaction of acceptance and challenge was not significant. Acceptance and challenge also produced additive, rather than interactive effects, in terms of message effectiveness in Dailey et al. (2011).

This body of work also began to investigate individual factors that may moderate the relationship between message components and message effectiveness. Some of the variables investigated included demographic and physical characteristics (i.e., BMI, age, sex; Dailey et al., 2010b), individual differences (i.e., body self-esteem, stages of change, weight locus of control, weight loss motives, preference for acceptance or challenge; Dailey et al., 2010b, 2011), and weight management communication satisfaction (Dailey et al., 2010b). Overall, weight management messages’ levels of acceptance or challenge accounted for most of the variance in perceived message effectiveness (i.e., high acceptance rated as more effective than low acceptance; high challenge rated as more effective than low challenge). Further, demographic characteristic tended to explain less of the remaining variance than individual differences like preference for acceptance or challenge.

Other work on communication about weight loss has emphasized the relational dimensions of such conversations. Kluever Romo and Dailey (2013), for example, examined couples’ perceptions of interaction following weight loss by one person in the dyad. The findings suggested that while weight loss by one person was often perceived positively, it also could prompt criticism (toward the partner who had lost weight) from the partner who had not lost weight. Relational investigations
of communication about weight management often frame such discussions in terms of social influence, as previously discussed in the section on social control. Burke (2012), for example, investigated weight management-related social influence in close relationships, finding that positive influence strategies were associated with both positive weight management outcomes and perceptions of relationship quality. In studying social influence strategies in weight management messages, Mooney Thompson, Kluever Romo, and Dailey (2013) found that dominance in social influence attempts was inversely related to perceived message effectiveness, while addressing the target’s face needs and providing reasoning were associated with effectiveness. In this study, participants were asked to describe a typical weight management conversation. They were then asked about the effectiveness of the reported conversation through a single self-report item assessing the extent to which the weight management influence attempt was effective in getting them to enact the weight management behavior(s) being discussed.

Thus, in sum, social interaction plays a central role in weight management, through the inhibition or facilitation of positive health behaviors. Social support, conceptualized from the sociological, psychological, and communicative positions discussed, has been examined as one form of social interaction linked with positive health outcomes. Within the supportive communication tradition, one central research aim has been the identification of the dimensions of enacted support messages that are linked with more and less effective results in the domain of interest (e.g., comforting, esteeming). Work in communication in weight management has
identified that weight management conversations may be sensitive and prone to misunderstandings, and may be related to the overarching relational dynamics present within the interaction situation. It has also identified that messages which either affirm or challenge the weight loss target may be associated with greater intentions to exercise or eat healthy. However, while valuable, these tests do not distinguish between message level of message quality (i.e., can one challenge in better and worse ways?) Also, it seems possible that dimensions other than acceptance and challenge may be operative.

Summary

In conclusion, this literature review revealed several insights relevant to the identification of motivational support message dimensions. First, RAT perspectives suggest an emphasis on bolstering PBC for middle-aged and older adults attempting to lose weight is important. Therefore, high quality motivational support messages should help individuals dissolve perceptions about weight management obstacles. However, as SDT literature suggests, having a behavioral intention to lose weight alone does not necessarily mean that intention will lead to sustained and successful weight management efforts. Instead, SDT posits that persons need to have motivation which is autonomous, rather than controlling, in nature. Therefore, motivational support messages should likely also avoid dimensions of control, instead helping participants to see weight management as a joyful and integrated aspect of themselves. Lifespan developmental frameworks also speak in a slightly different way about motivational processes, noting that it is important for individuals
to select appropriate goals, and to find ways to maximize gains/minimize losses and obtain primary control as they enact those goals. The literature on social interaction and weight management recognizes the importance of social context, and specifically social support, in facilitating positive weight management outcomes. In the area of weight management communication, research suggests that weight management talk is a complex instrumental communicative task, which highlights that there may be differences in quality for motivational support messages. However, research that integrates these perspectives to examine the communicative dimensions of motivation in weight management is lacking. Given the practical and theoretical importance of motivational support in weight management for middle-aged and older adults, and the lack of research specifically at this juncture, a qualitative study was conducted to explore participants’ conceptions of motivational support.
This dissertation employed a mixed-methods, sequential design (Creswell & Plano Clark, 2011) to formulate a model of motivational support. Using this design, it was deemed appropriate to conduct the qualitative study presented in this chapter first in order to garner, from middle-aged and older adult participants’ perceptions of effective motivational support practices. The findings from this study were then used to complement, enrich, and challenge the literature reviewed in Chapter two, ultimately informing the quantitative test outlined and tested in Chapters, four, five, and six. As seen in Chapter two, several domains of literature are relevant to the study of motivational support, but little work has occurred at the intersection of social support, communication practices, and weight loss for the populations of interest. The need for such a study is further elaborated next.

First, relatively little research has explicitly studied communication about weight management (Dailey et al., 2010), despite the deleterious consequences of overweight and obesity outlined in Chapter one. Further, communication research generally tends to rely on participants who are college students, so claims about the generalizability of resultant knowledge to non-college student samples are limited (Pecchioni, Wright, & Nussbaum, 2005). More broadly, it has been argued that few models of health behavior change have been examined from a qualitative perspective, despite the richness and insight such an approach may provide.
(Robertson, Mullan, & Todd, 2014). Robertson et al. (2014) also noted that when such qualitative examinations do occur, they tend to focus on only one weight management behavior, like eating or exercise, rather than examining multiple behavioral domains simultaneously. Although approaching weight management behavior change from a focused vantage point certainly offers advantages (and indeed will be adopted later in this dissertation), it does not allow for the initial insights gained from taking a more integrative approach to the role of weight management as a whole in persons’ lives. Thus, semi-structured, in-depth interviews were used to investigate middle-aged and older adults’ perceptions of effective motivational support practices in the weight management context.

**Topical Foci and Research Questions**

First, because the overarching instrumental task of the forthcoming model of motivational support is to provide middle-aged and older adults’ with high-quality energizing drive to persist in weight management behaviors, it is crucial to understand the weight management *situation* of middle-aged and older adults wanting to lose weight. Here, a participant’s weight management situation encompasses his or her present, past, and future temporal weight loss orientations. Specifically addressing each of these temporal orientations in turn, it is important to understand if participants are: 1) currently actively attempting to lose weight (present), 2) their weight loss goals/desires (future), and 3) their weight management histories/experiences (past). Understanding each participants’ weight management situation offers important insights informed by multiple perspectives. For example,
within reasoned action perspectives, past behavior has been forwarded by some as an important predictor of future behavior (Fishbein & Ajzen, 2010; McEchlan et al., 2011). Further, some have discussed the importance of goal selection and implementation intentions in enacting a desired behavior (e.g., Gollwitzer, 1999; Gollwitzer & Brandstatter, 1997). It also seems plausible that past weight management behavior may influence motivation through participants’ perceptions of their own autonomy and competence. Although the importance of understanding participants’ weight loss situations is affirmed by multiple theoretical perspectives, central to this investigation is an approach to participant interview interaction which honors the phenomenological experiences of participants, apart from pre-imposed conceptual constraints. Thus, first research question of interest is as follows:

RQ1: What are participants’ current efforts, goals and history of weight management?

In addition to elucidating the weight management situation of participants, the categories of literature described in Chapter two suggest further broad topical domains of interest to be examined in this study.

First, several features drawn from reasoned action perspectives seem particularly interesting given the objective of creating a model of motivational support. Namely, because ongoing, high-quality motivation likely involves triumphing repeatedly over challenges, it seems important to elicit participants’ perceptions of relevant barriers in the weight management process. Thus, the following research question emerged from the RAT perspective:
RQ2: What are participants’ most salient barriers to weight management?

Second, as described in Chapter two, SDT suggests that the kind of motivation experienced by participants in the weight management context likely matters a great deal (e.g., Teixeira et al., 2012). Motivation that is seen as more autonomous is perceived as higher in quality than motivation that is controlled, and resultanty motivation that is more self-determined is linked to better outcomes (Deci & Ryan, 2002). What kinds of motivation, if any, do they demonstrate? While the broad topical area of motivation type is suggested by SDT, here, this investigation is also interested in understanding participants’ conceptions of their own weight management motivation.

RQ3: How do participants characterize and cast their own weight management motivation?

RQ4: What kind of motivation manifests in participants’ weight management practices?

Third, to formulate a model of motivational support, it is important to understand what components of messages are seen as effective in motivating. Because of the conceptualization of communication further articulated in chapter four, these message components are viewed as occurring within a unique personal and relational communication situation. Conversely, it is also important to clarify what kinds of messages are harmful in this endeavor. Thus, the following questions are advanced:
RQ5: What kinds of weight management messages are perceived as motivating?

RQ6: What kinds of weight management messages are perceived as demotivating?

An additional domain of interest emerges as well; namely, whether age is viewed as important in participants’ perceptions of the weight management process.

RQ8: How do participants perceive the role of age in weight management?

Semi-structured, in-depth interviews were used to investigate these questions. This method was deemed most appropriate because it “…permits an in-depth exploration of a particular topic or experience” (Charmaz, 2006, p. 25), allowing valuable insight into the process of effective motivational support in the weight management context.

Method

Participants

Participants were 28 middle-aged and older adults (23 women, 5 men, age range: 43-94 years, $M_{age} = 60.5, SD = 11.5$) who were recruited from flyers distributed in a fitness center and church in two Midwestern cities. To participate, potential participants had to meet the following inclusion criteria: 1) Be 45 years of age or older; 2) Currently desire to lose weight, increase fitness, and/or get healthy; and 3) Have no diagnosed cognitive impairment. Inclusion criterion one was provided to secure a middle-aged and older adult sample. Criterion three was included because, in research with older adults, cognitive impairment like dementia or Alzheimer’s disease can confound findings (Jamieson & Victor, 2002). The
researcher invited two individuals who were 43 years of age to take part in the study after they expressed interest in participating.

The final sample was predominately Caucasian (N = 25, 89%), with some participants identifying as Hispanic/Latino (N = 2, 7.1%), and Native American (N = 1, 3.5%). A majority of participants were currently married (N = 20, 71%), followed by divorced or separated (N = 4, 14%) and widowed (N = 3, 11%) individuals. The vast majority of participants rated their general health status as “very good” or “good” (89%), with the remainder rating their general health status as “poor” or “fair.” Body Mass Index, a widely-used metric of weight status, was also assessed. According to the Centers for Disease Control, BMI below 18.5 constitutes underweight, 18.5-24.9 constitutes normal weight, 25.0-29.9 constitutes overweight, and > 30.0 constitutes obesity. The sample fell within the normal-obese BMI range, with the mean BMI bordering the overweight and obese ranges (M_{BMI} = 28.9, BMI range: 19.5-48.9). Five participants fell in the normal BMI range, 13 participants fell in the overweight BMI range, and eight participants fell in the obese BMI range. Two participants did not report either height or weight, and thus BMI could not be calculated.

**Procedure**

Interviews were conducted in a comfortable location of the interviewee’s choosing (e.g., coffee shop, participant’s home). Informed consent was obtained. The same interview schedule was used for all interviews to ensure consistency of topics discussed across participants; however, follow-up and probing questions were
tailored as appropriate during the interview. The researcher used a largely non-directive interviewing approach, encouraging participants to expound as they saw fit in their responses (Stewart & Cash, 2014). A warm and friendly interview style was also adopted to put participants at ease while discussing the potentially-sensitive weight management issue (Charmaz, 2006). Interviews lasted approximately 20-60 minutes, with the majority taking 40-60 minutes, and were audio recorded for later reference. Following the interviews, participants completed a brief questionnaire with various demographic, health, and technology questions.

**Instrumentation and Measures**

**Interview schedule development.** Please see Appendix A for the complete interview schedule used in this research. An interview schedule “consists of all major questions with possible probing questions under each” (Stewart & Cash, 2014, p. 73). This interview was developed by first creating an interview guide, “a carefully structured outline of topics and subtopics to be covered” (Stewart & Cash, 2014, p.71). The topics and questions thus presented in this schedule reflect the overarching questions of interest previously described.

Topic one, *present attempts and past experiences*, served to orient participants to the interview situation and to gain knowledge on their current and past experiences with weight loss. Topic two, *conceptions of challenge*, dealt with participants’ views of salient weight management challenges. Topic three, *general motivation*, dealt with participants’ perceptions of motivation to overcome challenges. Topic four, *motivational supportive communication*, asked respondents
to provide an example of one motivating message and one demotivating message in the weight management context. For each of these overarching questions within topic four, a series of follow-up probes was launched, reflecting a multiple-goal perspective on communication (O’Keefe & Delia, 1982). Some of these probing questions included queries regarding the relationship between the provider and receiver, attributions about the person providing the supportive (or unsupportive) message, and the perceived efficacy of that message. Within this interview topic, participants were told that the message could come from any interpersonal source, communication channel (e.g., face-to-face communication, text message, Facebook post), and could be any length. The technique of asking participants to provide one example of motivating and de-motivating messages is similar to the widely-used memorable message technique, which has been used often in health-related research (e.g., Holladay, 2002; Smith et al., 2009). General perceptions of support climate and support provision tendencies from others were also solicited. Topic five, “concluding questions” involved closing tasks of the interview; namely, asking participants if they had any questions or further thoughts and thanking them for their time. After finishing the interview, participants completed a brief questionnaire related to demographics, general health status, and technology use.

**Data Analysis**

Interview data was analyzed using grounded theory techniques (Corbin & Strauss, 2008) to answer the research questions of interest. Analyses proceeded in the following fashion. Each interview was audio recorded and was transcribed.
verbatim shortly thereafter. This process resulted in roughly 140 single-spaced pages of transcripts. As the initial step in analysis, each transcript was subjected to open coding. In this open coding process, pre-conceived theoretical categories were set aside, and participants’ voices were allowed to emerge from the data. Open coding proceeded by chunking all participants’ interviews into weight-management related text units, understood here as a unit of analysis consisting of a participant’s observations on one (or part of) a topic. Thus, as opposed to selecting a pre-determined unit of analysis (like one word or one sentence), a thought unit is instead designated by semantic meaning, and ranged from a few words to a few sentences.

Initial codes, “…a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based data” (Saldaña, 2009, p. 3), were assigned to each identified text unit. When possible, in vivo codes (i.e., codes emerging from participants’ descriptions) were used in this process.

Following open coding, axial coding commenced (Strauss & Corbin, 1990). In this stage, overarching conceptual categories emerged as a result of the constant comparison (Corbin & Strauss, 2008) of open codes across transcripts. Some constant comparative techniques used in this analysis included examining similarities and differences among participants’ codes, as well as searching for negative cases to challenge potential categories. At this stage, the theoretical perspectives initially informing this investigation were brought to bear on the emerging categories to facilitate explanatory insight (Lincoln and Guba, 1985). NVivo qualitative data
analysis software was used to facilitate the coding process. The analyses resulting from these steps and related to each research question are presented in turn, and codes emerging verbatim from participants’ talk during interviews (i.e., \textit{in vivo} codes) are presented in italics.

\textbf{Analyses}

\textbf{Surveying the Landscape (Research Question 1)}

In an effort to shape the formulation of motivational support, it was deemed important to understand participants’ weight management situations. All participants indicated a desire to lose weight (as per eligibility criteria); however, each person was accomplishing this within a different weight management context.

\textbf{Current weight loss, fitness, and health behavior efforts.} Research question one concerned participants’ current efforts, goals and history of weight management. The majority of participants reported actively trying in some way to lose weight, often accompanied by the goals of increasing fitness and “getting healthy” (N=18, 64\% of the sample). Of those participants, 4 reported working to maintain, but also to lose “a bit” more weight (described as 4-10 pounds by all), although they would not be disappointed if they remained at their current weight. One participant solely wanted to maintain weight and not lose more. Three participants reported not actively trying to lose weight per se, but still remained conscious of monitoring their weight, and sometimes tweaked or adjusted eating and exercise patterns as necessary to avoid excess weight gain. The participants reporting not actively trying to lose weight were three of the oldest participants in the study.
For example, in response to the questions about current weight loss and fitness efforts, one older-old (i.e., 75-85 years) participant noted that she was “not aggressively” trying to lose weight, but that “I consistently try to watch what I do eat” (Interview 24). An oldest-old (i.e., >85 years) gentleman noted “…when I go to the Waffle House, I get the half order of biscuits and gravy, one cup of coffee when we have our morning share group on Friday morning” (Interview 25). Two participants reported wanting to increase fitness but not lose weight. One participant noted that, while she wants to lose weight, she is focused on “getting healthy” and the rest “will fall in place.” Four participants noted that they were not actively working on weight loss or fitness, although they expressed sentiments of knowing what they needed or “should do.”

The means participants who wanted to lose weight or increase fitness used toward these ends were varied. The vast majority of participants were trying to lose weight on their own (i.e., not using a commercial weight loss program). The means used to accomplish this were solely exercise (N=5), solely some form of independent eating self-regulation or calorie monitoring (N=4), and a combination of exercise and independent eating regulation (N=9). Some of these participants used fitness tools like loseit.com or a Fitbit pedometer. Two participants were losing or maintaining their weight using structured, commercial weight loss programs. As will be further elaborated in a moment, it is worthwhile to note that many participants reported using some type of structured program to lose weight at some point in the past.
Weight management goals. Individuals’ weight management goals varied. Most (N = 21) participants articulated a goal in terms of weight management, which was most popularly a specific goal weight (i.e., specific number on the scale) they would like to attain (N=13), with other goals including fitting comfortably into clothes, increasing strength or balance, and eliminating or reducing doses of diabetes and blood pressure medication. Goals varied in their specificity.

Participants reported different reasons for selecting their chosen goals. Some of these reasons included thinking that weight reduction would put them in a healthy BMI chart range and wanting to prep for upcoming family special events. One participant noted she selected her goal due to her Wii Fit video game. Referring to her interaction with the game, she noted “when I step up there she says ‘You’re overweight!’ I want her to not say ‘You’re overweight.’ I want her to say ‘You’re normal’ – and six pounds will do that for me. So my goal is to lose six pounds” (Interview 16).

Four participants noted that although they wanted or were even trying to manage their weight, they did not have any specific goals in this area. As one participant noted:

So I feel that the losing weight is the number one goal, but I also feel that it’s probably the hardest because in a way I need to maybe focus on the smaller goals, meaning changing some habits. You know working on smaller things that may eventually lead me to the ultimate goal in way instead of saying, ‘I don’t know, I just want to lose weight’.” (Interview 2)
Another participant noted, in response to the question “So would you say right now do you have any goals related to weight loss?” responded “No, I’m just… no” (laughter) (Interview 13). Another noted they will know they are at their goal once they arrive there: “Yes. I know what it is to be healthy and be at a healthy weight, and I have been randomly, and it’s just a constant trial to get back there because I’m always feeling the consequences of not being where I should be.” (Interview 17).

Weight management history. Approximately two thirds of participants (N=18) noted that weight management had been a salient issue for an extended period of time. The experiences of these 18 individuals will first be examined before turning to those describing a less lengthy concern with weight management. The theme of weight being important for an extended period of time emerged in two different ways – first, as an issue that people remember devoting much affective, cognitive, and behavioral attention to for an extended period of time. This was mentioned in 10 interviews. An in-vivo code emerged that captured this process well: weight management as a life-long struggle. Several participants noted that weight management was a life-long struggle that often originating much earlier in the life-course (i.e., actively struggling to manage weight since early adulthood, adolescence, or – in some cases – childhood). Several quotations illustrate this concept. One participant responded:

Well, when I was a kid it all started then. I wasn’t really overweight but I thought I was, so I think that just basically when I was about 12 and really started going through puberty I really thought that my body was too big – too
fat. And I was pretty cruel to myself all through adolescence and even early adulthood. I never had an eating disorder but always thinking I wasn’t good enough and going on diets. And I wish someone had said to me, you’re at a normal weight, this is a normal range for girls your weight and your height – that’s totally normal. So then when I became an adult, it became more of a real issue and I gained weight. (Interview 3)

Another participant shared “Well, the thing is…since I’ve been dealing with this my whole life I feel that I know what I’m supposed to do. You know? Rationally I understand the process” (Interview 1).

The theme of life-long struggle manifested in another way; namely, that some participants described being almost habituated to the ongoing struggle. To illustrate, in response to the question “Are you currently actively trying to lose weight?” several participants indicated that this is a way of life to which they have been accustomed. One woman mentioned, “Yes, I am. Well, [I’m] always trying to get healthy and almost always to lose weight [laughs]” (Interview 17). Another participant responded “This time? [laughs] …it’s been a lifelong issue” (Interview 3). Echoing this sentiment, another participant responded “All my life” (Interview 11). Others offered the following responses, “Oh my gosh. Off and on since I was, 29? I’m 52, so a long time” (Interview 28), and “It’s been a way of life for me. I’ve always struggled with and wanted to be smaller…” (Interview 16). Another participant answered that although she was not currently actively trying to lose weight, weight management nonetheless commanded cognitive resources:
I’m consciously always thinking, ‘I shouldn’t be eating that, it has too much sugar, too much starch, whatever’. But right at the moment I am not, but it’s just always on my mind you know, I know from the past, from dieting in the past what you should eat, what you shouldn't eat (Interview 13)

Complex family dynamics may also enter into the process of weight management as life-long struggle. For example, one participant noted, “My mom, bless her heart, I love her to death, [but] she’s really been on me for my weight most of my life. My weight’s really fluctuated over the years, especially as I’ve gotten older” (Interview 20). An additional respondent noted that she had been actively working on weight loss since her early 50s, about a decade previously. One interview captured this constant effort succinctly when asked if she was trying to lose weight: “Always, yes. Have been, am now, and I always will” (Interview 7).

Tied to the idea of weight management as a lifelong struggle is the description of weight management as a roller coaster. A second way participants expressed weight loss history as an ongoing concern – even if not necessarily life-long as described by the participants above – is having lost and regained what they perceived to be a sizeable amount of weight at least once in their lives, usually multiple times, and often fairly recently (i.e., within the past three years; N=18). The roller coaster metaphor linguistically highlights the perceived uncontrollability of the weight management endeavor.

Often participants reported discouragement over this weight management roller coaster. One woman, for example, detailed how she had lost 75 pounds two
years ago and had recently gained it all back. She noted: “It’s a roller coaster…Of course I go back to the two years ago I was in the same place I’m in now, and I did it, so why can’t I do the same thing I did then now?” (Interview 1). Other participants, however, seemed to accept the weight management roller coaster as inevitable. A few participants for example, used the term creep to describe the process of inevitable weight regain. For example, “When I quit [a commercial weight loss program], I tried to maintain and I did for a good while, but then it just kinda crept back in and I’m up to where I started again” (Interview 15). Another individual with a similar experience noted, “…[Y]ou lose the weight, and then you get back to life, so it eventually came back” (Interview 16). One participant described the process of dealing with the inherently volatile and uncontrollable nature of this weight management process: “So I have to just constantly keep on, and I roller coaster a lot with that. But I think that it’s almost just a weekly process...so I am constantly trying to get back on track…” (Interview 17). Here, the participant’s reference to a “track” which she is trying to get back on serves to reinforce the idea of weight management as analogous to some sort of out of control, run-away coaster car.

In contrast to the experience of the participants described thus far, about a third of participants (N=10) noted that weight management had not necessarily been a life-long struggle, but was more of a recent issue. Four of the five male participants fell in this group. Further, this group of participants tended not to have as much weight to lose, to have been very physically active throughout their lives, and to have
recently had a weight loss success that they were successfully maintaining. For example, one male participant described his fairly recent decision to lose some weight and increase his fitness: “I’ve always been real healthy up to that point and I still am but started thinking about we’re not getting any younger so that was kind of one of the key motivators…” (Interview 12).

**Examining the Roadblocks (Research Question 2)**

Research question two asked about participants’ most salient barriers or obstacles related to weight management. All but four participants reported experiencing challenges related to weight management, and most participants reported experiencing more than one obstacle. Commonalities in challenges occurred, and clustered broadly into barriers perceived to be external/situational and internal/personal. These will each be addressed in turn.

*External/Situational.* Obstacles categorized here as external/situational were described by participants as features of their life context that somehow made weight management behaviors more challenging. One frequently reported obstacle was “busyness/stress” (N=5). Participants reporting this obstacle tended to be middle-aged women juggling the demands of family and work, which they perceive as crowding out the time required to, say, cook a healthy dinner. One participant, for example, noted it was challenging to find time to work out with two sons in middle school, one of whom has autism. Another participant described her situation, noting “By the time I’m home from work and I have to run errands or anything, by the time I get home I’m tired and I don’t really feel like cooking a lot. Ok, let’s throw a
frozen pizza in. And I have a nine year old and I try to make healthy things for her, but it’s like I don’t really even go through the trouble for myself” (Interview 20). A grandmother who watched her grandchildren full-time noted that at the end of the day she would rather put her feet up in her La-Z-Boy recliner than go out and exercise.

Five participants mentioned age as a specific weight related challenge. Age as obstacle was embodied in two ways. One participant noted that, in older adulthood, she and her partner’s finances were quite constrained, prohibiting the purchase of healthy foods. As she noted, “And that’s where we are now and I can’t change it. Got too old to change it” (Interview 7). The other participants noted that age generally, and menopause specifically, made it especially challenging to lose weight. Indeed, one participant said that after “the change,” weight “clings on like glue” (Interview 15).

A third group of more varied external constraints emerged (N=10). These included perceived weight management obstacles related to eating out at restaurants, travel, social engagements with friends and coworkers, being situated within a family sabotaging weight management goals, and various medical conditions limiting or precluding exercise.

*Internal/Personal.* In addition to perceived external/situational barriers, some participants (N=8) mentioned internal characteristics or attributes as salient challenges to weight management. These personal characteristics were both held as the single obstacle, or combined with other external obstacles. Several participants
(N=4) cited their own *lack of willpower* as their central obstacle. These participants tended to refer to this lack of willpower in relation to eating behavior and regulation. One participant, for example, discussed her struggle with late night snacking. As she noted, “I know it would be very easy to stop and yet it’s not easy to stop” (Interview 1). Another participant described the cyclical nature of her willpower as follows: “You know, I'll do real good for about 3-4 months then go back to my old eating habits but then in three or four months later it's like you realize that’s not the thing to do after you gained about 8 pounds…” (Interview 23).

A second internal/personal characteristic identified was personal weight management history, which was explicitly mentioned by three participants as a central obstacle to their current weight management efforts. One participant, for example, noted “I think it’s more of my mental state sometimes because my [weight management] history sort of makes me get negative. I’m sort of trying to not let that ruin this for me” (Interview 3). Another participant noted that each year, “I find when the bags of Halloween candy show up, that it just triggers ‘Oh, it’s time to stock up on that’ and ‘Oh, these are just small portions’. So I can actually self-talk in a negative way that is actually not being honest being myself. That self-talk that is, like an alcoholic, food for me. It [is] easily excessed” (Interview 17). Another participant discussed that her central obstacle to managing her weight was eating ice cream every night. However, she felt she must eat the ice cream because it soothed her stomach, something crucial given that her husband passed away of a stomach condition. As she noted, “And anyway he had bleeding ulcers of the stomach and he
had to have a lot of blood transfusions and eventually his body rejected any blood so I literally watched him bleed to death. So I know the consequences of a real sore stomach” (Interview 18).

Responses to obstacles. Although not specifically solicited by the interview schedule, a theme of resilience emerged as participants discussed these challenges, although this was not uniform across participants. Somewhat counter to the theme of resilience, a handful of participants noted that they did not feel capable of surmounting their identified obstacles. One participant, for example, noted “…obviously if I’ve been struggling with this my whole life, there’s obviously something that hasn’t clicked, you know, that’s how I feel about it…So I’m like how am I going to make that click if it hasn’t happened yet?” (Interview 1). And yet, even though several participants reported struggling with doubts about their weight management capabilities, none of the participants in this study reported an intention to give up weight management desires, even if they felt unsure about their ultimate success. Illustrating this point, one participant shared “…I’ve tried so many other things in the past. And for some reason, I just seem to be so stuck right where I am, so I don’t feel very confident, though I am not giving up. I could still work towards it.” (Emphasis added; Interview 17).

Indeed, some participants had overcome truly adverse life circumstances and continued to persist at some level in weight management endeavors, which points to the resilience demonstrated by many individuals later in the lifespan. Some of these more acute stressors included divorce, cancer recovery, a Vietnam veteran’s
posttraumatic stress disorder, major depression, and a loss of independent living. It seems reasonable that many both more routine and acute stressors may quite unapologetically unsettle weight management as an area of cognitive resource; however, most participants did not endorse this view. Rather, most participants were quick to note that although there were often significant challenges to managing weight, they merely fostered excuses, and that people simply had to make up their mind to act appropriately anyway.

Succumbing to excuses – seeing weight management obstacles as a deterministic impetus for failure – was cast as suggesting moral turpitude, or at least a certain lack of gumption. As one participant noted after discussing her perceived challenges in the weight management domain, “So those are challenges, but I’m not letting them get to me this time” (Interview 2). Another participant shared how her husband does not struggle with weight management, and thus, he sometime unintentionally undermines her weight management efforts. Her refusal to be stymied by excuses is seen as she described this challenge, noting “Without even thinking that this is an excuse [laughs], I have just the most wonderful husband of 43 years who does not have a weight issue” (Interview 17). Along these lines, another participant described not seeing herself as a complainer in the weight management context, noting “I’m an exercise person, but, I notice the older I get, the harder it is. And I have a little bit more of aches and pains and things like that. I try to overlook ‘em, arthritis and stuff like that. I don’t worry about things like that. I feel it, but I’m not a complainer. So that’s about the size of it” (Interview 15). While most
participants acknowledged that obstacles were not necessarily binding, and many labeled them as *excuses*, several participants noted they could not seem to make themselves engage in weight management behaviors in an ongoing manner.

**Faithfully Running the Race (Research Questions 3 & 4)**

Research question three asked how participants characterize and cast their own weight management motivation. Approximately one-third of the sample (N=10) noted that they currently felt highly motivated in their weight management efforts (e.g., losing weight, maintaining weight, increasing fitness). These individuals tended to report feeling currently excited or happy about their eating and exercise behaviors. One participant, for example, discussed the joy she newly found from participating in Zumba, a fitness dance activity: “It’s fun, it’s just fun” (Interview 2). One participant noted feeling highly motivated at the time of the interview; however, due to past weight loss and regain experiences, she noted that she hoped the motivation to eat healthy and exercise would persist. The remaining participants (N=18), however, noted struggles with sustaining their level of weight management motivation. These participants noted that they knew what they “should do” in terms of weight management, but were struggling to actually do so. This discrepancy illustrates the philosophical concept of *akrasia*; in brief, knowing what one wants to do and yet not doing it.

Several participants described the desire to want to lose weight but not taking the steps to do so as being *stuck*, or in a *rut*. For example, one woman shared how she needed to get back to the gym. She noted, “I still cannot make the jump over
you to “oh ok…get over it and get yourself back to Zumba” (Interview 1). Another participant stated, “I got in this rut and I didn’t know how to get out of it” (Interview 7). Other interviewees noted that they were unsure of how to translate their knowledge about and desire for weight management into action. One woman, for example, said that she had worked in food services for over 30 years, and therefore had extensive knowledge about healthy eating; however, she said she could not seem to translate this knowledge into not reaching for ice cream each evening before bed. Other participants noted that, at some point in the past, they were feeling motivated, but that the motivation stopped abruptly, and almost without reason. To illustrate, one woman shared:

So of course with us starting hormones [related to menopause] at that time and then the thyroid medicine for me at that time I was feeling better, oh yeah feeling a whole lot better. But I just quit…I had weighed 150 and I got down to 130 pounds in going on that diet within seven months’ time. I felt great about myself. I felt better. I just couldn’t keep going and do that. (Interview 23)

Several participants were comfortable assuming sole personal responsibility for this discrepancy. A recurring metaphor that emerged as one way to overcome the perceived lack of motivation was *taking the bull by the horns*. This metaphor suggests that the participants perceived that they should be self-motivated in order to overcome akrasia, and that they did not (or should not) need others’ help in order to
persist in ongoing weight management endeavors. All they needed to do was decide
to tackle their weight management goals, and do it.

Research question four asked about what kinds of motivation participants
demonstrated; that is, whether their weight management motivation tended to be
more controlled or autonomous. As previously noted, four participants were not
currently attempting weight loss or increased fitness, suggesting amotivation (i.e., a
lack of intention to act) in SDT terms. However, this characterization is not wholly
accurate. Instead, all participants displayed some level of energizing drive directing
action in the weight management domain (Deci & Ryan, 2002). In other words, all
participants desired to either lose weight or improve health or fitness, and were
somehow engaging in either weight management behaviors or cognitions (although
some less stringently than others). As one participant shared, “I get motivated, but
then it kind of goes to the wayside a little bit, but the thought’s still there – it is”
(Interview 15). However, the nature of motivation (autonomous vs. controlled) did
vary.

In terms of motivational type, participants reported varying motives and goals
associated with weight management, which can roughly be grouped as extrinsic (e.g.,
pursued for appearance or social prestige motives) or intrinsic (e.g., pursued for
health, self-development, or generativity motives; Deci & Ryan, 2000). Commonly
reported extrinsic motives included appearance, wanting to wear “cute” clothes, and
wanting to look good for upcoming family or special events like weddings. As one
participant noted, “I’m an old man but I want to look good” (Interview 14).
Commonly provided intrinsic motives included wishing to feel good/healthy/energetic, wanting to live a long and vital life, desiring to “be around” to see grandchildren grow up, and attempting to honor spiritual directives mandating care for one’s body as “The Lord’s Temple.” Further, participants varied in their descriptions of whether they were losing weight “because my doctor said I have to” or “for me,” once again, suggesting differences in controlled vs. autonomous motivation.

**Conversing with Others on the Path (Research Questions 5 and 6)**

Research questions five and six asked what kinds of weight management messages participants perceived as motivating or demotivating, respectively. These will be addressed in turn.

*Motivating messages.* Research question five asked participants to recall a message that motivated them to persist in weight management or fitness efforts. Across most participants, several expressed views that they should not need “external motivation” to engage in weight management endeavors. To illustrate, one participant noted: “It’s just that if you just don’t do it yourself, you’re not going to do it because otherwise you depend on somebody else being your ‘Yeah yeah! Rah you!’” [did cheerleading nonverbal gesture]. Which is fine, but we can do that within ourselves…” (Interview 8). However, despite these kinds of contentions, most participants noted that they had received interpersonal weight management messages that they perceived as motivating. Seven participants noted they did not receive any
motivating weight management messages. The prominent characteristics of these motivating messages are presented in Table 1.
## Table 1. Study 1 Components of Motivating Messages

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<th>Categories</th>
<th>Definition</th>
<th>Examples</th>
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| Compliments                   | Expressions of praise or admiration, typically conventional in form        | “You’re looking good! What are you doing?” (Interview 11)  
“[My wife] praises me heavily. Like I’m lookin’ hot and she’s all the time saying I’m a hottie.” (Interview 14) | 10  |
| Accountability/Tangible Aid   | Offers of assistance and/or companionship in weight management activities in order to hold the person attempting to lose weight responsible for doing so | “Well, years ago, and this was my motivation years ago, a gal that I worked with, every night after work religiously, every night we would walk. And we’d gab and gab and gab as we walked, it was our friendship time plus we were doing something for ourselves, healthy, weight loss, [etc.]” (Interview 20)  
“She didn’t buy into any kind of poor me. She wasn’t mean about it. She was just like the bottom line, the clear message was just do it. You’ll feel better.” (Interview 28) | 8   |
| Expressions of Empathy and Understanding | Messages focused on affirming the feelings of the person attempting to lose weight | “[My sister told me] ‘I really understand how hard it is. Kind of saying, yes, that’s right, but we need to be focused on what’s really good for our bodies…’I know it’s hard but the outcome will be better’.” (Interview 13) | 3   |
| Value-Based Affirmation       | Messages meant to motivate through shared sacred or moral values           | “And… even to the point of we’ll put [weight management] on a prayer list for each other, if that’s a particular struggle at a particular time – ‘Be praying for me that I’ll be making wise choices.’ That kind of thing”. (Interview 22) | 3   |
| Motivation by Example         | Messages in which the conversation partner discussed their healthy lifestyle choices | “Conversations with [my daughter] are positive because she’s always saying ‘well, I went and ran today’ or ‘I grilled these vegetables this way’ …And we’re on the phone quite a bit. So she’s never critical… And I thought “Oh, that’s a good choice, I should do that” [laughs]. And I probably respond more to that than somebody lecturing me or saying ‘you should do this’ or ‘why don’t you do this?’”. (Interview 17) | 2   |
| Jokes/Teasing                 | Playful messages attributed as motivating                                 | “He’ll joke once awhile in a very loving way, if he gets the last piece of something [like cake], ‘I’m helping you’ [laughs]. But he just says it in a very loving ‘Well, I just was helping’ [way], and that doesn’t bother me not in the least, nuh uh. And we have a nice relationship and I think that people see that he is just so loving and kind…” (Interview 17). | 2   |
As shown, compliments were most often reported by participants as motivating in helping them persist in weight management endeavors. These compliments generally consisted of other persons (including family members, friends, coworkers, and acquaintances) commenting on the participant’s physical appearance. These conversations were often marked by the conversation partner asking either “Are you losing weight?” or “What are you doing [to lose weight]?” These questions were seen by participants to be functioning as compliments, signifying that the conversation partner had noticed and was affirming a perceived positive change in the participant. One participant, for example, noted “A couple of guys noticed [I was losing weight] and I thought ‘gosh, maybe it is making a difference’” (Interview 16). Thus, these compliments seem to provide a measure of confirmation or validation for people’s efforts. However, although a significant portion of the sample noted that compliments were affirming, many also argued that these messages were not (or should not) factor into their weight management persistence. One participant, for example, noted, “I wasn’t looking for compliments” (Interview 24). Another participant noted that compliments based on physical appearance were demotivating for her.

Other message dimensions participants perceived to be useful included offers to help or companionship designed to hold the person trying to lose weight responsible for these weight management behaviors (tangible aid/accountability). One participant, for example, shared that she wished her friends would organize
group outings centered on physical activity rather than eating and imbibing. Other motivating message strategies involved acknowledgment of the perspective and situation of the person trying to lose weight (expression of empathy and understanding) as well as linking the person’s weight management behaviors with higher goals and values (e.g., “your body is the Lord’s Temple,” value-based affirmation). Others reported that simply conversing with persons they respected about that person’s healthy lifestyle choices was extremely motivating (motivation by example), while additional participants said playful “jabs” could be motivating within a loving relationship (jokes/teasing).

*Demotivating messages.* Research question six asked what kinds of interpersonal messages participants perceived as demotivating. Almost two-thirds of participants (N=17) reported that they had not recently received any demotivating impersonal weight management messages, although they may have received demotivating messages in the more distant past. Indeed, several participants reported that demotivating comments made in the past (sometimes many, many years ago) had a lasting impact. Some examples of these “past wounds” follow. One participant recalled, “Yeah, I can remember as a kid, I had big legs and I can remember my dad making a comment about ‘she has legs like butter churns,’ so that was demotivating. I wasn’t trying to exercise or anything but that kind of message stays in your head” (Interview 28). Another participant noted:
I would say decades ago, I had a woman say ‘I just don’t understand why you’ve got a problem.’ She was one of those older women that if she decided to do it, she did it, and she just couldn’t see why I would have success and then would not have success. Well, I don’t why you just don’t do it. And I had a meal with someone who, while I was eating my dessert, said, ‘Well, if you had had the salad, you wouldn’t want the dessert.’ And it was a very trim/fit individual. And it was very condemning to me, and it brought up my shame in the choices I’d made. I thought, you’re right, but I’m eating my cake [laughs]. So I guess it’s things like that that I do not handle well. It just really wounds me. (Interview 17)

In terms of demotivating messages, most (N=26) participants reported that these kinds of comments – either past or present – were not intended as malicious or harmful, but that they were still demotivating nonetheless. For example, one participant noted that her mother’s comments were not having their intended effect. She noted:

“…her intentions are good, it’s just her delivery. When she constantly tells me ‘you need to lose weight’ or ‘you’ve gained weight’ – those kind of comments, [I’m like] I know, I know. It’s like, really? You think? You know, not to be a smart aleck but, yeah, that’s what I want to say. Don’t you think I know that? So that’s demotivating. Even though she means well, she’s just saying it to help me, it doesn’t help, not at all, not at all.
Another individual recounted a story in which she was chatting with a representative from a gym at a health fair. The gym representative told the participant she would be able to work out with no pain and significantly increase her fitness within a few weeks if the participant just joined the gym; however, the participant felt the representative completely ignored her comments about health conditions (i.e., nerve damage resulting from a brain tumor) that may make this kind of progress challenging. Thus, a lack of feeling listened to and understood by the representative was seen as ultimately demotivating. The participant noted, “I do have very little patience for people who don’t listen. You know, if you don’t listen to me, I don’t want to talk to you….that’s how I feel” (Interview 7). Another participant discussed that her father – who usually directed weight-related comments to others – recently directed a “joking” weight-related jab in her direction. The participant described her reaction, noting that while this comment perhaps should have spurred her to lose weight to change her father’s perception of her as an overweight person, “…but yet it did not motivate me, if anything I probably went home and ate more cookies than I normally would have…” (Interview 23). Yet another individual noted that when well-intentioned people tell her that she does not need to lose weight, it is demotivating, because it removes her will to take action. Thus, demotivating comments often were deeply situated in the past, yet continued to serve as a painful reminder of some perceived inadequacy. Further, demotivating comments tended to make the person trying to lose weight feel ashamed and or incapable of changing
their behavior. Some nuances related to responses to demotivating messages will be more fully discussed under lifespan considerations.

**The Road Well-Traveled (Research Question 7)**

Research question eight asked how the lifespan played a role in weight management practices. Although not specifically included in the interview guide and schedule, almost all participants mentioned age as a relevant component in the weight management experience. Indeed, weight accounts permeated each of the themes discussed above. Most notably, age – and one’s current position as situated within the lifespan – were described as presenting both constraints and opportunities.

In terms of constraints, as discussed previously in consideration of weight management obstacles, participants described age as a significant factor most often when discussing situational challenges related to weight management. These include challenges linked to certain social roles held at various points in the lifespan (e.g., being a busy mom in her mid-40s with teenagers to care for), as well as financial hardships due to living on a fixed income, and health-related issues (e.g., arthritis, aches and pains, diabetes). Some perceived age itself (and hormonal fluctuations) as central to weight management challenges. Also, one participant in his mid-90s was faced with unique weight management challenges because of his dependence on caregivers for meal preparation.

However, age was also described by many participants as positive. For example, one participant noted that, now that she was retired and had a stable
income, she was totally free to pursue weight management endeavors with no hindrances. The interviews also reflected, that although participants continued to enjoy compliments acknowledging their appearance, many participants described a shift away from a perhaps unhealthy focus on “looking hot” or “skinny” during younger adulthood to a perspective that was more health-focused.

Further, to expand on the discussion of person’s responses to demotivating messages, many participants noted that they had learned over their lives to structure their social worlds in such a way that they were surrounded with positive people, who did provide the kinds of motivating messages above. This sort of adaptive response and growth across the life course meshes well with Carstensen’s (1991) socioemotional selectivity theory or Baltes and Staudinger’s (2000) understanding of wisdom. To illustrate, one Vietnam veteran commented that “I purposely try not to hang around people who would make those kind of [demotivating] comments” (Interview 14). Another person echoed this sentiment, “I guess I don’t really have a sphere of influence that does that [makes demotivating comments]” (Interview 7). Yet another participant remarked:

I surround myself with some pretty motivating people. So if you look around at friendships and people I hang with it’s more about being healthy than it is about drinking or any of the other things that could have been phases of my life, so it’s just different. (Interview 4)
In addition to intentionally surrounding oneself with positive people, another theme that emerged was coping with demotivating messages when they did arise. Several participants noted that, with age and life experience, they had learned ways to deal with these kinds of comments in a more positive manner. One participant noted, “I don’t think I respond to it anymore. I think I tune it out” (Interview 4). Another interviewee shared “Well you’re going to have people with negative comments about well ‘so and so did that and it didn't work’ or you know that kind of thing… whatever. But I can't say it's been any kind of a negative impact on me anyway, okay? It hasn’t changed my feelings or my thought process for my actions on what I'm doing” (Interview 12).

In sum, participants in middle and older age continued a desire to persist in weight management behaviors for their physical, mental, and spiritual health – counter to popular myths of aging and increasing decrepitude and disengagement with society (Rowe & Khan, 1998). One participant summed this sentiment well, noting her response to society’s tendency to make older persons “invisible”:

…[W]ell I’m here. And people are like oh you’re here. What’s going on here? I’m still me. I’m just an older version of myself but I’m still not being recognized. But again, it’s my responsibility to put myself out there and be heard. I may have to try harder. I’m still vital, I’m vibrant. I have something to say.
Discussion

This study investigated middle-aged and older adults’ experiences of motivational support in the weight management context. The theoretical frameworks discussed in chapter two were used to guide this endeavor. The resulting findings emerged. First, in surveying the weight management landscape, research question one asked about: 1) participants’ current weight loss, fitness, and health behavior efforts, 2) participants’ weight management goals, and 2) participants’ weight management histories. The findings suggest that most participants were currently making some active efforts to lose weight, that most participants wanted to lose a specific amount of weight, while others wanted to maintain weight or increase fitness, and that weight management history played an important role in many participants’ current weight loss endeavors in the form of weight loss as a life-long struggle and weight loss as a roller coaster.

In examining potential roadblocks in the weight management process, several themes emerged in response to research question two (asking about participants’ most salient weight management obstacles). These obstacles fell roughly into two overarching groups: external/situational (i.e., stress/life role, age, and other) and internal/personal (i.e., weight management history and willpower).

Research questions three and four asked about participants’ conceptions of their motivation, and the quality of motivation displayed, respectively. In answer to research question three, some participants reported experiencing ample motivation,
and other participants reported feeling *stuck in a rut* as a result of akrasia. In terms of research question four’s discussion of motivation quality, most participants did not display amotivation, although participants varied in their levels of autonomous vs. controlling motivation.

Research questions six and seven asked about the characteristics of motivating and demotivating weight management messages, respectively. Participants reported certain qualities of messages as motivating: compliments, accountability/tangible aid, expressions of empathy/understanding, value-based messages, motivation by example, and joking/teasing. In response to research question seven, demotivating messages often occurred in the past and were largely recognized as unintentionally harmful. Such messages often made the participant feel ashamed of his or her weight management and incapable of making changes. Not listening was also perceived as ineffective.

Finally, in response to research question eight about the role of the lifespan in weight management, several findings emerged. Broadly, weight was perceived as both an opportunity and a constraint. Constraints consisted of age as obstacle. Opportunities included more freedom to pursue weight management behaviors and also adaptive growth processes facilitating optimal orchestration of one’s social world and perspectives allowing for more optimal coping with potentially-negative messages. These findings, in total, are valuable in formulating a model of motivational support.
Implications for a model of motivational support. First, these findings provide general insight into the nature of participants’ motivational dilemmas. In the area of supportive communication, for example, much is known about the processes involved in providing effective emotional support (e.g., Burleson, 2008), in which the primary communicative function is improving a support target’s affect. For motivational support, this study suggests that many participants’ motivational dilemma stems from their experience of weight loss as cyclical, spurring feelings of akrasia. Thus, it seems that a useful site at which to target motivational messages is helping participants become “unstuck” from their current weight management situation.

Further, participants’ accounts of motivating and demotivating message provide insight into both the topical domains of motivational messages and the levels of quality within each domain. The characteristics of motivating messages resulting from this study were used to inform the motivational support dimensions to test in chapter four. For example, in Study 1, both compliments and expressions of empathy and understanding were reported as motivating. Compliments, through an SDT lens, can promote autonomous motivation because they act in a way that is attributed to relatedness needs. From a communication theory perspective, the concept of person-centeredness (to be further described in chapter four) also embodies a similar idea; namely, that care and acknowledgement of the person trying to lose weight’s unique situation helps them understand weight management in a new way. Similarly, the
importance of accountability/tangible aid informs the call to action message
dimension discussed in Chapter four. The situational counterarguments and self-
worth affirmation message dimensions were informed by participants’ accounts of
salient external and internal weight management barriers, respectively. Further, some
participants noted that simply conversing with another about the other’s healthy
choices was motivating, and so elements of testimony were added to final
constructed messages.

Second, participants’ accounts that often people who provided demotivating
messages “meant well,” but did not deliver messages in a manner perceived as
appropriate, helped solidify the conceptual distinction between levels of message
quality used in the formulation of support. In other words, within a broad topical
domain, messages may be either more or less effective in achieving their intended
outcomes.

In addition, the findings related to the pervasiveness of age accounts in
participants’ descriptions of their weight management endeavors and interaction is
telling. These findings lend support to lifespan communication scholars’ contentions
that lifespan factors may indeed exert powerful influence over communicative
phenomena, rather than assuming such processes work invariably across age groups
(Pecchioni, Wright, & Nussbaum, 2005).

Last, while not an emphasis of the present dissertation, this study affirms that
motivational supportive communication interactions are not usually isolated one-off
messages but instead are situated within relationships. Participants’ perceptions of teasing as motivating, for example, is effective because teasing has been associated with positive meanings within specific relationships (Burleson, Metts, & Kirch, 2000).

Summary

In conclusion, this study aimed to gain greater insight into how supportive communication may be used to optimally-motivated middle-aged and older adults to persist in weight management endeavors. Theoretical constructs relevant to this aim were analyzed in the interview data. The final picture emerging from this data depicted a weight management situation that may be challenging and littered with obstacles to success. However, the same picture also portrayed resilient middle-aged and older adults who were motivated (albeit with varying kinds of motivation) to continue with their weight management attempts despite challenges, due in part to supportive interaction with others. The following chapter capitalizes on these insights to gain greater insight into the specific mechanisms by which communication can be used to enhance motivational quality.
Chapter 4: Conceptual Framework

Building on the literature reviewed in chapter two and Study 1 findings, a conceptual framework for message features which constitute effective motivational support is forwarded. Motivational support is conceptualized as a functional communicative activity intended to increase middle-aged and older adults’ high-quality motivation to persist in weight management endeavors. Toward this end, it is important to accomplish three objectives. First, the conceptualization of communicative activity assumed in this investigation is presented. This conceptualization of communicative activity is forwarded through a brief description of the nature of communication, as informed by constructivist communication theory. Second, the message dimensions hypothesized to be linked to more and less effective motivational support will be presented, along with their respective hypotheses and research questions. Third, research questions related to the role of communication channel in motivational support provision will be provided.

Communicative Activity

The following discussion of communicative activity is informed by constructivist communication theory, as developed by Delia and associates beginning in the 1970s (see Delia, O’Keefe, & O’Keefe, 1982, for a conceptual
statement), as well as other communication theories that have focused on how social actors constitute and adopt shared meaning and mutual understanding (i.e., coordinated management of meaning, communication accommodation theory, interpretive perspectives). This theoretical orientation has since generated a large corpus of empirical findings (Burleson & Caplan, 1998; Coopman, 1997) relevant to the formulation of motivational support.

From this view, instead of conceiving of communication solely as the linear transmission of information between sender and receiver, communication is also viewed as an ongoing, interpretive social process (Delia, O’Keefe, & O’Keefe, 1982). Communication is seen as an “…emergent creative activity through which human social reality is constantly being re-created, affirmed, repaired and changed” (Delia & Grossberg, 1977, p. 36). In this view, communication is understood as a form of human activity, in which individuals coordinate their lines of action in an attempt to make their internal states known to another person; that is, to make cognitions “public and intersubjective” (O’Keefe & Delia, 1985). Thus, the “emergent creative activity” of communication is complex, consisting of both intrapersonal and interpersonal dimensions, and is situated within a cultural context (Delia, O’Keefe & O’Keefe, 1982; O’Keefe & Delia, 1985; O’Keefe & Delia, 1988). Indeed, a constructivist viewpoint is especially relevant to this particular investigation given this perspective’s emphasis on the connection of human development and communicative activity (e.g., Applegate, Burke, Burleson, Delia, &
Kline, 1985; Applegate, Burleson, & Delia, 1992). Within a given communicative interaction, a number of communication activities are at work in order to accomplish various communication functions. Both communication processes and functions will be briefly discussed.

**Communication processes.** Within the communicative relationship, several processes are occurring in the making of meaning, often simultaneously. These message activities include the codification of meaning, the coordination of attention and action, and cooperation among interactants in order to produce and interpret messages.

First, in terms of the codification of meaning, O’Keefe and Delia (1990) argued that meaning is created in communicative interaction through the use of shared speech codes. This position was forwarded to counter the idea that linguistic competence alone (i.e., knowledge of language rules) is sufficient for creating shared meaning. Instead, speech codes, defined as “…[systems] of socially constructed symbols and meanings, premises, and rules, pertaining to communicative conduct” (Philipsen, 1997, p. 126), are seen as operative in meaning-making.

The concept of speech codes was forwarded by scholars like Bernstein (1970), who identified distinct ways of speaking emerging from cultural embeddedness and social relationships among British schoolchildren (i.e., restricted and elaborated speech codes). Along similar lines, Hymes (1974) programmatically approached an ethnography of speaking to understand how people characterized and
cast communication in situ. He termed groups of people that operated by shared speech codes as speech communities, and noted that these communities are distinct and recognizable. Many studies built on Hymes’s paradigm, finding unique meanings associated with communication in various cultures (e.g., Basso’s 1970 ethnographic study of the meaning of silence in Apache culture).

Philipsen’s (1992) research on the ethnography of speaking further advanced knowledge on speech codes. In this work, Philipsen adopted Geertz’s (1979) conception of culture as “socially constructed and historically transmitted pattern of symbols, meanings, premises, and rules” (Philipsen, 1992, pp. 8-9). Philipsen studied the Teamsterville community, located on the south side of Chicago, in his fieldwork. He found cultural dimensions related to talk associated with male role enactment and the evocative power of place and neighborhood (Philipsen, 1976). A similar approach was taken to examine more middle-class North American conceptions of communication. This revealed a Nacirema speech code in which normative communication was viewed as open, expressive, and all about sharing (Katriel & Philipsen, 1981). Although informative, Philipsen’s theory of speech codes does not fully account for personal or relational speech codes.

However, a consequential-cultural approach to interpersonal relationships has also been recognized, in that communication “fabriicates, maintains, and modifies a dynamic, evolving relational culture” (Burleson et al., 2000, p. 252). Thus, as situated within the broader cultural speech communities discussed above, individuals
in relationships construct shared meaning systems, often through routine daily interaction. These relational cultures are created and maintained through communication channeled by norms and rules, and sustained and sometimes challenged and reshaped through constructed symbolic codes (e.g., stories, idioms) and rituals (Burleson et al., 2000).

In addition to the codification of meaning, another process operative during communicative activity is interaction coordination, in which message production and processing (and other) activities are choreographed between interactants to create intelligible interactions (Burleson, 2010). One such coordination activity is captured in Clark’s (1996) conception of grounding. Clark (1996) asserted that whenever interactants enter and engage in conversation, they are constantly in the process of communicatively locating common ground (i.e., establishing “commonalities of thought”, p. 331). These commonalities are negotiated over time between the interactants and may flow from either communal (i.e., from some shared social community, like an ethnic, religious, or professional affiliation) or personal commonalities (i.e., from shared relational history). Negotiating synchrony and alignment during discourse is another example of a coordination process.

Last, a number of cooperative processes are also in effect in a given communicative encounter. One such proposed cooperative process is embodied in Grice’s (1975) conversational maxims, in which he argued that the overarching principle “be cooperative” guided interactants’ conversational efforts. In other
words, interactants tend to create conversational meaning by abiding by conversational maxims regarding quantity, quality, relation, and manner. He argued that failure to abide by these maxims in conversation facilitated implicatures, or inferences drawn from the conversational exchange. Other cooperative process include empathy, taking the role of the other, and communication accommodation (O’Keefe & Delia, 1988). Cooperation is especially evident in the production of person-centered messages, which will be further discussed shortly (O’Keefe & Delia, 1988).

**Communication functions.** Of particular importance to this study, communication, as comprised of the activities described above, is used to accomplish various goals. Three broad clusters of research aims can be identified within this approach. These include interaction management functions, which include, among other goals, maintaining face, and organizing turn-taking in discourse. These goals usually are pursued to form the “background consensus” necessary to pursue other instrumental goals (Burleson, 2010, p. 154). A second group of functions include relationship management functions (e.g., relationship initiation, maintenance, and termination, privacy management).

Most directly relevant to this investigation are what have been termed “instrumental” functions of communication. These tend to guide the overarching aims of a communicative encounter, and can typically be distinguished from other kinds of aims (e.g., comforting, persuading, entertaining). These instrumental
functions can be performed with greater and lesser levels of skill. Generally, a person must be motivated to provide a competent message, and have the social perception and communicative repertoire and skills necessary to produce a sophisticated message (Burleson et al., 2000).

**Motivational Supportive Communication**

Given the preceding discussion of the nature of communicative activity, a normative understanding of supportive communication emerges as appropriate. A conceptualization of motivational support as normative stems in part from work by Goldsmith (2004) and Goldsmith and Fitch (1997). This approach posits, consistent with the discussion thus far, that supportive communication is a form of meaningful action situated within a specific sociocultural context (Hymes, 1972; Philipsen, 1992). Further, supportive communication that is perceived as *helpful* by a support target simultaneously manages multiple task, identity, and relational goals. Thus, for example, advice messages that also attend to face needs have been found to be perceived as more helpful by support targets than advice messages that only attend to instrumental goals (Goldsmith & Fitch, 1997). Thus, in formulating a model of motivational support, it is necessary to craft messages in such a way that they are seen as high quality, and thus more effective. The process that will be used to attempt this endeavor is presented next, following prior research efforts.
**Message perception paradigm.** In research on communication functions (e.g., support), several key lines of questioning have emerged. These include investigations into: 1) the nature of the function (e.g., what does it mean to *motivate*?), 2) what producers need to know about the “topic, audience, and occasion to generate messages that will be appropriate and effective,” and 3) identification of message dimensions generally associated with more and less effective outcomes (Burleson, 2010). In this dissertation, the review of extant literature provided good insight into the nature of weight management motivation and Study 1 elucidated the weight management topic, audience, and occasion. Thus, Study 2 used these insights to accomplish objective three; that is, the identification of features of motivational support in the weight management context associated with motivational outcomes. Previous bodies of supportive communication research provide insight into accomplishing this task.

In the supportive communication literature, much research has focused on supportive messages, defined as “specific lines of communicative behavior enacted by one party with the intent of benefiting or helping another” (Burleson & MacGeorge, 2002, p. 386), recognizing that message production and reception is only a part of the total supportive interaction and/or process across time. Consistent with the broader research lines on communicative functions, “…major aims in research on supportive messages have been (a) to identify more and less effective message forms and (b) to specify the features that distinguish the more effective
forms from those that are less effective” (Burleson & MacGeorge, p. 387). Although differing methodological paradigms have been used in this endeavor, including the naturalistic, interaction analysis, and experimental paradigms (for a review, see Burleson & MacGeorge, 2002), the message perception paradigm is one that has been successful in “…testing the effects of specific (and theoretically derived) message features” (p. 387). This approach is used here.

This conceptual framework thus builds on previous bodies of supportive communication literature in terms of investigative approach. In these realms, a specific concern has been identified as a focal area in need of communicative redress (Burleson & MacGeorge, 2002). Thus, for example, the primary task involved in providing emotional support is improving a target’s affect (Burleson, 2008). Likewise, effective esteem support has been shown to increase state self-esteem, for example in the job search context (Holmstrom & Burleson, 2011). To gain insight into what kinds of messages may most effectively accomplish such goals, researchers identify features of messages that, through the communicative processes described above, work to address the chief goal(s) of import (e.g., improve affect, self-esteem).

As suggested in Chapter one, and corroborated by Study 1, for middle-aged and older adults attempting to persist in weight management endeavors, the focal supportive aim is amelioration of a target’s felt sense of “stuckness.” This is not the most elegant term, but it gets at the idea of akrasia, or weakness of the will.
Although support targets likely (though not necessarily) know what they need to do in terms of weight management, they experience a lack of energizing drive toward that purpose. Many Study 1 participants, for example, reported a sense of shame for having “just not done it” (i.e., taken the weight off or maintained a weight loss) year after year. A key goal of motivational support is, therefore, to communicatively facilitate a short-circuiting of akrasia and an increase in general motivation, behavioral intention, and high-quality motivation.

**Message Dimensions**

In this initial test of motivational support in the weight management context for middle-aged and older adults, the central aim is to identify theoretically-relevant message dimensions, and then to test if variations in message quality within these dimensions are associated with differences in motivational outcomes. The following four message dimensions were selected as test foci: 1) person-centeredness, 2) counterarguments against situational obstacles, 3) self-worth affirmation, and 4) calls to action. These four dimensions were selected as appropriate for this initial test because, theoretically, they respond to the weight management motivational dilemma of middle-aged and older adults discussed thus far. Although these message dimensions may not comprise an exhaustive explanation of motivational support, they provide a theoretically-useful starting point. Each dimension will be briefly addressed in turn.
**Person-centeredness.** The concept of person-centeredness emerged from Bernstein’s (1970) work on restricted vs. elaborated codes. The restricted code communication style “…reflects and fosters the assumption that the identities of others and the meanings of their actions are given in socially defined roles occupied in particular contexts” (Appelgate, Burleson, & Delia, 1992, p. 5). Thus, the unique natures of interactants are downplayed. Elaborated code, in contrast, emphasizes the unique perspective and situation of the interactants. Further, Bernstein (1974) noted that the elaborated code tended to be *personal* (directed by elaboration on the unique characteristics and qualities of the person and situation), whereas the restricted code was more *positioned* (directed by social roles rather than persons’ unique differentiation).

Researchers in the constructivist tradition adapted these concepts, identifying a message’s level of person-centeredness as the extent to which it “reflects an awareness of and adaptation to the subjective, affective, and relational aspects of communicative contexts” (Burleson, 1987, p. 305). Lines of research in this area suggested that messages that were more *person-centered* in focus tended to be more effective in transactional communicative activities, defined as “…tasks in which language is used instrumentally to have specific effects on other people” (O’Keefe & Delia, 1988). Indeed, a message’s level of person-centeredness may be assessed for any type of instrumental communication activity, including regulating behavior (e.g., Kline, 1991) and comforting another (e.g., Burleson & Samter, 1985). Person-
centeredness in any kind of transactional message is usually examined through comparison to a hierarchy of person-centeredness (O’Keefe & Delia, 1988).

The hierarchy, initially developed by Applegate and colleagues, consists of nine levels ranging from 1 (least person-centered) – 9 (most person-centered), varying in the level to which the experience of the message recipient is recognized, articulated, and legitimized (Burleson, 1984). Burleson’s (1984) person-centered supportive communication comforting hierarchy will be used to illustrate. The lowest levels of the hierarchy (1-3) deny the perspectivity of the other, through implicitly or explicitly denying the feelings of the other. Levels 4-6 of the hierarchy comprise moderate person-centeredness, in which persons’ feelings are acknowledged, but are not elaborated or contextualized. Levels 7-10 of the hierarchy comprise high person-centerededness, and acknowledge the perspectivity of the other through the explicit recognition, elaboration, and contextualization of the other’s feelings.

High person-centeredness in supportive communication messages has fared well empirically, being associated with greater perceptions of message effectiveness (for reviews see, Burleson, 2008; Burleson & MacGeorge, 2002, MacGeorge et al., 2011). High person-centeredness in messages is thought to be linked with positive message outcomes for several reasons. First, high-person centered messages tend to work well in simultaneously managing multiple communicative goals (O’Keefe & Delia, 1982). As Burleson and MacGeorge (2002) explained:
Components of highly person-centered support messages include acknowledgements of the target’s emotional and cognitive states, inquiries about the problematic situation and the target’s affective reactions, expressions of compassion and understanding, and, especially, utterances (statements, questions, and conversational continuers) that encourage the target to elaborate his or her feelings and perspective regarding the problematic situation. (p. 402)

Person-centered messages are thought to function by facilitating the support recipient’s reflection on a problematic situation, allowing them to, in turn, understand and appraise the situation in a more beneficial way (Burleson & Goldsmith, 1998; Burleson & MacGeorge, 2002).

The use of high person-centered messages maps on well to SDT principles. For example, Deci, Eghrari, Patrick, and Leone (1994) examined specific elements of an interpersonal context that facilitate autonomy support and resultant autonomous motivation. Three autonomy-supporting elements were isolated. One of these elements was “acknowledging people’s feelings and perspectives so they will feel understood” (Deci et al., 1994). This view can be understood as complementary to a person-centered perspective.

In this investigation, person-centeredness in weight management communication is seen as comprised of two levels of quality: high and low. As presented in Table 4.1, messages conceptualized as high in person-centeredness were
constructed to reflect levels seven through nine of the person-centered hierarchy, in that they explicitly acknowledge, legitimize, and elaborate the weight loss experience of the participant. In contrast, messages conceptualized as low in person-centeredness correspond with levels one through three of the hierarchy, failing to acknowledge or elaborate on the participant’s weight management experience. It is argued here that messages high in person-centeredness will be linked with positive evaluations of message quality, message effectiveness, and motivational outcomes.

Message quality refers to the amount to which a given dimension embodies the theorized characteristics of that dimension. Thus, a high person-centered message should be evaluated as allowing the participant to understand their feelings in a new way. Message effectiveness is conceptualized as the degree to which support messages are evaluated as successfully and simultaneously performing several functions (Goldsmith et al., 2000). For example, an effective motivational support message should be rated as sensitive (an emotional dimension of support), supportive (a relationship dimension of support) and helpful (an instrumental dimension of support) (Goldsmith et al., 2000). Message effectiveness evaluations have been demonstrated to mediate the relationship between supportive messages more distal outcomes (e.g., improving affect, Bodie et al., 2012). Thus, the following hypothesis is presented:

H1: Messages high in person-centeredness will be associated with a) greater levels of message quality, b) greater perceptions of message effectiveness, c)
greater levels of weight management motivation, and d) greater behavioral intentions to lose weight than messages low in person-centeredness.

Also, as forwarded by SDT, motivation may vary in type, with motivation that is more autonomous seen as superior to motivation that is controlled. No known studies have specifically examined motivation type as a message outcome, and thus the following research questions are forwarded:

RQ1: Are differences in person-centeredness message quality associated with changes in levels of autonomous motivation?

RQ2: Are differences in person-centeredness message quality associated with changes in levels of controlled motivation?

Dissolving misconceptions. This message dimension is derived from the discussions thus far about the importance of increasing individuals’ perceptions of behavioral control over weight management endeavors. Referring back to Study 1, for example, participants noted that common external constraints hampering weight loss were busyness, expense, etc. Thus, it seems one emphasis of motivational support may be the communicative disempowerment of these perceived obstacles. One way this may be done is by using communication to remove an obstacle. For example, O’Keefe (2002) noted that PBC can be increased when, for example, a person’s obstacle is lack of information and then that information is supplied.

Like person-centeredness, messages in the dissolving misconceptions group were seen as varying in message quality (low vs. high). To create this distinction,
although the situational counterargument dimension is not conceptualized as analogous to advice, some characteristics of advice messages that have been associated with perceptions of effectiveness (e.g., Feng & MacGeorge, 2010) were used to create messages in the high dimension. As seen in Table 4.1, these characteristics include problem inquiry, and lines of reasoning that are efficacious (i.e., likely to work), feasible, and absent limitations (i.e., not causing serious drawbacks; MacGeorge et al., 2011). Messages low in this dimension, in contrast, did not engage in problem inquiry, offered only non-relevant need related arguments (i.e., losing weight is important), and did not provide effective, feasible lines of reasoning free from limitations. Thus, the following hypothesis regarding situational counterarguments emerged:

H2: Messages high in dissolving misconceptions will be associated with a) greater levels of message quality, b) greater perceptions of message effectiveness, c) greater levels of weight management motivation, and d) greater behavioral intentions to lose weight than messages low in dissolving misconceptions.

Changes in autonomous and controlled motivation as a result of message quality are also of interest. Therefore, the following research questions are of interest:

RQ3: Are differences in dissolving misconceptions message quality associated with changes in levels of autonomous motivation?
RQ4: Are differences in dissolving misconceptions message quality associated with changes in levels of controlled motivation?

**Self-worth affirmation.** The third motivational support message dimension of interest is self-worth affirmation. As revealed in Study 1 findings, weight management may be a domain in which a person’s self-esteem is threatened, and thus, an individual may attribute a lack of perceived success to some personal shortcoming. This, in turn, may erode self-confidence and motivation to act. Thus, this message dimension is needed to bolster an individual’s feeling of self-worth.

Here, self-worth affirmation is viewed as conceptually-similar to esteem support, a distinct sub-set of emotional support that uses re-attributions and reappraisals to help a person feel better about him or herself (Holmstrom & Burleson, 2011). As seen in Table 4.1, high-level esteem messages are conceptualized as possessing several attributes. First, messages high in this dimension reference specific qualities of a person, linking them to present and future successful outcomes. This linkage of personal qualities to likely future outcomes is thought to foster appraisals of coping potential (Holmstrom, Clare, & Russell, 2014). Second, messages high in self-worth affirmation should dispel conceptions of culpability for weight management motivational dilemmas, instead shifting the locus of responsibility to the difficulty of the weight management situation instead of shortcomings of the individual (Holmstrom et al., 2014). Messages low in the self-worth affirmation condition, in comparison, deliberately criticize the person losing
weight, elaborating their failure. These messages also do not contain reasoning about specific qualities of the person associated with weight management success, but instead recycle weight management need arguments (e.g., losing weight is important for your health). Therefore, the hypotheses and research questions for self-worth affirmation are as follows:

H3: Messages high in self-worth affirmation will be associated with a) greater levels of message quality, b) greater perceptions of message effectiveness, c) greater levels of weight management motivation, and d) greater behavioral intentions to lose weight than messages low in self-worth affirmation.

RQ5: Are differences in self-worth affirmation message quality associated with changes in levels of autonomous motivation?

RQ6: Are differences in self-worth affirmation message quality associated with changes in levels of controlled motivation?

Call to action. The final dimension of motivational support proposed in this investigation is call to action. Here, the call to action message dimension is conceptualized as communication intended to create the opportunity for the successful performance of the behavior in question (O’Keefe, 2002). It is thought that encouraging participants to actually enact a weight management behavior may combat akrasia and the feeling of “stuckness” described in Study 1.
High versions of call to action messages are comprised of several characteristics. First, they borrow from motivational interviewing techniques (Rollnick, Miller, & Butler, 2008) to collaborate with support recipients in taking feasible, immediate action. Second, messages high in this dimension offer several concrete action plans, building on research on the importance of implementation intentions in carrying out intended actions (e.g., Gollwitzer, 1996). Working from Study 1 findings, messages high in this dimension also stress the communal accountability and enjoyment provided by joint action. Finally, high versions of these messages emphasize vitality and enjoyment in the process of losing weight, consistent with SDT theorizing regarding ways to promote autonomous motivation. It is possible that this last emphasis on joy found in high-level versions of this dimension may be especially important further along in the lifespan (Resnick, 2011). Some gerontologists, for example, stress the importance of minimizing pain and maximizing pleasure in motivating older adults to adopt health behaviors (Resnick, 2011). For example, an older adult will likely not be motivated to exercise if the chosen form of exercise hurts his or her joints, but may find some alternate activity enjoyable.

Low-level versions of this message dimension, in contrast, acknowledge the person is currently struggling to find motivation, but do not offer plans or accountability to overcome this obstacle. Low level messages do not mention fun or enjoyment. These messages also offer irrelevant need arguments (i.e., losing weight
is important for health). Therefore, similar to the previous dimensions, the following research questions and hypothesis and research questions are presented:

H4: Messages high in call to action will be associated with a) greater levels of message quality, b) greater perceptions of message effectiveness, c) greater levels of weight management motivation, and d) greater behavioral intentions to lose weight than messages low in call to action.

RQ7: Are differences in call to action message quality associated with changes in levels of autonomous motivation?

RQ8: Are differences in call to action message quality associated with changes in levels of controlled motivation?

**Combined Messages**

While the message dimensions presented above help isolate differences between messages dimensions and levels of quality, in this initial test, it was also deemed important to begin understanding how combinations of the aforementioned components may influence the outcomes of interest. In other words, are messages comprised of all high-level dimensions more effective than messages comprised of all low-level dimensions? Messages were created by taking core elements verbatim from the single message dimensions. Based on the previous discussions of each message feature, the following hypotheses and research questions are advanced:

H5: Combined messages high in all message dimensions will be associated with a) greater perceptions of message effectiveness, b) greater levels of
weight management motivation, and c) greater behavioral intentions to lose weight than messages low in all message dimensions.

RQ9: Are differences in combined message quality associated with changes in levels of autonomous motivation?

RQ10: Are differences in combined message quality associated with changes in levels of controlled motivation?

Table 2 provides consolidates the conceptualized dimensions and message level qualities presented thus far.
Table 2. Message Dimension Analysis System

<table>
<thead>
<tr>
<th>Message Dimension</th>
<th>Message Quality</th>
<th>Example Messages</th>
<th>Features Embodied in Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person-Centeredness</td>
<td>High</td>
<td>Hey, how are you doing? I totally understand that it can be frustrating to try to eat healthy all the time. It can be tough to constantly make the right food choices. Sometimes it’s easier to splurge! It is for me, too! But you’re making great progress, even if it feels slow. I think that your feeling of frustration is a totally normal one that many people experience when they try to lose weight, and it shows you’re moving in the right direction. I think that if you can just keep going now, soon you’ll feel motivated to eat healthy again.</td>
<td>Inductive move to solicit feelings</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>I don’t understand why you’re feeling frustrated and unmotivated about your eating. You’re moping around instead of doing what you need to do. You should lose this weight because you’re not getting any younger and carrying extra weight isn’t healthy. The weight is hard on your heart, joints, and puts you at risk for many other conditions. You should start eating right again to improve the situation, but I don’t see that happening. Eating healthy isn’t rocket science. You know you need to lose weight, so instead of feeling sorry for yourself, pick yourself up and get back to it.</td>
<td>Disregards and delegitimizes the feelings of the other</td>
</tr>
</tbody>
</table>

Continued
| Dissolving Misconceptions | High | What’s your biggest challenge in exercising? Lack of time? Me, too! It’s hard to find time to add one more thing to the schedule. But I think there are simple ways to be more active even in the busy-ness of life. For the last several weeks I’ve been finding that it works for me to fit physical activity in throughout my day. It’s easy to park farther away from the store, or walk around the block a few times a day – and even these little bursts of exercise add up. I also bought an inexpensive pedometer, and that makes getting extra steps almost seem like a game. | Problem inquiry
Testimony
Multiple efficacious suggestions
Offers feasible suggestions free from major drawbacks |
|---|---|---|---|
| Low | Exercising in order to lose weight is important. I mean, we all know the consequences of being overweight – it’s hard on your heart, your joints, puts you at risk of other conditions, and the list goes on. You'd be doing better if you took off some extra weight, and I agree it’s something you need to do. Finding time to exercise is tough – it takes forever to drive to a gym, workout, and then shower. Still, you need to lose weight for your health, so it’s important to make healthy choices. | Acknowledges topical domain
Recycles need arguments
Offers directives with no actionable suggestions |
| Self-worth Affirmation | High | I’ve noticed you’ve been hard on yourself lately because you’re not losing weight as quickly as you’d like. But it’s not your fault. Losing weight and exercising regularly are just hard! Even though exercising is tough, I’ve seen you succeed in situations similar to this. That same grit and determination that have served you so well in the past will continue to help you now. I mean, you’re creative and great at thinking on your feet. You’ll definitely be able to | Expression of care
Removing locus of causality
Recognizing challenges of situation
Reasoning about specific |
<table>
<thead>
<tr>
<th>Call to Action</th>
<th>Low</th>
<th>Use that creativity and innovation to think up ways to fit exercise into your day – even when it’s challenging.</th>
<th>qualities of the person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Low</td>
<td>It must not be fun to keep failing at losing weight. It’s probably pretty discouraging to be trapped in a cycle of losing and regaining weight, and feeling like you never quite have a handle on eating right. But being at a healthy weight is important for so many reasons – it helps prevent diabetes, certain kinds of cancer, heart disease, arthritis – I could go on. If you lost weight, you’d be able to be more active as well. Losing weight, and exercising in order to do so, isn’t easy, but it’s what you have to do for your health.</td>
<td>Directly threatens individual qualities of the person</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Recycles need argument</td>
</tr>
<tr>
<td></td>
<td>Call to Action</td>
<td>I know you told me that losing weight is important to you, but that you feel like you’re stalled out right now. Have you thought about any ways to break out of this rut? I think I can help you – it would definitely be more fun to tackle this together! Maybe today we could start writing down what we eat? Even if you don’t change anything, and, say, eat a piece of chocolate cake, we’ll still be more aware of what we’re actually eating. And I think that’s a great starting point. I think if we can see at the end of the day that we’ve taken in fewer calories, it’ll be fun and I think we’ll feel terrific! Small steps like that will build on each other and soon we’ll be moving toward our goals again.</td>
<td>Asks recipient to think of solutions</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>I know losing weight is important to you, but you’re clearly stalled out right now. Wanting to lose weight makes sense – it’s good for our health, especially as we age. Being at a healthy weight is important for so many reasons</td>
<td>Acknowledges motivational dilemma</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Recycles need arguments</td>
</tr>
</tbody>
</table>

Continued
– it helps prevent diabetes, cancer, heart disease, arthritis – I could go on. Of course, you’re stuck in a rut and aren’t feeling motivated to eat healthy right now. Maybe eventually you’ll go in the right direction again.

I can help you follow through with exercise – it would definitely be more fun to tackle this together! Today, we could meet up to go for a walk. I know sometimes it’s challenging to find time to exercise, but I’ve been finding that it works for me to fit physical activity in throughout the day. It’s easy to park further away from the store, or walk around the block a few times a day – and even these little bursts of exercise add up. In fact, I just read that more moderate, brief workouts can be really as effective! I totally understand that it can be a drag to exercise consistently, but you’re making progress even if it seems slow. So please don’t beat yourself up because you’re not losing weight as quickly as you want. You definitely have always had the grit and determination to do what you want, which can happen with exercise, too.

I don’t understand why you’re feeling frustrated and unmotivated about your exercise. You’re moping around instead of doing what you need to do. I mean, it must not be fun to keep failing at losing weight. It’s discouraging to be trapped in a cycle of losing and regaining weight. You’re stalled out right now. Losing weight helps prevent diabetes, cancer, heart disease, arthritis that will shorten your life – I could go on. Finding time to exercise is tough. Still, you need to lose weight for your health, so it’s important to make healthy choices.

<table>
<thead>
<tr>
<th>Combined Messages</th>
<th>High</th>
<th>Low</th>
<th>Offers directive without clear plan</th>
<th>Incorporates features from all individual high message dimensions</th>
<th>Incorporates features from all individual low message conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>– it helps prevent diabetes, cancer, heart disease, arthritis – I could go on. Of course, you’re stuck in a rut and aren’t feeling motivated to eat healthy right now. Maybe eventually you’ll go in the right direction again.</td>
<td>I don’t understand why you’re feeling frustrated and unmotivated about your exercise. You’re moping around instead of doing what you need to do. I mean, it must not be fun to keep failing at losing weight. It’s discouraging to be trapped in a cycle of losing and regaining weight. You’re stalled out right now. Losing weight helps prevent diabetes, cancer, heart disease, arthritis that will shorten your life – I could go on. Finding time to exercise is tough. Still, you need to lose weight for your health, so it’s important to make healthy choices.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In sum, in this initial formulation of motivational support in the weight management context, four message dimensions were proposed which are thought to be linked with positive motivational outcomes in the weight management context. In Study 2, the core components of this formulation are tested by assessing the degree to which high-level versions of these dimensions are associated with perceptions of message effectiveness, embodiment of the intended characteristics of each message dimension, general motivation, weight management behavioral intention, and more autonomous forms of motivation. The method proposed to address these hypotheses and research questions is presented next.
Chapter 5: Method

Study 2 used an online experiment, following the message perception paradigm (Burleson & MacGeorge, 2002), to test its hypotheses and research questions. Before launching the main study, a pilot study was conducted to ensure that the constructed messages to be tested were realistic and that they systematically varied in the intended direction for all relevant message dimensions. The hypothetical message manipulations, method, and results from this pilot study are provided here. The findings from this study were then used to inform the messages used in the main study. Second, the participants, procedures, instrumentation, and measures used in the second study will be provided.

Pilot Study

Message Manipulations

For the pilot study, a total of 32 motivational support messages were constructed. Each of the four proposed message dimensions (i.e., person-centeredness, dissolving misconceptions, self-worth affirmation, call to action) was viewed as an independent variables with two levels (low/high). To increase the generalizability of findings, eight messages were produced for each message dimension. Each set of eight messages was split across two overarching hypothetical
scenarios: eating and exercise. The use of multiple scenarios to manipulate messages is common in message perception research, and is used in order to increase generalizability and to avoid the error of fixed message effects (Burleson & MacGeorge, 2002). All messages were of similar length (81-106 words) to reduce variability not attributable to message manipulations. Messages within a given message dimension (e.g., high person-centered, low person-centered) were quite similar in length; more pronounced differences emerged among message dimensions. The complete scenarios and messages tested in the pilot study are presented in Appendix B.

The overarching purpose of the pilot study was four-fold. First, the study was conducted to ascertain if the constructed scenarios (i.e., eating or exercise) were realistic. Second, it was deemed important to determine if the constructed messages were considered realistic. Third, the study tested if the messages embodied the conceptualized characteristics of their respective dimensions. Fourth, the study examined if participants evaluated effectiveness differently between high and low quality versions of each message.

Method

Participants were 123 students (77 women, 44 men, 2 did not disclose) enrolled at a Midwestern university. Students were able to participate in this study for course extra credit. Participants completed the study through the online survey provider, Qualtrics.com. While the use of a college student sample was largely due
to convenience, this approach was justified given the goals of the pilot study. Namely, the study sought to confirm that manipulated messages were seen as realistic and that the message manipulations were successful (e.g., high person-centered messages should be rated higher on person-centered message qualities than low person-centered messages). Establishing that the manipulated messages function in the intended manner is arguably less influenced by age than assessing whether a particular message is motivating (Main Study 2).

Because this pilot used a sample of students who were not primarily older adults, participants were asked to imagine that the scenario and message they evaluated were being given to an overweight or obese middle-aged or older adult. Participants were randomly assigned to evaluate the realism of either the eating or exercise scenario. They were then asked to evaluate four pairs of high-low messages from either the eating or exercise path depending on which scenario they received. The presentation order of high and low messages was randomly varied within pairs.

The evaluation measures were as follows. All items were measures on 7-pt Likert scales, ranging from 1 (strongly disagree) to 7 (strongly agree). Scale alphas are presented in the presentation of results. First, scenario realism was assessed using three items commonly used in message perception studies (e.g., Holmstrom & Burleson, 2011). Sample items included, “This scenario is believable,” and “It’s hard for me to imagine a person in this scenario.” Message realism was evaluated using
the same three items, with item wording slightly altered to reflect assessment of the message instead of scenario.

Each message dimension was evaluated in terms of its conceptualized properties, as drawn from the literature described so far. For all message quality measures, items for each dimension were averaged to create a message quality measure for that dimension, with higher scores indicating greater embodiment of a particular dimension. Person-centered message qualities were assessed with three items. Sample items included, “This message focuses on the feelings of the person trying to lose weight,” and “This message helps the person trying to lose weight understand their feelings in a new way.” Situational counterarguments were evaluated with three items. Sample items included, “This message is effective in providing helpful suggestions to the person who is trying to lose weight” and “This message gives suggestions that the person trying to lose weight could probably implement.” Self-worth affirmation was measured by four items, including "This message would help the person trying to lose weight be able to meet the challenge of managing his or her weight” and “This message would help the person trying to lose weight feel confident in his or her ability to manage their weight.” Call to action was assessed with three items. Sample items included “This message encourages the person trying to lose weight to take small, concrete steps,” and “This message motivates the person trying to lose weight to take immediate action.”
Message effectiveness was measured using five items commonly used in assessments of supportive message evaluation (e.g., Goldsmith, McDermott, & Alexander, 2000). These items were developed to reflect the multi-functional nature of supportive communication messages (Goldsmith et al., 2000), with participants noting the degree to which a message was evaluated as accomplishing various supportive functions. Thus, following the stem “this message is,” participants rated their level of agreement with the level to which a message was: “helpful,” “appropriate,” “sensitive,” “supportive,” and “effective”. These items were averaged to form a measure of message effectiveness. Complete pilot test measures may be found in Appendix C.

Results

Analyses of the pilot data focused on the four research questions described thus far: Are the scenarios considered by participants to be realistic? Are the messages considered to be realistic? Do participants detect the conceptual differences embodied in the messages? And do participants rate high and low quality forms of each message type consistent with the conceptual analysis? Answers to these questions were conducted with a series of simple and repeated measures ANOVAs.

Scenario realism. A first analysis determined if the two scenarios (diet and exercise) were each considered to be realistic. Two of the three realism items were averaged and used in the analysis ($\alpha = .82$). The means for both scenarios were rated
above 6 on the 1-7 response format, indicating that both scenarios were considered to be realistic. An ANOVA further found no significant differences between the diet \( (M = 6.51, SD = .535) \) and exercise \( (M = 6.37, SD = .985) \) scenarios, \( F = .876, df = 1, 122, ns. \)

**Message realism.** A second analysis determined if the support measures were considered to be realistic by participants. A realism measure was formed by averaging the three realism scale items after finding that they were reliable for each message type (e.g., person-centeredness), level of message quality (i.e., low or high), and message replication (see Table 1 for alphas). In only one condition was an alpha below .70 (i.e., .66).

To examine if messages were considered to be realistic, means and standard deviations were formed for realism ratings for each message condition, which appear in Table 3. They show that the mean ratings for each message condition was above a 5, indicating that the messages were considered by participants to be somewhat believable and likely to be encountered in everyday life.

A series of eight repeated measures ANOVAs were then conducted to determine if message realism across each message type. Analyses examined if message realism differed by message quality (low or high), scenario type (diet or exercise), and message replication (2 message pairs=MR1, MR2). In these analyses, scenario type (diet or exercise) was entered as a between groups factor (2) and message quality was the within-subjects factor (low or high).
In these analyses scenario type had no significant main effect on message realism for any message type or message replication: person-centeredness MR1, $F = .292$, $df = 1, 52$, MR2, $F = .273$, $df = 1,71$; counterarguments MR1, $F = .027$, $df = 1,52$, MR2, $F = .391$, $df = 1,55$; efficacy MR1, $F = 2.70$, $df = 1,60$, MR2, $F = .511$, $df = 1,61$; and call to action MR1, $F = .122$, $df = 1,55$, MR2, $F = .712$, $df = 1,56$.

Table 3 also reports differences in message quality on message realism. As can be seen, five of the eight tests showed that high quality messages were considered to be more realistic than the low quality messages. Most significant differences were not large in magnitude. Some differences are not surprising, given that participants were asked to imagine persons receiving a low-quality message without many contextual descriptions.

In sum, the messages as a whole were considered to be realistic, even though some low quality messages were seen to be less realistic than high quality messages. Scenario type did not exert any significant effects on message realism ratings.
Note: M-Pr. = Low-High Message Pair Replication. Alphas are for low and high message quality measures, respectively. Dfs are for within subject tests. Scenario type differences were nonsignificant throughout for main effects.

**Message type manipulations.** A second group of analyses examined if high and low versions of each message type, person-centeredness, self-worth affirmation, dissolving misconceptions, and call to action, significantly differed on the message features conceptualized to be embedded in each message type. Reliability assessments conducted on the items for each message type resulted in retaining all four items for self-worth affirmation (e.g., the message would help the person feel
confident about his or her ability to lose weight), two items each for dissolving misconceptions (i.e., provides helpful suggestions, gives suggestions that the person could implement) and call to action (e.g., encourages the person to take action), and one item to measure person-centeredness (i.e., helps the person understand his/her feelings in a new way). Alphas for each measure are presented in Table 4, along with the repeated measures ANOVAs conducted for each message type and message replication. Scenario type was entered as a between groups factor for each analysis.

Table 4 shows that all eight analyses were statistically significant on the message factor, with significant effect sizes on each analysis. Both message replications on person-centeredness showed that high quality messages, compared to low quality messages, were seen as helping the recipient understand his or her feelings in a new way. Both analyses on dissolving misconceptions found that high quality messages, compared to low quality messages, contained helpful and feasible suggestions. Both analyses on self-worth affirmations found that high quality messages, compared to low quality messages, helped the recipient feel capability, confident and better about him/herself. Finally, both analyses on call to action found that high quality messages, compared with low quality messages, encouraged the recipient to take action or small steps towards his or her weight management goals.

As with the message realism analyses, there were no significant effects for the scenario type on the message types and message replications: person-centeredness MR1, $F = .024, df = 1, 37$, MR2, $F = .519, df = 1, 71$; misconceptions
MR1, $F = .551$, $df = 1,52$, MR2, $F = .011$, $df = 1,55$; efficacy MR1, $F = .073$, $df = 1,60$, MR2, $F = .189$, $df = 1,61$; and call to action MR1, $F = 1.53$, $df = 1,55$, MR2, $F = .634$, $df = 1,56$.

Table 4. Effects of Supportive Message Type and Message Quality on Message Type Manipulation

<table>
<thead>
<tr>
<th>Message Type</th>
<th>as</th>
<th>Message Quality</th>
<th>Message</th>
<th>Quality</th>
<th>$F$</th>
<th>$df$</th>
<th>$p$</th>
<th>Par. $\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Low $M (SD)$</td>
<td>High $M (SD)$</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Person-</td>
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<tr>
<td>Centeredness</td>
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<td></td>
</tr>
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<td>M-Pr. 1</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.91</td>
<td>3.30 (1.68)</td>
<td>5.19 (1.16)</td>
<td>37.61</td>
<td>1,52</td>
<td>.000</td>
<td>.42</td>
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</tr>
<tr>
<td>M-Pr. 2</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>.91</td>
<td>2.84 (1.50)</td>
<td>5.44 (1.29)</td>
<td>118.16</td>
<td>1,71</td>
<td>.000</td>
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<td>Misconceptions</td>
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<td>M-Pr. 1</td>
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<tr>
<td></td>
<td>.91</td>
<td>3.78 (1.44)</td>
<td>5.80 (1.02)</td>
<td>52.95</td>
<td>1,52</td>
<td>.000</td>
<td>.51</td>
<td></td>
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<tr>
<td>M-Pr. 2</td>
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<tr>
<td></td>
<td>.91</td>
<td>3.94 (1.49)</td>
<td>5.77 (1.07)</td>
<td>57.08</td>
<td>1,55</td>
<td>.000</td>
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<td>Self-worth Affirm</td>
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<tr>
<td></td>
<td>.97</td>
<td>3.89 (1.53)</td>
<td>5.31 (1.06)</td>
<td>37.77</td>
<td>1,60</td>
<td>.000</td>
<td>.38</td>
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<tr>
<td>M-Pr. 2</td>
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<td></td>
<td>.96</td>
<td>3.14 (1.50)</td>
<td>5.72 (1.06)</td>
<td>139.02</td>
<td>1,61</td>
<td>.000</td>
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<td>Call to action</td>
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<td>M-Pr. 1</td>
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</tr>
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<td></td>
<td>.74</td>
<td>4.28 (1.29)</td>
<td>5.48 (1.06)</td>
<td>32.98</td>
<td>1,55</td>
<td>.000</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>M-Pr. 2</td>
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<td>.86</td>
<td>4.43 (1.46)</td>
<td>6.04 (1.97)</td>
<td>53.00</td>
<td>1,56</td>
<td>.000</td>
<td>.48</td>
<td></td>
</tr>
</tbody>
</table>
Note: M-Pr. = Low-High Message Pair Replication. Alphas are for low and high message quality measures, respectively. Dfs are for within subject tests. Scenario type differences were nonsignificant throughout for main effects.

**Message effectiveness.** A third set of analyses examined if high and low versions of each message type, person-centeredness, self-worth affirmation, dissolving misconceptions, and call to action, significantly differed on perceived message effectiveness. Evaluation measures were formed by averaging the five evaluation scale items, as they were reliable for each message type (e.g., person-centeredness), level of message quality (i.e., low or high), and message replication (see Table 5 for alphas). A similar set of repeated measures ANOVAs were conducted on message evaluation for each message type and message replication, with scenario type entered as a between groups factor. These findings are presented in Table 5.

All eight analyses show that the high quality messages were rated as significantly more effective than lower quality messages, with substantial effect sizes. High quality forms of person-centered, self-worth affirmation, dissolving misconceptions and call to action messages were evaluated as more effective, appropriate, sensitive, helpful, and supportive than lower quality versions of these message types. In these analyses scenario type had no significant main effect on message evaluation for any message type or message replication: person-centeredness MR1, $F = 1.51, df = 1, 352$, MR2, $F = .386, df = 1, 71$; misconceptions
MR1, $F = .064$, $df = 1,50$, MR2, $F = .004$, $df = 1,55$; efficacy MR1, $F = .000$, $df = 1,60$, MR2, $F = .007$, $df = 1,61$; and call to action MR1, $F = 2.02$, $df = 1,55$, MR2, $F = 3.91$, $df = 1,56$.

Table 5. Effects of Supportive Message Type and Message Quality on Message Effectiveness

<table>
<thead>
<tr>
<th>Message Type</th>
<th>as</th>
<th>Low M (SD)</th>
<th>High M (SD)</th>
<th>$F$</th>
<th>$df$</th>
<th>$p$</th>
<th>Par. $\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person-Centeredness</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M-Pr. 1</td>
<td>.86,</td>
<td>3.22(1.42)</td>
<td>5.640(.952)</td>
<td>95.65</td>
<td>1,52</td>
<td>.000</td>
<td>.64</td>
</tr>
<tr>
<td></td>
<td>.90</td>
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<td>M-Pr. 1</td>
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<td>5.61 (.949)</td>
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<td>Call to action</td>
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<td>5.60 (.900)</td>
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<tr>
<td>M-Pr. 2</td>
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<td>5.08 (1.10)</td>
<td>6.12 (.765)</td>
<td>42.61</td>
<td>1,56</td>
<td>.000</td>
<td>.43</td>
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Note: M-Pr.= Low-High Message Pair Replication. Alphas are for low and high message quality measures, respectively. Dfs are for within subject tests. Scenario type differences were nonsignificant throughout for main effects.
In sum, these pilot study findings supported that the messages constructed were, overall, realistic, and that high and low versions produced differing evaluations of embedded message qualities and message effectiveness. Thus, these messages were deemed appropriate to use in the main Study 2, with slight modifications that will be discussed next.

**Study 2**

Following the pilot study described above, Study 2 was launched. This study was conducted to test the research hypotheses and questions presented in Chapter four. Funding for this study was provided by the Ohio State Time Sharing Experiments for the School of Communication (TESoC) program, which provided access to an online opt-in participant panel administered through the online survey provider Qualtrics.com.

While creating the online experiment questionnaire to be distributed to participants, formative comments were solicited from ten individuals (including colleagues and non-academic volunteers in the target age group) regarding the clarity, length, and flow of the questionnaire. These comments were used to refine the questionnaire, clarify instructions, and hone the study to a final format requiring approximately 20 minutes for participants to complete.
Participants

Participants were 415 individuals (287 women, 128 men, $M_{age} = 58.16$ years, age range 45-86 years, $SD = 7.96$) recruited through the opt-in panel provider Qualtrics.com. For participants’ complete demographic information, please see Appendix D. These participants were members of Qualtrics.com’s opt-in participant panel, in which panel members participate in various surveys in return for small incentives. To participate in this particular study, certain eligibility criteria were specified. Participants had to be 45 years of age or older, currently desiring to lose weight, and must engage in weight management talk with at least one other person. These criteria were chosen to select a sample of persons as close to the conceptualized target population of this investigation as possible.

A total of 415 participants qualified as “good completes” by the Qualtrics.com panel project team, meaning that these participants satisfied the eligibility screening questions, provided informed consent, and successfully answered the five “attention filter” questions throughout the study (e.g., “For data quality purposes, please select ‘disagree’ below”).

Procedures

Participants were first screened for eligibility as per previously-described criteria. If eligible, informed consent was obtained through an online form. Once informed consent was obtained, all participants completed information regarding basic demographic information. They were also asked to provide information on the
person with whom they most often discussed weight management, and provide
information on this relationship and these conversations. Baseline information
regarding participants’ motivation type (i.e., autonomous or controlled) was
gathered.

Next, participants were randomly assigned to one of the possible forty
message conditions. This message perception task will be described in detail shortly.
Following the message perception task, participants also provided information
regarding their current health and weight management status. In addition,
participants evaluated their perceptions of motivational support provision across
communication channels (i.e., face-to-face, phone call, text message, public
Facebook post) and their technology use. These technology questions were not the
central focus of this particular study. An example screenshot detailing the user
interface for the Study 2 questionnaire can be found in Appendix E.

**Message Perception Task and Message Manipulation**

Participants were asked to read a role-play scenario in which they were
experiencing a lack of motivation to either eat healthy or exercise regularly. To
illustrate, the eating scenario was as follows:

You have been working to lose weight for a while now, and feel fairly
knowledgeable about healthy eating. Lately, though, you haven’t been
making the progress you wanted. You have found it difficult to eat healthy
foods or stick to proper portions, and are feeling unmotivated to eat right.
The exercise scenario was identical except for a slight adaption in wording to reflect the topical exercise domain of interest.

Participants were then asked to imagine they received a motivating message from the person they previously identified as speaking with most often about weight management. After reading this message, participants were asked to complete items assessing their perceptions of their assigned message’s quality, effectiveness, and motivational outcomes. Last, participants’ perceptions of scenario and message realism were assessed.

Study 2 thus reflected a 5 (message dimension) X 2 (eating vs. exercise) X 2 (high quality vs. low quality) design. In total, 40 manipulated messages were constructed. Twenty manipulated messages were created to reflect the eating topical domain of interest, and 20 manipulated messages were created to reflect the exercise topical domain of interest. Within each scenario, four messages were created for each of the five message dimensions (i.e., person-centeredness, dissolving misconceptions, self-worth affirmation, call to action, combined messages). For each dimension, two high-quality and two low-quality message versions were constructed. Table 6 presents the message manipulations that were tested. Complete Study 2 scenarios and messages may be found in Appendix F.

Study 2 used the messages tested in the pilot study, with slight modifications applied to some messages in order to make them more conversational in tone and to clarify some conceptual dimensions. Further, four new combination messages were
created for Study 2 by incorporating components of all four dimensions. As in the pilot study, for all messages, variations in message length were minimized.

Table 6. No. of Constructed Message by Scenario, Dimension, and Level

<table>
<thead>
<tr>
<th>Message Dimension</th>
<th>Scenario</th>
<th>Message Quality</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>High</td>
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<tr>
<td>Person-Centered</td>
<td>Eating</td>
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<tr>
<td></td>
<td>Exercise</td>
<td>2</td>
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<tr>
<td>Dissolving Misconceptions</td>
<td>Eating</td>
<td>2</td>
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<tr>
<td></td>
<td>Exercise</td>
<td>2</td>
</tr>
<tr>
<td>Self-Worth Affirmation</td>
<td>Eating</td>
<td>2</td>
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<tr>
<td></td>
<td>Exercise</td>
<td>2</td>
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<tr>
<td>Call to Action</td>
<td>Eating</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Exercise</td>
<td>2</td>
</tr>
<tr>
<td>Combination Message</td>
<td>Eating</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Exercise</td>
<td>2</td>
</tr>
</tbody>
</table>

Measures

To evaluate the hypotheses and research questions of interest, the following measures were used. The Study 2 measures described here may be found in Appendix G in their entirety.

**Message effectiveness.** Participants’ perceptions of message effectiveness were assessed using six semantic differential items adapted from Goldsmith, McDermott, and Alexander (2000), which have been used widely in supportive communication message assessment (e.g., Bodie, Burleson, & Jones, 2012;
These items were rated on 7-point semantic differential scales, with each word pair anchored on an opposing pole of the scale. The adjective pairs used were “appropriate/inappropriate,” “helpful/unhelpful,” “effective/ineffective,” “supportive/unsupportive,” “successful/unsuccessful,” and “sensitive/insensitive.” The valence of the adjective pairs was varied so that some adjective pairs presented the positive attribute first, while some adjective pairs provided the negative attribute first. The six items demonstrated high level of internal reliability ($\alpha = .93, M = 4.33, SD = 2.23$). Items were averaged to form a score of message effectiveness with higher scores indicating greater message effectiveness.

**Message Quality.** The level to which high and low versions of the four message dimensions exhibited the conceptualized characteristics of interest were assessed with four sets of items, one set for each message dimension.

**Person-centeredness.** The level to which a message was perceived as person-centered was measured using three items created by the researcher. These items were derived from the person-centered literature and were measured on 7-point Likert scales that ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). The items were evaluated following the stem “This message:” and included “focuses on my feelings,” “helps me better understand my feelings and situation,” and “validates my feelings.” These three items were averaged to create a score for person-centeredness.
message quality, with higher scored indicating greater embodiment of quality. These items demonstrated good internal reliability ($\alpha = .90, M = 4.14, SD = 0.76$).

**Dissolving misconceptions.** The level to which a message embodied the characteristics of dispelling situational obstacles was measured with three items created by the researcher. These items were informed by items related to advice quality, efficacy, and feasibility (Feng & MacGeorge, 2010). The items assessing level of situational counterargument were anchored on 7-point Likert scales, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The items were presented after the stem “This message” and were as follows: “provides helpful tips,” “gives suggestions that I could probably implement,” and “helps me see ways to overcome my weight management challenges.” These items were averaged to create the situational counterargument message quality score. Cronbach’s alpha was deemed acceptable at .99 ($M = 5.20, SD = 1.20$).

**Self-worth affirmation.** The degree of self-efficacy affirmation embodied in a message was measured using four items created by the researcher. These items tapped perceptions that the message encouraged understanding of capability and worth. These items were presented after the stem “This message,” and included “would help me feel more confident in my ability to manage my weight,” “helps me feel capable of handling my weight management,” “helps me feel able to meet the challenges of managing my weight,” and “helps me feel worthy of taking care of my health.” Respondents evaluated these items on 7-point Likert scales ranging from 1
(strongly disagree) to 7 (strongly agree). These items demonstrated good internal consistency ($\alpha = .98$, $M = 5.10$, $SD = 1.50$), and were averaged to create the self-worth affirmation score.

Call to action. The degree to which the message roused participants to action was assessed using three items created by the researcher. These items were informed by work in motivational interviewing, which seeks to aid participants in implementing actionable strategies in the behavioral domain of interest. The three items followed the stem “this message:” and were as follows: “motivates me to take immediate action,” “encourages me to take small, concrete steps,” and “encourages me to take action toward my weight management goals.” Cronbach’s alpha was deemed acceptable at .99 ($M = 5.00$, $SD = 2.33$).

Motivation. Given the centrality of motivation to Study 2, it was assessed in three different ways; namely, through measures of general motivation, behavioral intention, and levels of autonomous and controlled motivation.

General motivation. Whether or not a message was perceived as motivating was assessed with two items that were evaluated on Likert scales ranging from 1 (strongly disagree) to 7 (strongly agree). Item wording was adapted slightly depending on whether the participant was assigned to the eating or exercise scenario. Sample items from the eating scenario are provided here with exercise wording in brackets. Complete sets of items are presented in Appendix G. Items included “This message would be effective in motivating me to eat healthfully [exercise regularly]”
and “This message would motivate me to make positive changes in my eating choices [exercise habits]”. These items demonstrated excellent internal consistency ($\alpha = .99$, $M = 4.00$, $SD = 2.33$). They were summed and averaged to create the general motivation measure.

**Behavioral intention.** Following Azjen’s (2002) advice regarding the measurement of behavioral intention, four items were used to evaluate person’s intentions to engage in either diet or exercise behaviors after reading the manipulated message. These items were rated on 7-point Likert scales ranging from 1 (*strongly disagree*) to 7(*strongly agree*). Items followed the stem “After hearing this message,” and sample items included “I would refocus my efforts to eat healthy for the next month” and “I would work harder to eat healthy for the next month.” These items demonstrated good internal reliability ($\alpha = .98$, $M=3.90$, $SD=2.43$). Items were averaged to create the behavioral intention scale, with higher values reflecting greater intention to act.

**Motivation type.** Motivation type (i.e., autonomous, controlled) was assessed using the validated Regulation of Eating Scale (Leong, Madden, Gray, & Horwath, 2012). This scale was used in two ways. First, the measure was administered before any message manipulations occurred to assess participants’ baseline levels of autonomous and controlled motivation. The eating version was presented verbatim to participants assigned to the eating scenario. The exercise measure was slightly adapted slightly adapting wording to make the items reflect the exercise rather than
eating domain. This measure taps the six sub-types of motivation toward a particular behavior (i.e., eating or exercise) posited by SDT, with four items for each motivational type. According to the SDT conceptualization of motivation, a person may demonstrate multiple types of motivation toward a behavior simultaneously. Thus, theoretically, a participant may score high in both autonomous and controlled motivations toward eating.

Four items tapped each of the six possible motivation types (i.e., intrinsic, integrated, identified, introjected, extrinsic, amotivation), and were measured on 7-point Likert scales ranging from 1 (strongly disagree) to 7 (strongly agree). For the baseline assessment, items in the eating condition followed the stem, “The reason I would eat a healthy diet is:”. Items in the exercise condition followed the stem, “The reason I would exercise regularly is:”. Using items from the eating scenario to illustrate, a sample item from the intrinsic motivation subscale is “because it is fun to create meals that are good for my health”. An integrated subscale item is “Because eating healthy is consistent with other aspects of myself”. A sample item from the identified subscale includes “Because I believe it that eventually it will allow me to feel better.” An introjected item is “Because I do not want to be ashamed of how I look.” An external regulation item is “Because other people insist that I do it.” Finally, an item reflecting amotivation is “I do not know why I bother.” Following Leong et al. (2012), the items representing the three levels of more autonomous motivation (i.e., intrinsic, integrated, identified) were averaged and summed to
construct a global measure of autonomous motivation. Likewise, the three levels of more controlled motivation (i.e., introjected, external, amotivation) were summed to construct a global measure of controlled motivation. Internal consistency for the baseline measure of autonomous motivation was satisfactory ($\alpha = .73, M = 4.83, SD = 1.42$), as it was for the baseline measure of controlled motivation ($\alpha = .73, M = 2.97, SD = .99$).

After the message manipulation, items identical to those used in the baseline measure were provided, following the stem “This message helps me feel that:”. The same procedure used in constructing the baseline measures of autonomous and controlled motivation was also used here to construct global measures of post-manipulation autonomous and controlled motivation, respectively. Internal consistency was moderately acceptable for post-manipulation autonomous motivation ($\alpha = .64, M = 4.97, SD = 1.13$) and controlled motivation ($\alpha = .80, M = 3.00, SD = 1.15$).

**Scenario and Message Realism.** Scenario realism was assessed with three items, measured on 7-point Likert scales ranging from 1(*strongly disagree*) to 7 (*strongly agree*). Sample items included “This scenario is believable,” and “It’s possible for me to imagine myself in this scenario”. These items demonstrated good internal reliability ($\alpha = .86, M=5.77, SD = 1.13$).

Message realism was assessed with a one-item measure rated using the same 7-point Likert scale format: “This message is believable” ($M = 4.92, SD = 2.14$).
**Additional measures.** In addition to assessing the demographic characteristics of participants, several additional variables were measured to better understand the characteristics of the sample and to serve as statistical controls. These are as follows.

*Relationship characteristics.* The relationship between the participant and the support provider (i.e., person the participant selected to think about while reading the vignette and message) was assessed. Participants provided a description of who they were envisioning (i.e., friend, co-worker, family member, romantic partner). They also assessed the quality of their relationship. Relationship quality was assessed with five items rated on 7-point Likert scales ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). These items were adapted from Stafford and Canary (1991). Sample items include “My relationship with this person is strong” and “My relationship with this person makes me happy”. Items exhibited strong internal consistency (α = .98, M = 6.44, SD = 1.06).

*Weight management talk.* The frequency of weight management conversations with the chosen individual was assessed with a single item on a 7-point Likert scale anchored from 1 (*less than once a year*) to 7 (*daily*). The item was as follows: “How often do you talk with this person about topics related to weight loss, fitness, or getting healthy?” Participants’ satisfaction with these conversations was measured with a single item: “How satisfied are you generally with these weight
management conversations?”. Participants responded on a 7-point Likert scale ranging from 1 (very dissatisfied) to 7 (very satisfied).

Health and weight management. Participants’ current Body Mass Index (BMI) was assessed by asking for self-reports of weight and height. BMI was then calculated with the following formula: BMI = weight (lb)/[height (in)²] * 703 (Centers for Disease Control, 2014). Self-reports of weight and height tend to slightly underestimate actual weight and slightly overestimate actual height (Merrill & Richardson, 2009), thus resulting in lower overall estimates of BMI. However, this metric remains useful in obtaining a general sense of the weight status of participants.

Frequency of exercise was measured with the single item, “How many times do you typically exercise during an average week?”. Response options ranged from 1 (0 times) to 6 (five or more times).

Nutrition was assessed through a modified version of the Starting the Conversation Brief Dietary Assessment (Paxton, Stryker, Toobert, Ammerman, & Glasgow, 2011). Items asked participants how many times in a typical week they engaged in six different types of eating behavior. Sample items included “How many times a week do you eat fast food meals?” and “How many servings of fruit and vegetables do you eat each day?” Response options ranged from 1 time per week to 3 or more times per week, with an option for “don’t know/not sure.” Responses were summed to create an index of eating behavior (possible response range: 6-24), with
lower scores indicating generally healthier eating patterns, and higher scores indicated generally less healthy practices (Paxton et al., 2011). Eating patterns were assessed using four items derived from the Eating Behaviors Inventory (O’Neil et al., 1979). Items were measured on 7-point Likert scales ranging from 1 (almost never) to 7 (almost always). These items included “I carefully watch the quantity of food which I eat,” and “My emotions cause me to eat.” The items demonstrated acceptable internal consistency (α = .76) and were averaged to form a scale with higher scores indicating higher levels of normally-regulated eating behavior (M = 4.84, SD = .83).

Participants’ general physical health was assessed through the single item, “How would you rate your general health?” with response options ranging from 1 (quite poor) to 5 (quite good). Self-reported health status has been demonstrated to be valid, and to predict mortality (Jylha, 2009). Overall life satisfaction was measured using an adapted version of Diener, Emmons, Larson, & Griffin’s (1985) Satisfaction with Life scale. This scale was comprised of six items, measured on 7-point Likert scales anchored at 1 (strongly disagree) to 7 (strongly agree). Sample items include “In most ways my life is close to ideal” and Functional limitations were assessed through the question “If I could live my life over, I would change almost nothing.” These items demonstrated acceptable internal consistency (α = .98), and were averaged to create a life satisfaction score (M = 4.14, SD = 1.49).
Functional limitation was assessed with the single item, “In the past six months, have you had any health conditions prevent or limit your ability to exercise?” Response options were yes or no. Current weight loss effort was evaluated through the question “Are you currently actively trying to lose weight?” also presented with yes/no response options. Finally, participants were asked if they currently participated in a structured weight loss program (e.g., Weight Watchers, workplace wellness program). The item was “Do you currently participate in a weight loss program?” and was answered with a yes/no response.

**Demographics.** Participants were asked to report their gender, age, race/ethnicity, household income, educational level, occupational status, and marital status. Full participant demographic characteristics are provided in Appendix D.

**Analysis Plan**

Following data collection, Study 2’s hypotheses and research questions were tested using a series of descriptive and inferential statistics, primarily multivariate and univariate analyses of variance. These results are provided in the next chapter.
Chapter 6: Results

This chapter presents the results of Study 2. First, the relevant characteristics of the sample are described. Second, the results of preliminary analyses necessary for subsequent tests are offered. Third, the analyses that test this study’s hypotheses and investigate its research questions are presented. Last, a summary of these findings is given.

Relevant Sample Characteristics

Weight Management Conversation Partner Relationship and Weight

Management Talk. Before evaluating their assigned manipulated message, participants were asked to report the person with whom they most often discussed weight management. Participants identified this person as belonging to one of five relationship categories (see Chapter five for complete item details). Weight management conversation partners were described as a spouse/significant other (N = 182, 44%), friend (N = 106, 26%), other family member (N = 93, 22%), coworker (N = 18, 4.3%), or “other” relationship type (N = 3.8%). In the “other family member” category, participants reported consulting with a child (N = 37), a sibling (N = 31), a parent (N = 18), or some “other” family relationship type (N = 6; e.g., aunt, niece, grandchild). Those who reported discussing weight management most frequently with someone in the general
“other” relationship type category reported talking primarily to their doctors (N = 12), with other responses (N = 4) including an ex-wife, therapist, trainer at a gym, and Weight Watchers staff member. Overall, participants perceived their relationships with their weight management conversation partners as high in quality. The mean relationship quality score was 6.44 (SD = 1.06), as measured on a 7-point scale, with higher scores indicating greater levels of perceived relationship quality. Thus, as a whole, participants were extremely satisfied with these weight management conversation relationships.

Next, participants were asked about the frequency of weight management talk with their weight management conversation partner, and about their general satisfaction with these conversations. Most participants talked fairly often to their weight loss conversation partner about weight management. Over 80% of participants noted talking about weight management with this person at least several times per month: 163 talked about this topic several times per week (39.3%), 177 talked several times per month (42.7%), 41 talked once per month (9.9%), 26 talked less than once a month (6.3%), and seven (1.7%) talked less than once a year. Overall, participants were satisfied with these weight management conversations. The majority of participants reported being somewhat satisfied, satisfied, or very satisfied with these conversations (N = 324, 78%). The remaining participants described themselves as neither satisfied nor dissatisfied (N = 68, 16.4%). A few participants reporting feeling very or somewhat dissatisfied with these weight management conversations (N = 24, 5.5%). Thus, participants tended to perceive their relationships with their weight management conversation partner as very high in
quality, to talk about weight management with this person relatively often, and to be generally satisfied with these discussions when they occur.

**Health and Weight Management Characteristics.** Participants were also asked to provide information about their overall health status and weight management practices. Health status information included self-rated health status, BMI, functional limitation, and subjective well-being. Weight management practices included nutrition quality, eating behavior, exercise behavior, current weight loss efforts, and current participation in a structured weight loss program. The complete health and weight management characteristics of participants may be found in Appendix I. A few notable characteristics of this sample will be highlighted here. First, the vast majority of participants were overweight or obese, as reflected by BMI scores ($M = 31.4, SD = 7.07$). As per Centers for Disease Control criteria (see Study 1 method for complete explanation of the BMI metric), four participants (1%) were classified as underweight, 56 were classified as normal weight (13.9%), 136 were classified as overweight (33.7%), and 208 were classified as obese (51.5%). This sample thus contains a higher proportion of overweight and obese persons than is found in the general U.S. populace (Ogden, Carroll, Kit, & Flegal, 2012). The unequal distribution of BMIs is expected, however, given that one of the eligibility criteria to participate in this study was the desire to lose weight.

Second, although all participants in this study currently reported a *desire* to lose weight in order to meet the eligibility criteria to participate in this study, this alone does not mean that participants are in fact taking steps to actualize this desire. Thus,
participants were queried about their current weight loss efforts. The majority of participants (N = 344, 71.7%) reported that they were currently actively attempting to lose weight. However, only a small subset of participants reported participating in a structured weight loss program (e.g., Weight Watcher, workplace wellness program) in order to do so (N = 33, 6.9%).

Third, participants were asked if they had any functional limitations or illnesses within the past six months that had precluded or limited exercise. Half of participants (N = 206, 50%) reported experiencing some sort of functional limitation that prevented or limited exercise in the last six months.

Thus, in terms of the health and weight management characteristics of the sample, participants tended to be overweight or obese, and to report actively trying to lose weight. To lose weight, most participants used a self-directed rather than structured approach. Further, half of participants experienced some sort of physical limitation or setback which deleteriously influenced exercise effort. Preliminary analyses related to scenario and message realism are presented next.

**Preliminary Analyses**

**Scenario and Message Realism.** Study 2 used role-play scenarios and messages to test the hypothesized message dimensions of interest, as consistent with the message perception approach (Burleson & MacGeorge, 2002). It was thus deemed important to assess whether participants considered the scenarios and the messages overall to be realistic, including whether low quality messages were considered to be realistic. An
ANOVA was conducted to determine whether the scenarios were realistic, with message quality and scenario type entered as between groups factors. There were no significant effects in the analysis, with the overall mean for realism at an acceptable level ($M = 5.77$, $SD = 1.13$).

Five ANOVAs were then conducted to determine whether each message type was realistic, with message quality and scenario type entered as between groups factors. There were no significant effects for message quality for misconceptions, self-worth affirmation, and call to action. In each case the overall means for realism were well above the scale midpoint: 5.98 (.97); 5.78 (1.17); 5.67 (1.28), for misconceptions, affirmation, and call to action, respectively. There was a significant effect on message realism for message quality for person centeredness, $F (1, 55) = 19.51, p = .000, \eta^2 = .21$, and for the combined messages, $F (1, 61) = 11.93, p = .001, \eta^2 = .16$. However, the overall means for person-centeredness and combined message realism were well above the scale midpoint, 5.78 (1.18; 5.31 (1.70), respectively; overall means for low quality messages were also above the scale midpoint, 4.94 (1.14), 4.68 (1.96), respectively. Taken together, these analyses suggest that both the scenarios and each of the message types were considered to be realistic by the participants. After establishing that manipulated scenarios and messages were perceived to be adequately realistic, the hypotheses and research questions central to this investigation were examined, and are presented next.
Tests of Hypotheses and Research Questions

This initial test of motivational support was primarily concerned with examining if the conceptualized message dimensions of person-centeredness, dissolving misconceptions, self-worth affirmation, and call to action were associated with positive message evaluation and motivational outcomes. Specifically, for each message dimension, hypotheses predicted that messages high in a given dimension would: embody greater levels of message quality (H1a, H2a, H3a, H4a), be perceived as more effective (H1b, H2b, H3b, H4b), be evaluated as more motivating (H1c, H2c, H3c, H4c), and be associated with greater levels of weight management behavioral intention (H1d, H2d, H3d, H4d) than messages low in a given dimension. Further, this study also examined combined messages that were either high on all message dimensions or low on all message dimensions. Combined messages high on all message dimensions were hypothesized to be evaluated as more effective, more motivating, and associated with greater weight management behavioral intention than messages low in all dimensions (H5a, H5b, H5c).

In addition, two research questions were proposed for the four individual message dimensions of interest, as well as for the combined message (RQs 1-10). RQs 1, 3, 5, 7, and 9 asked if differences in message quality for a given dimension were associated with changes in participants’ levels of autonomous motivation. RQs 2, 4, 6, and 10 asked if differences in message quality for a given dimension were associated with changes in participants’ levels of controlled motivation. The analyses conducted to examine these
hypotheses and research questions are presented in the following order: message quality embodiment, message effectiveness, general motivation, behavioral intention, combined message outcomes, and autonomous/controlled motivation.

**Manipulated Features of Message Dimensions**

The first set of hypotheses (H1a, H2a, H3a, H4a) concerned message quality, predicting that messages high in a given dimension should be evaluated as embodying a greater degree of the appropriate message quality than messages low in a given dimension. Thus, a first group of analyses tested if high and low versions of each message type (i.e., person-centeredness, dissolving misconceptions, self-worth affirmation, call to action) significantly differed on the message features conceptualized to be embedded in each message type. A MANOVA was initially conducted on message features, with message quality (low vs high) and weight management focus (diet vs exercise) entered as between group factors, and age and sex entered as covariates in the analysis. The MANOVA produced no significant effects for the covariates or for scenario type, but two other effects: message form, Wilks lambda = .979, $F(4, 399) = 2.10, p = .080, \eta^2 = .02$; and scenario x quality, Wilks lambda = .926, $F(4, 399) = 7.93, p = .001, \eta^2 = .07$. There were two way interactions between message quality and scenario type on person-centeredness and self-worth affirmation.

These findings were further examined in a series of univariate analyses that are presented in Table 7. In each analysis, scenario and message quality were entered as between groups factors, and age and sex entered as covariates. The analysis on person-
centered manipulation produced a significant main effect for message quality (see Table 7), and also a main effect for scenario type, $F(1, 62) = 9.28, p = .003, \eta^2 = .13$, with higher ratings in the diet scenario, and an interaction effect for scenario type x message quality, $F(1, 62) = 13.22, p = .001, \eta^2 = .18$. The interaction effect reflected a significantly greater difference in high person-centered ratings for the diet scenario, compared to the exercise scenario ($Ms = 9.33 (3.59)$ vs. average $M = 5.33 (3.47)$). The analysis on removing misconceptions produced a main effect for manipulated message quality, $F(1, 75) = 7.51, p = .008, \eta^2 = .10$, and no other significant effects. The analysis on efficacy affirmation produced a main effect for message quality (see Table 7), and also an interaction effect for message quality and scenario, $F(1, 78) = 8.50, p = .005, \eta^2 = .10$. The interaction reflected a greater difference in message manipulation ratings in both low and high quality messages in the diet scenario than for the exercise scenario. Finally, the analysis on call to action produced no significant effects (see Table 7).

In sum, messages high in person-centeredness, dissolving misconceptions, and self-worth affirmation were perceived as embodying greater degrees of message quality than messages low in these dimensions, providing support for hypotheses H1a, H2a, and H3a. However, there were no significant differences in embodied message quality between low and high message versions for the call to action dimension. Hypothesis 4a was not supported.
Table 7. Main Effects of Supportive Message Type and Message Quality on Manipulated Message Dimensions

<table>
<thead>
<tr>
<th>Message Type</th>
<th>Low M (SD)</th>
<th>High M (SD)</th>
<th>F</th>
<th>df</th>
<th>p</th>
<th>Par. η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person-Centeredness</td>
<td>3.31 (1.52)</td>
<td>7.86 (3.47)</td>
<td>48.23</td>
<td>1,62</td>
<td>.000</td>
<td>.44</td>
</tr>
<tr>
<td>Misconceptions</td>
<td>4.86 (1.16)</td>
<td>5.62 (1.12)</td>
<td>8.51</td>
<td>1,75</td>
<td>.005</td>
<td>.10</td>
</tr>
<tr>
<td>Worth-Affirm</td>
<td>4.86 (1.55)</td>
<td>5.43 (1.29)</td>
<td>6.08</td>
<td>1,75</td>
<td>.016</td>
<td>.08</td>
</tr>
<tr>
<td>Call to action</td>
<td>5.03 (1.35)</td>
<td>5.02 (1.22)</td>
<td>.001</td>
<td>1,72</td>
<td>.986</td>
<td>-</td>
</tr>
</tbody>
</table>

**Perceived Message Effectiveness**

The second group of hypotheses (H1b, H2b, H3b, H4b) predicted that messages high in a given dimension would be evaluated as more effective than messages low in a given dimension. A MANOVA was initially conducted to determine the overall effect of message quality on the four message types. In this analysis message quality and scenario were between group factors and gender and sex entered as covariates. The only multivariate analysis effect that was statistically significant was for message quality, Wilks lambda = .96, $F(4, 403) = 4.48$, $p = .001$, $η^2 = .04$. From this analysis, univariate analyses of variance were further examined for each message type. The univariate analysis of variance on person-centeredness produced a large main effect for message effectiveness (see Table 8). Age and sex were not significant covariates, and scenario type did not produce a main effect for message effectiveness. The univariate ANOVA on removing misconceptions produced a main effect for message quality, $F(1, 76) = 78.0$, $p$
= .000, $\eta^2 = .51$. The analysis also produced a main effect for scenario type, $F(1, 76) = 17.87, p = .000, \eta^2 = .19$, and an interaction effect with message quality, $F(1, 76) = 12.49, p = .001, \eta^2 = .14$. Low quality dissolving misconceptions messages were seen as less effective in the exercise scenario than in the eating scenario.

The univariate analysis of variance on self-worth affirmation produced a main effect for message quality (see Table 8). The analysis also produced an interaction effect with message quality, $F(1, 79) = 24.78, p = .000, \eta^2 = .24$. Sex and age were not significant covariates in the analysis. Finally, the univariate analysis on call to action produced no significant main effect for message quality (see Table 8), although it was trending toward significance, $F(1, 80) = 2.73, p = .102, \eta^2 = .03$. There were no other significant effects.

In sum, these analyses suggest that messages high in a given dimension were generally evaluated as more effective than messages low in a given dimension for three of the four proposed message dimensions. Specifically, messages high in person-centeredness were evaluated as more effective than messages low in person-centeredness, for both eating and exercise scenarios, supporting H1b. Messages quality for the dissolving misconceptions dimension was also associated with perceived message effectiveness, providing support for H2b. Message quality for self-worth affirmation was associated with perceived message effectiveness, with high quality messages producing higher evaluations of perceived effectiveness. Further, high self-worth affirmation messages were rated as more effective in the eating than in the exercise scenario. H3b
was supported. Last, while message quality for the call to action dimension was not associated with statistically-significant differences in perceptions of message effectiveness across the entire sample, message means were trending in the predicted direction. Therefore, H4b received limited support.

Table 8. Main Effects of Supportive Message Type and Message Quality on Perceived Message Effectiveness

<table>
<thead>
<tr>
<th>Message Type</th>
<th>Low M (SD)</th>
<th>High M (SD)</th>
<th>F</th>
<th>df</th>
<th>p</th>
<th>Par. $\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person-Centeredness</td>
<td>3.35 (1.68)</td>
<td>5.91 (.99)</td>
<td>69.85</td>
<td>1,73</td>
<td>.000</td>
<td>.49</td>
</tr>
<tr>
<td>Misconceptions*</td>
<td>3.16 (1.84)</td>
<td>5.84 (1.34)</td>
<td>78.00</td>
<td>1,76</td>
<td>.000</td>
<td>.51</td>
</tr>
<tr>
<td>Worth-Affirm*</td>
<td>4.88 (1.78)</td>
<td>6.57 (2.05)</td>
<td>24.78</td>
<td>1,78</td>
<td>.000</td>
<td>.17</td>
</tr>
<tr>
<td>Call to action</td>
<td>5.28 (1.38)</td>
<td>5.71 (1.07)</td>
<td>2.73</td>
<td>1,80</td>
<td>.102</td>
<td>-</td>
</tr>
</tbody>
</table>

*Interaction effect with scenario type.

Motivational Outcomes

In addition to examining the effects of each dimension’s message quality (high vs. low) on embodied message quality and message effectiveness, Study 2 also investigated how each message dimension impacted a set of motivation-related outcomes; namely, general motivation, behavioral intention, and autonomous/controlled motivation.

General motivation. The third set of hypotheses (H1c, H2c, H3c, H4c) predicted that messages high in a given dimension would be associated with greater motivation to
eat healthfully or exercise regularly (depending on assigned scenario) than messages low in a given dimension. An initial MANOVA was conducted to determine overall effects of message motivation. Message quality and scenario type were entered as between groups factors, and gender, sex, BMI, and functional limitation were entered as covariates. An initial MANOVA detected a significant main effect for message quality, Wilks Lambda = .95, $F(4, 399) = 5.42, p = .000, \eta^2 = .05$, and a significant interaction between the scenario type and message quality, Wilks lambda = .97, $F(4,399) = 3.53, p = .008, \eta^2 = .03$. Follow up univariate ANOVAs were used to probe these main and interaction effects, with main effects for the message types in Table 9.

The analysis on person-centeredness produced a main effect for message quality (see Table 9), and a significant interaction effect between message quality and scenario, $F(1, 69) = 10.61, p = .002, \eta^2 = .13$. Differences in the motivation of person-centered messages were strongest in the eating scenario ($Ms = 2.85 (.351) \text{ vs } 6.13 (.336)$) for low and high person-centered messages, respectively.

The ANOVA on removing misconceptions produced a main effect for the covariate BMI, $F(1, 63) = 5.71, p = .02$ and a main effect for scenario type, $F(1,63) = 8.38, p = .005$. Both low and high quality messages were rated as more motivating in the diet scenario than they were in the exercise scenario. The ANOVA on self-worth affirmations produced only an interaction effect for message quality and scenario type, $F(1, 65) = 2.71, p = .015, \eta^2 = .09$. Differences in the motivation of self-worth affirmations were due to slightly higher evaluations of the low refutation messages in the exercise
scenario ($M = 5.32 (1.31)$ for low-quality messages vs $5.15 (1.05)$ for high-quality messages). In the eating scenario, high quality messages were seen as more motivating than low quality messages ($M = 4.06 (1.76)$ vs $5.64 (1.44)$ for low and high-quality messages, respectively). Finally, the ANOVA on call to action produced no significant effects.

In sum, messages high in person-centeredness produced a main effect for motivation, supporting H1c. However, message quality did not significantly influence motivation for the dissolving misconceptions dimension, providing no support for H2c. For the self-worth affirmation category, an interaction effect was found such that low-quality messages were evaluated as slightly more motivating in the exercise scenario, while high-quality messages were evaluated as more motivating in the eating scenario. Thus, limited support was provided for H3c. Last, message quality for call to action was not associated with differences in motivation, disconfirming H4c.
The fourth set of hypotheses (H1d, H2d, H3d, H4d) predicted that messages high in a given dimension would be associated with greater levels of behavioral intention to engage in either eating or exercise behavior (as appropriate for condition) than messages low in a given dimension. An initial MANOVA detected a significant main effect for scenario, Wilks lambda = .96, F (3,399) = 4.08, p = .003, $\eta^2 = .04$, and a significant interaction between the scenario type and message quality, Wilks lambda = .96, F (3,399) = 4.63, p = .001, $\eta^2 = .05$. Follow up univariate analyses showed that for person-centeredness there were no significant effects except for a main effect for scenario type, $F (1, 50) = 7.65, p = .008, \eta^2 = .13$. The ANOVA on removing misconceptions produced

*Interaction effect with scenario type

### Behavioral Intentions

Table 9. Main Effects of Supportive Message Type and Message Quality on General Motivation

<table>
<thead>
<tr>
<th>Message Type</th>
<th>Low M (SD)</th>
<th>High M (SD)</th>
<th>F</th>
<th>df</th>
<th>p</th>
<th>Par. $\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person-Centeredness</td>
<td>3.19 (1.54)</td>
<td>5.37 (1.49)</td>
<td>42.34</td>
<td>1,69</td>
<td>.000</td>
<td>.38</td>
</tr>
<tr>
<td>Misconceptions</td>
<td>5.05 (1.36)</td>
<td>5.04 (1.61)</td>
<td>.528</td>
<td>1,63</td>
<td>.470</td>
<td>-</td>
</tr>
<tr>
<td>Worth-Affirm*</td>
<td>4.79 (1.67)</td>
<td>5.44 (1.31)</td>
<td>2.71</td>
<td>1,65</td>
<td>.105</td>
<td>-</td>
</tr>
<tr>
<td>Call to action</td>
<td>4.72 (1.60)</td>
<td>4.69 (1.30)</td>
<td>.016</td>
<td>1,65</td>
<td>.947</td>
<td>-</td>
</tr>
</tbody>
</table>
a main effect for the covariate BMI, $F(1, 73) = 4.52, p = .04$ and a main effect for scenario type, $F(1, 73) = 6.09, p = .02$. Both low and high quality messages were rated as inspiring greater behavioral intention in the diet scenario than in the exercise scenario.

The ANOVA on self-worth affirmation produced a main effect for message quality at the $<.10$ level (see Table 10). The self-worth affirmation ANOVA also revealed an interaction effect between message quality and scenario type, $F(1, 79) = 5.97, p = .017, \eta^2 = .07$. Post hoc analyses showed that the interaction effect resulted in no significant difference in the exercise scenario on behavioral intentions for message quality, but significant differences for the diet scenario, with higher quality messages influencing greater behavioral intention. The final analysis on call to action message features produced a main effect for message quality at the $p < .10$ level, $F(1, 65) = 3.0, p = .088, \eta^2 = .04$, and a main effect for scenario type, $F(1, 65) = 6.34, p = .011, \eta^2 = .014$. Call to action messages produced higher behavioral intentions overall in the eating scenario.

To summarize the results on behavioral intention, person-centered message quality did not significantly impact behavioral intentions, although the means in both the eating and exercise scenarios were in the predicted directions (H1d not supported).

Ratings of behavioral intention also did not significantly differ with variations in dissolving misconceptions message quality (H2d not supported). However, for the self-worth affirmation dimension, message quality did interact with scenario type to influence behavioral intention. Although behavioral intention slightly increased with low-quality self-affirmation messages in the exercise scenario, a significant association between high-
quality self-affirmation and increased levels of behavioral intention was seen in the eating scenario. Thus, partial support was provided for H3d. Last, message quality for call to action was associated with variations in level of behavioral intention, with means in the predicted directions. Thus, H4d was supported.

Table 10. Main Effects of Supportive Message Type and Message Quality on Behavioral Intentions

<table>
<thead>
<tr>
<th>Message Type</th>
<th>Low M (SD)</th>
<th>High M (SD)</th>
<th>F</th>
<th>df</th>
<th>p</th>
<th>Par. η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person-Centeredness</td>
<td>4.47 (1.59)</td>
<td>4.45 (1.48)</td>
<td>2.02</td>
<td>1.73</td>
<td>.161</td>
<td>-</td>
</tr>
<tr>
<td>Misconceptions</td>
<td>5.05 (1.78)</td>
<td>5.38 (1.43)</td>
<td>15.96</td>
<td>1.79</td>
<td>.220</td>
<td>-</td>
</tr>
<tr>
<td>Worth-Affirm*</td>
<td>5.15 (1.19)</td>
<td>5.56 (1.36)</td>
<td>5.56</td>
<td>1.77</td>
<td>.058</td>
<td>.05</td>
</tr>
<tr>
<td>Call to action</td>
<td>5.28 (1.38)</td>
<td>5.71 (1.07)</td>
<td>3.0</td>
<td>1.65</td>
<td>.088</td>
<td>.04</td>
</tr>
</tbody>
</table>

*Interaction effect with scenario type.

Combination Motivational Support Messages

Hypothesis 5a, 5b, and 5c predicted that combined messages high in all message dimensions would be associated with greater perceptions of message effectiveness, general motivation, and behavioral intention than messages low in all message dimensions. These hypotheses were tested with univariate ANOVAs for two message
outcomes, perceived message effectiveness and behavioral intentions, which are presented in Table 11. Analyses assumed the same form as previous analyses, with 2 between groups factors (scenario & message quality) and 2 covariates (age and sex). The only significant effect on perceived message effectiveness was for message quality, with higher quality messages perceived as more effective as lower quality messages (see Table 11). Similarly, the ANOVA for the combination support messages on general motivation produced a significant main effect for message quality and no other significant main or interaction effects (see Table 11).

A third ANOVA produced a main effect for behavioral intentions (see Table 11), and no other significant effects, with high combined support messages producing higher behavioral intentions than low combined support messages. Thus, H5 was supported in its entirety, with messages high on all dimensions associated with greater perceptions of message effectiveness, behavioral intention, and general motivation.

Table 11. Main Effects of Combination Motivational Support Messages on Message Outcomes

<table>
<thead>
<tr>
<th>Message</th>
<th>Low M (SD)</th>
<th>High M (SD)</th>
<th>F</th>
<th>df</th>
<th>p</th>
<th>Par. η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message Effectiveness</td>
<td>4.34 (2.04)</td>
<td>5.87 (1.09)</td>
<td>17.17</td>
<td>1,74</td>
<td>.000</td>
<td>.19</td>
</tr>
<tr>
<td>Behavioral Intention</td>
<td>4.49 (1.86)</td>
<td>5.58 (.999)</td>
<td>10.71</td>
<td>1,65</td>
<td>.000</td>
<td>.14</td>
</tr>
<tr>
<td>General Motivation</td>
<td>4.00 (2.22)</td>
<td>5.27 (1.39)</td>
<td>9.25</td>
<td>1,74</td>
<td>.003</td>
<td>.11</td>
</tr>
</tbody>
</table>
Autonomous/Controlled Motivation Type Research Questions

Last, in addition to establishing if variations in a given dimension’s quality were associated with greater or lesser degrees of weight management general motivation and behavioral intention, this investigation also examined the type of motivation engendered (i.e., autonomous vs. controlled). Research questions 1, 3, 5, 7, and 9 asked if messages high in a given dimension were associated with increases in autonomous motivation, and research questions 2, 4, 6, 8, and 10 asked if messages low in a given dimension were associated with increases in controlled motivation. Motivation type was assessed using a pre-and post-manipulation design. For time one autonomous motivation measurement, participants initially reported fairly high pre-existing levels of autonomous motivation ($M = 4.83$, $SD = 1.42$). This mean score was well over the 7-point scale midpoint, and thus left little room for much additional variance as a result of message manipulations. In addition, for time one controlled motivation measurement, participants reported low initial levels of controlled motivation ($M = 2.88$, $SD = 1.1$). For each message dimension, two repeated measure ANOVAs were conducted to ascertain if there were overall differences between time one and time two measurement for autonomous and controlled motivation, respectively. In these analyses, scenario type and message quality were entered as between groups factors, age, sex, BMI, and exercise limitations as covariates, and time was the within-subjects factor (pre or post). Results for each message dimension are presented in turn.
Person-centeredness. The ANOVA on autonomous motivation did not produce a main effect for autonomous motivation change between time one and time two. However, it did produce a significant interaction effect between message quality and autonomous motivation, $F(1, 69) = 8.97, p = .004, \eta^2 = .12$. Those receiving high-quality person-centered messages reported an increase in autonomous motivation at time two, while those receiving low-quality person-centered messages reported a decrease in autonomous motivation at time two. There was also a significant three-way interaction among message quality, scenario type, and autonomous regulation, $F(1, 69) = 4.49, p = .04, \eta^2 = .06$. Examination of the condition means revealed that both high and low quality person-centered messages were evaluated as engendering higher levels of autonomous motivation in the eating scenario than both high and low quality person-centered messages in the exercise scenario.

The ANOVA on controlled motivation produced only a significant interaction effect between message quality and controlled motivation, $F(1, 69) = 17.9, p = .000, \eta^2 = .21$. Participants who received lower quality versions of the messages reported significantly higher levels of controlled motivation at time two than participants who received high quality messages. Participants who received high quality messages reported slightly lower levels of controlled motivation at time two than time one.

Dissolving misconceptions. The ANOVA on autonomous motivation revealed a main effect for autonomous motivation change between time one and time two, $F(1, 73) = 6.79, p = .012, \eta^2 = .084$. Levels of autonomous motivation increased between time one
and time two measurement. The only other significant effect was a two-way interaction between autonomous motivation and the covariate age, $F(1, 73) = 6.10, p = .016, \eta^2 = .078$. The ANOVA on controlled motivation only produced a significant interaction effect between controlled motivation change and scenario type, $F(1, 71) = 5.31, p = .024, \eta^2 = .07$. An examination of means revealed that controlled motivation increased between time one and time two for the eating scenario, but decreased between time one and two for the exercise scenario.

*Self-worth affirmation.* The ANOVA on autonomous motivation produced no significant main or interaction effects. The ANOVA on controlled motivation also produced no significant findings.

*Call to action.* The ANOVA on autonomous motivation produced only an interaction effect for the covariate BMI, $F(1, 76) = 4.75, p = .032, \eta^2 = .06$. The ANOVA on controlled motivation produced no significant effects.

*Combined messages.* Finally, the ANOVAs conducted on autonomous and controlled motivation, respectively, produced no significant findings.

In sum, this set of analyses investigated RQs 1-10, which asked if message quality was associated with changes in post-manipulation levels of autonomous and controlled motivation. These analyses revealed that the only interaction between message quality and motivation type change occurred in the person-centeredness message dimension. High quality person-centered messages were associated with a positive change in autonomous motivation between time one and time two while low quality messages were
associated with decreases in this motivation type. Similarly, low quality person-centered messages increased levels of controlled motivation at time two, while high quality messages decreased levels of controlled motivation. There was little change between pre- and post-manipulation measures for both autonomous and controlled motivation in general, with the exception of the dissolving misconceptions autonomous motivation type. However, examining the means for the motivation type time one and time two measurements shows that, for the most part, high quality messages were associated with higher time two autonomous motivation and lower time two controlled motivation than low quality messages (See Tables 12 and 13 for time one/time two motivation type means). One interesting pattern that emerged was the tendency for both high and low quality messages (excepting the person-centered message dimension) to increase controlled motivation at time two, albeit slightly.
Table 12. Means and Standard Deviations for Autonomous Motivation Pre- and Post-Manipulation

<table>
<thead>
<tr>
<th></th>
<th>Eating Scenario</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td>LPC</td>
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<td>LSA</td>
<td>HCA</td>
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</tr>
<tr>
<td>Time 1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td></td>
<td>5.11</td>
<td>5.47</td>
<td>5.31</td>
<td>5.43</td>
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<td>4.66</td>
<td>4.93</td>
<td>5.28</td>
</tr>
<tr>
<td>SD</td>
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<td>1.62</td>
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*Note. HPC/LPC = high/low person-centered, HDM/LDM = high/low dissolving misconceptions, HSA/LSA = high/low self-worth affirmation, HCA/LCA = high/low call to action, Hcom/Lcom = high/low combined messages.*
Table 13. Means and Standard Deviations for Controlled Motivation Pre-and Post-Manipulation

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*Note. HPC/LPC = high/low person-centered, HDM/LDM = high/low dissolving misconceptions, HSA/LSA = high/low self-worth affirmation, HCA/LCA = high/low call to action, Hcom/Lcom = high/low combined messages.
Study 2 Summary

In total, this study provided an initial test of the proposed dimensions of motivational support in the weight management context for middle-aged and older adults. The results related to each dimension’s hypotheses and research questions will be reviewed in turn.

**Person-centeredness.** Messages high in person-centeredness were predicted to be evaluated as higher in levels of person-centered message quality (H1a), message effectiveness (H1b), general motivation (H1c), and behavioral intention (H1d) than messages low in person-centeredness. Messages high in person-centeredness were indeed evaluated as embodying a greater degree of message quality than messages low in person-centeredness, supporting H1a. Message high in person-centeredness were also viewed as more effective than low quality person-centered messages, supporting H1b. In terms of motivational outcomes, highly person-centered messages were more motivating than messages low in person-centeredness, providing support for H1c. However, person-centered message quality was not associated with behavioral intention to engage in either eating or exercise behavior, disconfirming H1d.

Further, RQ1 and RQ2 asked if person-centered message quality was associated with changes in levels of autonomous and controlled motivation. Indeed, person-centered message quality was shown to interact with both time two autonomous and controlled motivation types, such that higher quality messages were associated with higher autonomous and lower controlled motivation scores.
**Dissolving misconceptions.** Messages high in dissolving misconceptions were predicted to be evaluated as higher in levels of dissolving misconception message quality (H2a), message effectiveness (H2b), general motivation (H2c), and behavioral intention (H2d) than messages low in situational counterarguments. Messages high in dissolving misconceptions were rated as embodying a greater degree of message quality that messages low in the dimension (H2a supported). Further, high quality dissolving misconceptions messages were seen as more effective than low quality messages (H2b not supported). However, message quality was not associated with general motivation (H2c not supported) nor weight management behavioral intention (H2d not supported).

In terms of RQ3 and RQ4, situational counterargument message quality was not associated with time two measures of autonomous or controlled motivation.

**Self-worth affirmation.** As with the previously-described message dimensions, self-worth affirmation messages predicted that messages high in this dimension would be associated with greater levels of message quality (H3a), message effectiveness (H3b), general motivation (H3c), and behavioral intention (H3d). High self-worth affirmation messages were viewed as embodying greater levels of message quality, supporting H3a. High quality messages were also seen as more effective than low quality messages, particularly in the eating scenario (H3b supported). In terms of general motivation, an interaction effect surfaced such that low quality self-affirmation messages were viewed as more motivating in the exercise scenario, while high quality messages were perceived to be more motivating in the eating scenario (H3c partially supported). The same pattern
of findings emerged for the behavioral intention outcome, with low quality messages evaluated as more effective in the exercise scenario and high-quality messages rated as more effective in the eating scenario (H3c partially supported). Last, when investigating RQ5 and RQ6, message quality was not associated with any change in post-manipulation levels of autonomous or controlled motivation.

*Call to action.* Messages high in the call to action dimension were hypothesized to be perceived as higher in level of embodied message quality (H4a), message effectiveness (H4b), general motivation (H4c), and behavioral intention (H4d). Unlike the other three message dimensions, high call to action messages were not perceived as embodying greater levels of message quality than low call to action messages (H4a not supported). In terms of message effectiveness, high quality call to action messages were not significantly associated with perceptions of increased message effectiveness, although means trended in the predicted direction (H4b partially supported). Although message quality was not associated with variation in general motivation (H4c not supported), call to action message quality was associated with weight management behavioral intention in the predicted direction (H4d supported). In the investigations of RQ7 and RQ8, message quality did not interact with changes in levels of autonomous or controlled motivation.

*Combined messages.* Finally, a last set of hypotheses and research questions concerned the functioning of high or low combined messages on message effectiveness, general motivation, and behavioral intention. As predicted, high combined messages were associated with greater evaluations of message effectiveness, general motivation,
and behavioral intention than messages low in all dimensions. Thus H5a-c were supported. However, combined message quality did not contribute to changes in either autonomous or controlled motivation levels (RQ9 & RQ10). The implications of these results will be expounded in the final discussion chapter.
Chapter 7: Discussion

This dissertation investigated how supportive weight management messages may be optimally crafted in order to motivate middle-aged and older adults to persist in weight management efforts. Although healthy weight management is important later in the lifespan, it is challenging for many persons, contributing to motivational dilemmas in this area. Motivational supportive communication was conceptualized as a unique functional communicative activity intended to bolster middle-aged and older adults’ high-quality energizing drive in this behavioral domain. This study sought to advance theory in the realm of supportive communication research by: 1) offering insight into the “topic, audience, and occasion” relevant to the construction of appropriate and effective motivational support messages (Study 1), and 2) identifying motivational support message dimensions generally associated with more and less effective outcomes (Studies 1 and 2; Burleson, 2010). In this chapter, key findings from Study 1 and Study 2 are reviewed and discussed in terms of their theoretical and practical implications. Limitations of this investigation as well as future research directions are also offered.
**Topic, audience, and occasion**

Drawing from literature on supportive communication, SDT, RAT, and lifespan developmental perspectives, Study 1 investigated the nature of the weight loss experience for middle-aged and older adults, as well as the role of supportive motivational communication within this experience. Findings suggested that, for many participants, the weight management context was perceived as a *life-long struggle* and *roller coaster*. Further, although the middle-aged and older adults in this sample were motivated to manage their weight, this motivation varied in quality and was subject to akrasia. Further, related to the RAT construct of PBC, middle-aged and older adults reported common patterns of external and internal constraints to weight management. Although some participants noted that they should not “need” motivational support from others in order to persist in weight management, they also reported that several kinds of interpersonal messages were motivating: praise/compliments, tangible-aid/accountability, expression of empathy and understanding, value-based affirmation, motivation by example, and jokes/teasing. These findings suggested that one useful site for communicative activity in for weight management motivational support is trying to help the support target become “unstuck.” Study 1 findings were used in tandem with extant literature to propose the message dimensions of person-centeredness, dissolving misconceptions, self-worth affirmation, call to action, and a combined set of dimensions, as useful in a normative model of motivational support. This model was tested in Study 2, and implications of this study in terms of message effectiveness and motivation are discussed next.
Study 2

Message effectiveness. One important task in motivational supportive communication research is distinguishing what makes certain kinds of messages more or less effective within a given domain (e.g., comforting, esteeming; Burleson, 2010, Burleson & MacGeorge, 2002). As discussed in Chapter four, message effectiveness has been conceptualized in supportive communication research as the degree to which support messages are evaluated as successfully and simultaneously performing several functions (Goldsmith et al., 2000). For example, an effective motivational support message should be rated as sensitive (an emotional dimension of support), supportive (a relationship dimension of support), and helpful (an instrumental dimension of support; Goldsmith et al., 2000). Perceptions of message effectiveness have been shown to mediate the relationship between message quality and more distal outcomes in some sub-areas of supportive communication (e.g., Bodie et al., 2012). A review of the proposed message dimensions’ performance in terms of message effectiveness generally supports that high levels of these dimensions are evaluated as better at managing the complexities of weight management conversations than low versions of these dimensions. Indeed, messages high in person-centeredness, dissolving misconceptions, self-worth affirmation, call to action, and the combined dimension were viewed as more effective than low versions of these messages. This finding is theoretically interesting because it reaffirms the normative nature of support (Burleson & MacGeorge, 2002). Although each message
dimension targets akrasia in a different way, this finding suggests that there are relatively better and worse ways to perform each task.

**Weight management motivation.** In addition to examining participants’ evaluations of message effectiveness, Study 2 also investigated which message dimensions were associated with general motivational outcomes, greater eating or exercise behavioral intentions, and change in autonomous and controlled motivation.

*General motivation.* Messages high in person-centeredness were viewed as more motivating than messages low in person-centeredness. As discussed in Chapter four, one operative mechanism linking high person-centered messages and positive outcomes is the facilitation of cognitive reappraisals (Burleson & Goldsmith, 1998; Holmstrom & Burleson, 2011). Thus, weight management messages high in person-centeredness may increase energizing drive in participants by allowing them to see their current weight management situation not as a rut but instead as an opportunity for continued growth.

Further, the cooperative communication practices used in the production of person-centered messages (e.g., empathy, perspective taking) display caring and concern, and have been linked with support recipients’ feelings of liking and acceptance for the message provider (e.g., Samter, Burleson, & Murphy, 1987). This aspect of person-centeredness is conceptually similar to the work of Dailey and her colleagues (Dailey et al., 2010a, Dailey et al., 2010b, Dailey et al., 2011). Dailey’s body of work reported that messages high in levels of acceptance (conceptualized as the level to which a message was warm and attentive) were associated with greater levels of weight management
motivation than messages low in acceptance. Thus, demonstrating care and concern for the person attempting weight management through listening to and elaborating their weight management situation appears important in motivational support attempts.

Although messages high is dissolving misconceptions were viewed as significantly more effective than messages low in dissolving misconceptions, message quality was not associated with differences in general motivation. Instead, both high and low quality messages produced relatively high levels of general motivation. One potential explanation for this finding may be due in part to a failure to select obstacles and solutions relevant to Study 2 participants, although Study 1 findings were used to inform the obstacles identified and described in the misconceptions messages (e.g., lack of time to eat healthfully, challenges of getting started with exercise). For example, as presented in Appendix I, 50% of Study 2 participants reported having a functional limitation that limited or prohibited exercise within the past six months. Thus, a message discussing ways to get started with exercise (one of the manipulated messages) assumed participants could exercise, and thus may have been seen as less motivating than a message discussing ways to overcome functional limitations in pursuing a healthy lifestyle.

In addition, the low quality dissolving misconceptions messages acknowledged the relevant weight management barrier without providing efficacious solutions. This low quality message may have been seen as motivating because of its challenge to do what is necessary in the weight management domain to improve one’s health without thought to impediments. If accurate, this explanation echoes participants in Study 1 who noted they
should not succumb to excuses created by weight management obstacles and should just take the bull by the horns in the weight management domain in order to succeed. This explanation also aligns with Dailey et al.’s (2010a, 2010b, 2011b) work, which demonstrated that messages high in challenge (conceptualized as the extent to which a message engaged and pushed the message recipient toward adopting weight management behaviors) were generally perceived as more motivating than messages lower in challenge. Although further investigation is needed to refine understanding of the relationship between weight management obstacles and motivation, SDT would suggest that persons attempting weight management do indeed thrive when their efforts are contextualized within an autonomy-supportive environment, rather than when they try to soldier on alone because of a sense of obligation (Deci & Ryan, 2002).

For self-affirmation messages, high-quality versions of this dimension were evaluated as more effective overall, but low quality versions of this message were deemed as slightly more motivating in the exercise scenario. As predicted, high quality versions were deemed more motivating in the eating scenario. This finding suggests that motivational support may function differently in specific weight management domains (i.e., eating, exercise). Although high-quality versions of call to action messages were deemed more effective than low quality messages in the exercise scenario, call to action message quality did not influence eating or exercise motivation. Indeed, messages low in call to action were perceived as slightly more motivating than messages high in call to action. One potential explanation for this finding is that the low quality call to action
messages mentioned that it was important to lose weight because obesity may cause cancer, among other health concerns. As proposed in theories like the extended parallel process model (EPPM; Witte, 1994), this message may have been viewed as motivating because of its perception as a kind of fear appeal. However, the EPPM framework echoes the predictions of SDT by arguing that these kinds of appeals are unlikely to produce long-term behavior change because they do not provide specific recommendations to enable a person to be self-efficacious. Last, high versions of combined messages were associated with greater levels of general motivation than low versions of combined messages.

Behavioral intention. Study 2 also examined if messages high in the proposed message dimensions were associated with greater behavioral intentions to engage in either eating or exercise behavior. Here, person-centeredness message quality was not associated with level of behavioral intention. Thus, although a support recipient may view a highly person-centered message as effective and motivating, these kinds of messages may not greatly influence an initial decision to act. While this finding is somewhat counterintuitive, it is possible that participants have already formed a weight management behavioral intention, and person-centered messages are seen as important in facilitating that ongoing behavior. For the dissolving misconceptions category, message quality was also not associated with behavioral intention, although messages both high and low in this dimension produced behavioral intention means well over the scale midpoint. In the self-affirmation message dimension, the same pattern of findings
emerged as for the general motivation category, with low quality self-affirmation messages producing greater behavioral intention in the exercise scenario, while high quality messages produced greater behavioral intention in the eating scenario. For the call to action message dimension, message quality was associated with behavioral intention, with high quality messages engendering greater intentions to act. Because messages manipulated to be high on these features involved accountability from another person, these messages may be especially important in actually bridging the gap from intention to action. Last, high combined messages were associated with higher levels of behavioral intention, again supporting the contention that effective motivational support may indeed be a composite of the message dimensions proposed in this investigation.

Autonomous and controlled motivation. To the researcher’s knowledge, this is the first communication study that has examined change in motivation type a message response outcome variable. The desire to examine these changes was rooted in SDT’s contention that more autonomous forms of motivation are important in promoting sustained and enjoyable behavior change (Teixeira et al., 2012). Participants as a whole reported high initial levels of autonomous motivation and low initial levels of controlled motivation.

Overall, despite the previously-discussed findings that certain high quality message dimensions were more motivating or engendered increased behavioral intentions, little overall change occurred between time one and time two measurement for autonomous and controlled motivation. Only person-centered message dimension quality
interacted with both autonomous and controlled motivation, with high quality messages increasing autonomous motivation levels and decreasing controlled motivation.

Theoretically, this finding makes sense. As elaborated in Chapter four, person-centered message production involves cooperative communication processes like empathy and perspective taking. These processes may be seen as crucially important in satisfying SDT's basic posited needs of autonomy and relatedness within social interactions. When a person’s perspective is acknowledged and legitimated, this should engender greater autonomous motivation and lesser controlled motivation (Deci et al., 1994). Although no other significant changes occurred, it is interesting that, except for person-centeredness, both high and low quality messages generally produced higher levels of controlled motivation at time two measurement. This may indicate that most weight management messages produce some perception in participants that they are being influenced or directed. Further, although combined message quality was related to message effectiveness, general motivation, and behavioral intention, it did not engender changes in autonomous and controlled motivation.

Failure for other differences to emerge between time one and time two may be partially attributable to the fact that this was the first time these concepts were measured in this kind of message perception paradigm study, and refinements may need to be made to these techniques in future investigations. For example, participants completed both the pre-manipulation and post-manipulation assessments within one 20 minute questionnaire. Thus, the pre-manipulation measurement may have primed participants to complete the
post-manipulation measure in a similar manner. It is also possible that other measures designed to assess levels of autonomous and controlled motivation should be developed for communication research. In this case, the one-off manipulated message may have been seen by participants as insufficient to change their overall motivational style. Further, this group of participants already had relatively high levels of autonomous motivation and low levels of controlled motivation, suppressing variation. The fact that person-centered message quality produced a significant effect for autonomous and controlled motivation given these considerations speaks to its potential power in motivational support messages.

**Study 2 additional considerations.** In reasoning about the implications of Study 2, it is possible that the relationship between Study 2 participants and their weight management conversation partner influenced findings. First, as described in this Chapter six, participants tended to perceive these relationships as very high in quality, to have known their weight management conversation partner for quite some time, and to generally be satisfied with the kind of weight management conversations occurring within that relationship. Thus, it is conceivable that participants attributed good intentions to their weight management conversation partner (e.g., spouse/significant other, friend) when evaluating low versions of messages. For example, participants may have interpreted a message coming from a spouse that notes the importance of losing weight for one’s health (a recycled need argument found in both low versions of dissolving misconceptions and call to action) as ultimately loving and caring, making differences
between high and low quality messages less pronounced. However, despite this possibility, differences in level of message quality and message effectiveness still emerged for most message dimensions. Further, all messages were rated as believable, suggesting that high relationship quality did not greatly influence the realism of both high and low quality messages.

**Study 2 concluding thoughts.** Valuable insights on the nature of effective motivational support in the weight management context for middle-aged and older adults emerged from Study 2. First, the importance of person-centeredness in weight management motivational support was demonstrated. As discussed in Chapters two and three, weight management conversations tend to be complex, and it is necessary to manage multiple instrumental, relationship, and identity goals. Person-centered messages manage these multiple goals well by encouraging participants to reevaluate and reappraise their situation in a way that honors their identity and their relationship with the support provider (O’Keefe & Delia, 1988). Another interesting finding was that high person-centeredness was associated with all positive outcome variables except for behavioral intention. The relationship between person-centered messages and behavioral intention deserves further scholarly attention.

Second, while no differences in message outcomes by scenario type (eating vs. exercise) emerged in the pilot test, in Study 2 several such results surfaced. Overall, high quality messages were generally evaluated more positively in the eating rather than the exercise scenario. Specifically, low quality self-affirmation messages were seen as more
effective in the exercise scenario, while low quality self-affirmation messages were seen as less effective in the exercise scenario. These and other similar findings related to exercise may reflect norms surrounding exercise discourse that were guiding message interpretation (as typified for example, by the common exercise-related comments “no pain no gain,” and “just do it”). Thus, an exercise-related high self-affirmation message that encouraged the participant to remove the locus of causality from him or herself may have been interpreted as an act of weakness, and as ultimately demotivating. This point is intriguing from a theoretical perspective because SDT would posit that a conversational style that is directive may be beneficial for igniting short-term behavior change, but produces ultimately untenable motivation (Deci & Ryan, 2002). Further research should examine how motivational supportive communication functions across different categories of weight management behavior and across multiple participant pools.

Third, the strong performance of high quality combination messages on the message effectiveness and motivational outcomes of interest suggests that highly effective motivational support messages likely consist of some combination of the message features discussed in this initial investigation. Further, it is possible that there is also an optimal sequence for the provision of such support. Thus, factorial designs testing possible combinations of the message features and sequences of support provision would be helpful in further elaborating a normative support model.
Limitations and Future Research Directions

As in every study, this investigation possessed limitations. First, in Study 1, while the number of interviewees was quite reasonable for this kind of qualitative investigation and theoretical saturation was reached, the sample was relatively homogenous in terms of race and ethnicity and dramatically skewed toward women. Given the conception here of supportive communication as normative and situated, interviewing a more diverse group of participants would provide both a broader and more nuanced understanding of weight management motivational support.

Along these lines, Study 2 used a larger sample (N = 415), which helped generate stronger claims about generalizability. Further, this sample was strong in that it was comprised of middle-aged and older adults from varied socioeconomic and educational levels, who were primarily overweight or obese (a group that does not receive much communication research attention). Men comprised about 1/3 of this sample. However, participants were still relatively homogenous in terms of race/ethnicity.

Another limitation of this study is inherent to the nature of the message perception paradigm; namely, the use of role-play scenarios and messages. Although participants generally rated the scenarios as believable, it is impossible to gauge from this study design if participants’ self-reports on motivational outcomes coincide with how they would actually behave (Burleson & MacGeorge, 2002). However, it is also important to emphasize functional communication studies using role-play scenarios have commonly been used to triangulate findings. Kline & Creposki (1984), for example, found
consistencies between role plays and person-centered practices in history taking interviews. Applegate (1980) also found that comforting strategies provided in response to role-play scenarios mirrored his ethnographic findings. Thus, the usefulness of role-play scenarios has been documented. An additional strength of this approach is its ability to isolate and test specific theoretically-intriguing message dimensions, as has been done here. Continuing on in the tradition of triangulating findings, future research investigations may complement this approach through assessing weight management conversations in a lab setting, or by asking participants to record their experiences of motivational support in a diary study.

Future research should also examine motivational support as situated within relationships and broader interaction sequences. For example, some investigations have demonstrated that couples who share similar weight management conversation styles are more satisfied with these conversations (e.g., Dailey, Kluever Romo, & Mooney Thompson, 2011), and it would be interesting to examine if weight management conversation partners’ preference for specific motivational support dimensions influences messages effectiveness and/or motivational outcomes. Along these lines, although not a central research question, Study 1 interviews revealed that the sequence of seeking and providing motivational support may influence perceptions of messages. For example, an unsolicited weight management motivational message may be perceived as offensive, while one offered in response to an expressed concern may be perceived as caring and helpful. Examining participants’ conceptions of their weight management conversation
partner’s goals in a given motivational exchange as well as the support recipient’s
attributions within this interaction would be important to ascertain.

Further, future investigations may wish to extend this model to other health
behavioral domains in which change is difficult and motivational challenges abound (e.g.,
smoking). It seems plausible that the dimensions expounded in this investigation may
extend to other situations in which the chief impediment to increased energizing drive is
“stuckness”. In addition, it would be interesting to examine if these message dimensions
are also helpful in motivating younger adults. While formative research would need to be
conducted in order to establish realistic messages for this group, promoting healthy
weight management for young adults from a stance of autonomous motivation (e.g., to
feel great, to be healthy, to have fun) rather than controlled motivation (e.g., to look
“hot”, to be skinny, to satisfy a romantic interest) seems a worthy endeavor.

In addition, it is also likely that effective motivational support likely varies in its
formal features as well as its broader topical dimensions (which was the focus of Study
2). For example, Mooney Thompson et al. (2011) found that weight management
messages that attended to face concerns were more effective than messages that did not.
Indeed, understanding how formal features of messages influence message perceptions
has been one major focus of supportive communication research (MacGeorge et al.,
2011). Thus, there may be better and worse ways to present even high levels of
motivational message dimensions.
Last, given the ubiquity of technology in contemporary society, it would be worthwhile to investigate how perceptions of motivational support vary across technological modality. One way to approach the role of technology in facilitating motivational support would be to examine how various media affordances may influence motivational communication. Walther (2007) described affordances’ role in communication articulately:

…aspects of the technology allow, enable, or promote certain social cognitive and communication processes, which are recursive. For instance, the ability to edit must interact with some desire or motivation to optimize one’s message, but the desire to optimize one’s message may be enhanced by the prospect of being able to do so. (p. 2541-2542)

Thus, it seems plausible that the unique configuration of affordances of various communication technologies may make them better or worse in the provision of motivational weight management support. For example, can the convenience afforded by frequent text messages from a friend encourage ongoing autonomous motivation? Or are these communications viewed as intrusive and controlling? What factors moderate this relationship? Investigation into these kinds of questions may allow for technology to be harnessed in a positive way to encourage healthy weight management practices.

Conclusion

In sum, this dissertation aimed to gain greater insight into how supportive communication may be used to optimally-motivate middle-aged and older adults to
persist in weight management endeavors. Theoretical constructs relevant to this aim were examined in Study 1 and an initial formulation of motivational supportive communication was tested in a pilot study and Study 2.

Returning to considerations of lifespan, overall findings provide practical guidance. Namely, counter to prevalent ageist stereotypes (Nussbaum, Pitts, Huber, Raup Krieger, & Ohs, 2005), middle-aged and older adults do often desire to engage in health-related behavior change. They should thus be supported by health-care providers, family members, and their social environments in these endeavors (Golub & Langer, 2007). Also examining Study 2 results in terms of lifespan considerations, age did not emerge as a significant factor in message quality, message effectiveness, or motivational analyses. This finding may suggest that middle-aged and older adults deal with many of the same weight management motivational dilemmas. It is important to note, however, that this sample consisted of community-dwelling older adults (of whom only one was in the oldest-old age group), rather than persons in more institutionalized settings. Future investigations should further probe the differences in perceptions of motivational support within and between more diverse groups of middle-aged and older adults.

In terms of practical significance, these findings may help those who work with or know and love a middle-aged and older adult who is working on their weight management to operate from a stance of greater empathy and understanding. Indeed, Study 2 demonstrated that high-quality messages were viewed as more effective than low-quality messages, suggesting that care should be exercised when formulating such
messages. In addition, combined messages, which offered both emotional validation and offered practical help were viewed as optimally motivating. Thus, adopting a multifocal approach in weight management supportive communication may be ultimately useful.

In sum, although weight management often proves challenging, it is possible to harness supportive communication to motivate one to continue on, with joy and perseverance. The four message dimensions tested provide an important first step in understanding how to offer optimal motivational support to middle-aged and older adults in the weight management context.
References


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Appendix A: Study 1 Interview Guide and Schedule

Initial Open-Ended Questions

Topics – Present Attempts & Past Experiences

1. Are you currently trying to lose weight/get healthy?

2. How long have you been trying?

3. Can you tell me, on a scale from 1-10, how much you currently want to lose weight/get healthy?
   a. [Probe: Do you think other important people in your life want you to lose weight/get healthy?]

4. Do you have any specific goals related to losing weight/getting healthy? What are they?
   a. [Probes: Could you tell me why you chose this goal? (will insert participants’ specific goal(s) here; for the remainder of the interview schedule, when the verbiage this goal/these goals is used, participants’ specific goals will be inserted unless otherwise noted) Do you have a plan sketched out to accomplish this goal?]

5. Have you tried to lose weight in the past 3 years?
   a. [Probes: How many times? What happens when you try to lose weight? When you try to maintain weight loss (if applicable)?]
6. Do you believe you can lose weight/get healthy this time around? Why or why not?

7. How is losing weight/getting healthy going?

8. Have you shared with anyone that you are trying to lose weight/get healthy?
   a. [Probes: Who? Why did (or didn’t) you tell them? Do they seem to be on board?]

[Transition] Losing weight isn’t always easy, and sometimes a variety of things can make the process challenging.

Intermediate Questions:

Topic – Conception of Challenge

9. Could you please list a few things, if any, that make losing weight hard for you?

Topic – General Motivation

10. What motivates you to keep going even when faced with [insert participants’ specific challenge(s) here; asking specifically for each challenge]? When I talk about motivation here, I’m talking about what keeps you going in your efforts to lose weight/get healthy.

[Transition] Now we’re going to talk a bit about how other people might help you stay motivated to lose weight/get healthy.

Intermediate Questions II: Topics – Motivational Supportive Communication
Messages & Sources
11. Could you please tell me about a conversation with another person that you have had recently that motivated you to keep going/persisting in losing weight/getting healthy? This conversation could be of any length (didn’t have to be long) and did not have to occur in a face-to-face conversation. The conversation could have happened, for example, through a series of text messages, over the phone, in a weight loss support group, or even online.

[If participant answers no, proceed to question 12]

a. Probes:

1. Who was the conversation with?
2. What was said?
3. How did you respond?
4. What was the context/situation of the conversation?
5. What do you think the other person (or group) meant by what he/she/they said?
6. What do you think the conversation meant?
7. How did this conversation motivate you to keep going in losing weight/getting healthy?
8. How did this conversation make you feel about yourself?
9. How did the conversation make you feel about the other person, group, etc.?
10. How often do motivating conversations occur? (daily, weekly, monthly, occasionally, infrequently)

12. [Skip if answer is provided for 11] Could you tell me why you think these kinds of conversations are not occurring?

13. Looking at the flip side of the coin, could you please tell me about a conversation with another person that you have had recently that demotivated you. In other words, discouraged you from persisting in attempts to lose weight/get healthy?

Like the conversation above, this conversation could be of any length (didn’t have to be long) and did not have to occur in a face-to-face conversation. The conversation could have happened, for example, through a series of text messages, over the phone, in a weight loss support group, or even online.

[If participant answers no, proceed to question 14]

a. Probes:

1. Who was the conversation with?

2. What was said?

3. How did you respond?

4. What was the context/situation of the conversation?

5. What do you think the other person (or group) meant by what he/she/they said?

6. What do you think the conversation meant?
7. How did this conversation demotivate you, keeping you from continuing on and persisting losing weight/getting healthy?

8. How did this conversation make you feel about yourself?

9. How did the conversation make you feel about the other person, group, etc.?

10. How often do demotivating conversations occur? (daily, weekly, monthly, occasionally, infrequently)

14. [Skip if answer is provided for 13] Why do you think these kinds of demotivating conversations are not occurring?

15. Earlier you mentioned that _______ & ________ [insert difficulties/challenges here as appropriate from earlier point in interview] sometimes made losing weight/getting healthy hard for you. Can you think of a conversation where someone motivated you to overcome or deal with ________ (repeat this procedure with other challenges)?

   a. Probes:

   1. Who was the conversation with?

   2. What was said?

   3. How did you respond?

   4. What was the context/situation of the conversation?

   5. What do you think the other person (or group) meant by what he/she/they said?
6. What do you think the conversation meant?
7. How did this conversation motivate you to overcome/deal with this particular challenge?
8. Was this conversation easy or difficult to have? Why?
9. How did this conversation make you feel about yourself?
10. How did the conversation make you feel about the other person, group, etc.?

16. Building on what we’ve talked about so far, what kinds of messages would motivate you? Could you give me examples of statements you would like to get from: 1) a romantic partner (if applicable), 2) a friend, 3) a health care practitioner, 4) a younger family member (if applicable), and 5) a younger stranger?

17. How satisfied are you with: a) the amount and b) the quality of weight management support you’re receiving?

18. Do you try to motivate others to keep working to lose weight/get healthy? How?

**Concluding Questions**

19. Is there anything I can clarify for you?

20. Did anything else come to mind for you that I didn’t ask about? If so, could you please share?
Appendix B: Pilot Study Messages

Messages in the Eating Scenario:

**HPC1:** Hey, how are you doing? I totally understand that it can be frustrating to try to eat healthy all the time. It can be tough to constantly make the right food choices. Sometimes it’s easier to splurge! It is for me, too! But you’re making great progress, even if it feels slow. I think that your feeling of frustration is a totally normal one that many people experience when they try to lose weight, and it shows you’re moving in the right direction. I think that if you can just keep going now, soon you’ll feel motivated to eat healthy again.

**LPC1:** I don’t understand why you’re feeling frustrated and unmotivated about your eating. You’re moping around instead of doing what you need to do. You need to lose this weight because you’re not getting any younger and carrying extra weight isn’t healthy. The weight is hard on your heart and joints, not to mention your appearance. You should start eating right again to improve the situation, but I don’t see that happening. Eating healthy isn’t rocket science. You know you need to lose weight, so instead of feeling sorry for yourself, pick yourself up and get back to it.

**HPC2:** I completely get that you feel stuck right now in trying to lose weight. Eating right can be a daily struggle. It’s easy to forget to watch calories or to eat for emotional reasons. But I remember you told me that you really want to lose weight so you can be fit and active for many years to come. And you are making progress – even if it feels slow. You’re developing strength and perseverance right now by keeping on even though it’s tough. I think that if you can just keep going now, soon you’ll feel more energized.

**LPC2:** You’ve obviously fallen off the wagon with your healthy eating plan. You’re not moving forward. I don’t understand why you feel frustrated and unmotivated about the situation. Suck it up and do what it takes to get on track. Stop eating so much. It’s that simple. You know you need to lose weight. You’re not getting any younger and the extra weight is not doing your health any favors. Feeling down and moping around about eating right clearly isn’t helping, so figure something else out. 85

**HSC1:** What’s your biggest challenge in eating healthy? Eating at restaurants? Me too! Most restaurants serve huge portions, and the food is loaded with calories. I’ve been finding that more and more restaurants are putting their nutrition info online or on their
menu, so it’s easier to find healthy options. Maybe that might work for you. Also, you can always box up part of your meal instead of eating it in one sitting. That way you can indulge a bit and still feel like you’re moving toward your goals.

**LSC1:** Eating healthy in order to lose weight is important. I mean, we all know the health consequences of being overweight – it’s hard on your heart, your joints, puts you at risk for other conditions, and the list goes on. It’s almost impossible to make healthy choices in some situations, though. Like eating at restaurants – most serve huge portions of food loaded with fat, carbs, salt, and calories. Still, you need to lose the weight for your health, so it’s important to try to make healthy choices even at restaurants.

**HSC2:** What’s the biggest challenge you face in trying to eat healthy? Finding time to do it? Me, too! It takes more time to eat fresh, healthy foods than to grab whatever’s immediately at hand. But I’ve found there are actually lots of ways to eat healthy even when I’m busy. Most grocery stores sell some fruits and veggies that are pre-washed and cut. And restaurants like Subway are convenient if you need a healthier meal on the go. Even fast food places like McDonalds and Wendy’s offer salads or grilled sandwiches.

**LSC2:** In order to lose weight, it’s important to eat right. And we all know that losing weight is important. Extra weight is hard on your heart and joints, and can make it difficult to be as active as you would want. I know it’s really difficult to find time to eat right. It seems like most food that is convenient or quick – like fast food – is terrible for you. It’s loaded with preservatives, fat, sugar, and salt. But being at a healthy weight is so important for your health, so you have to do the best you can even when you’re busy.

**HSA1:** I’ve noticed you’ve been hard on yourself lately because you’re not losing weight as quickly as you’d like. Do you think you’re weak because you’re not eating healthy all the time? It’s not you! Losing weight and eating healthy are just hard. But I know you well, and have seen you persist and succeed in many tough situations similar to this. That same grit and determination that have served you so well in the past will help you figure out this healthy eating thing, even though it’s really challenging at times.

**LSA2:** It must not be fun to keep failing at losing weight. It’s probably pretty discouraging to be trapped in that cycle. But being at a healthy weight is important for so many reasons – it helps prevent diabetes, certain kinds of cancer, heart disease, arthritis – I could go on. If you lost weight you’d also feel better about yourself and would be able to be more active as well. Losing weight, and eating healthy in order to do so, isn’t easy, but it’s what you have to do for your health.

**HSA2:** It seems like you’ve been feeling bad about yourself because you’re not losing weight as quickly as you’d like. But please don’t beat yourself up. It’s hard to lose
weight, and to make the healthy choices needed in order to do so. I know that you’re an active, energetic person who goes after what you want. And I know you want to lose some weight because you feel like sometimes it keeps you from doing the things you want, right? Because I’ve seen your tenacity and determination in the past, I know you have what it takes to go after this healthy eating goal as well.

**LSA2:** You must feel terrible about not being able to get that extra weight off. It’s probably pretty discouraging to be on the weight-loss rollercoaster, where you’re losing and regaining, and are never quite in control. But losing weight – and making healthy choices in order to do so – is still so important. Being at a healthy weight helps prevent diabetes, heart disease, arthritis – I could go on. I mean, eating healthy isn’t enjoyable or fun, but it has to be done so you can try to get off the extra weight for your health.

**HCA1:** I know you told me that losing weight is important to you. Have you thought about how to break out of the rut you mentioned you were in to get where you want to be? I can help you. Maybe today we could start writing down what we eat? Even if you don’t change anything, and, say, eat a piece of chocolate cake, we’ll still be more aware of what we’re actually eating. And I think that’s a great starting point. Small steps like that will build on each other and soon we’d be completely out of the rut.

**LCA1:** I know you told me that losing weight is important to you. That makes sense. Losing extra weight is good for health and appearance, and is especially important as we age. Being at a healthy weight is important for so many reasons – it helps prevent diabetes, certain kinds of cancer, heart disease, arthritis – I could go on. You mentioned you feel like you’re stuck in a rut right now, and that you’re not motivated to eat healthy. Eventually you’ll feel like you’re going in the right direction again.

**HCA2:** I know you feel stuck right now in the weight loss process, but you’re not alone. We can work on this together. What would help you start moving in the right direction now? Maybe one easy way we could start would be to try to get more fresh fruits and veggies into our meals, even if we don’t change anything else. Or, starting today, we could pick a different small goal – like cutting down on one sweet a day. We wouldn’t feel like we were depriving ourselves, and it could start a positive chain reaction that will move us in the right direction.

**LCA2:** I know you feel stuck right now in this weight loss process. But remember that losing the extra weight will help you feel more energetic and equipped to do the things you want to do. Losing weight would be so good for your health, as well, which is especially important as we age. I mean, being at a healthy weight is important because it helps prevent things like diabetes, certain kinds of cancer, heart disease, and arthritis.
Even though you’re not feeling particularly motivated to eat healthy right now, just wait the feeling out. Eventually, you’ll be enthusiastic about eating right again.

**Messages in the Exercise Scenario:**

**HPC1:** I totally understand that it can be frustrating to try to exercise consistently. It can be tough to make the time to be physically active. Sometimes it’s more appealing to relax on the couch. It is for me, too! But you’re making great progress, even if it seems slow. I think that your feeling of frustration is a totally normal one that many people experience when they try to lose weight, and it shows you’re moving in the right direction. I think that if you can just keep going now, soon you’ll feel motivated to exercise again.

**LPC1:** I don’t understand why you’re feeling frustrated and unmotivated about your exercise. You’re moping around instead of doing what you need to do. You need to lose this weight because you’re not getting any younger and carrying that extra weight isn’t healthy. The weight is hard on your heart and joints, not to mention your appearance. You should start exercising more often to improve the situation, but I don’t see that happening. Exercising isn’t rocket science. You know you need to lose weight, so instead of feeling sorry for yourself, pick yourself up and get back to it.

**HPC2:** I completely get that you feel stuck right now in trying to lose weight. Exercising regularly can be hard. It’s easy skip a workout or forget to get extra steps in throughout the day. But I remember you told me that you really want to lose weight so that you can be fit and active for many years to come. I want you to know that you are making progress – even if it feels slow. You’re developing strength and perseverance right now by keeping on even though it’s tough. I think that if you can just keep going now, soon you’ll feel more energized.

**LPC2:** You’ve obviously fallen off the wagon with your exercise plan. You’re not moving forward. I don’t understand why you feel frustrated and unmotivated about the situation. Suck it up and do what it takes to get on track. Start moving more. It’s that simple. You know you need to lose weight. You’re not getting any younger and the extra weight isn’t doing your health any favors. Feeling down and moping around about exercising clearly isn’t helping, so figure something else out.

**HSC1:** What’s the biggest challenge you face in trying to exercise? Lack of time? Me, too! It’s hard to find time to add one more thing to the schedule. But I’ve been finding that it works for me to fit physical activity in throughout my day. It’s easy to park further away from the store, or walk around the block a few times a day – and even these little bursts of exercise add up. I bought an inexpensive pedometer, and that makes getting extra steps almost seem like a game.
LSC1: Exercising in order to lose weight is important. I mean, we all know the consequences of being overweight – extra weight is hard on your heart, your joints, puts you at risk of other conditions, and the list goes on. It’s almost impossible to make healthy choices in some situations, though. Like finding time to exercise – it takes forever to drive to a gym, workout, and then shower. Still, you need to lose weight for your health, so it’s important to try to exercise even when you’re busy.

HSC2: What’s the biggest challenge you face in trying to exercise? Getting started? I’m with you! I feel like it’s really hard to get out of bed early in the morning or to get off the couch to go exercise. But I’ve found if I keep my work out clothes and shoes ready I’m much more likely to follow through with it. Or, have you considered meeting with a friend to exercise? I know when I do that it makes it harder to skip out. Once you start, you’ll be so glad you did.

LSC2: In order to lose weight, you have to exercise. And we all know that losing weight is important. Extra weight is hard on your heart, your joints, puts you at risk for other conditions, can make it difficult to be as active as you would want, and the list goes on. It can be really difficult get started with exercise when you’re busy, or tired, or have aches and pains. But being at a healthy weight is important, so you have to do the best you can.

HSA1: I’ve noticed you’ve been hard on yourself lately because you’re not losing weight as quickly as you’d like. Do you think you’re weak because you’re not eating healthy all the time? It’s not you! Losing weight and exercising regularly are just hard. But I know you well, and have seen you persist and succeed in many tough situations similar to this. That same grit and determination that have served you so well in the past will help you figure out this exercise thing even though it’s really challenging at times.

LSA1: It must not be fun to keep failing at losing weight. It’s probably pretty discouraging to be trapped in that cycle. But being at a healthy weight is important for so many reasons – it helps prevent diabetes, certain kinds of cancer, heart disease, arthritis – I could go on. If you lost weight you’d also feel better about yourself and would be able to be more active as well. Losing weight, and exercising in order to do so, isn’t easy, but it’s what you have to do for your health.

HSA2: It seems like you’ve been feeling bad about yourself because you’re not losing weight as quickly as you’d like. But please don’t beat yourself up. It’s hard to lose weight, and to exercise in order to do so. I know that you’re an active, energetic person who goes after what you want. And I know you want to lose some weight because you feel like sometimes it keeps you from doing the things you want, right? Because I’ve seen your tenacity and determination in the past, I know you have what it takes to go after this exercise goal as well.
LSA2: You must feel terrible about not being able to get that extra weight off. It’s probably pretty discouraging to be on the weight-loss rollercoaster, where you’re losing and regaining, and are never quite in control. But losing weight – and making healthy choices in order to do so – is still so important. Being at a healthy weight helps prevent diabetes, heart disease, arthritis – I could go on. I mean, exercising isn’t enjoyable or fun, but it has to be done so you can try to get off the extra weight for your health. 92
Appendix C: Pilot Study Measures

1. Scenario Realism:
   a. This scenario is believable
   b. It’s possible that a person could encounter a situation like this in real life
   c. It is hard for me to imagine a person in this scenario

2. Message Realism:
   a. This message is believable
   b. It’s possible that a person could encounter a message like this in real life
   c. It is hard for me to imagine a person hearing this message

3. Message Evaluation:
   a. This message is helpful
   b. This message is appropriate
   c. This message is sensitive
   d. This message is supportive
   e. This message is effective

4. Message Quality:
   a. Person-centeredness:
i. This message focuses on the feelings of the person trying to lose weight

ii. This message criticizes the person trying to lose weight

iii. This message helps the person trying to lose weight understand their feelings in a new way

b. Dissolving Misconceptions

i. This message is effective in providing helpful suggestions to the person who is trying to lose weight

ii. This message gives suggestions that the person trying to lose weight could probably implement

iii. This message gives suggestions to the person trying to lose weight that would have serious drawbacks

c. Self-Affirmation

i. This message would help the person trying to lose weight feel confident in his or her ability to manage their weight

ii. This message would help the person trying to lose weight feel capable of handling his or her weight management now

iii. This message would help the person trying to lose weight be able to meet the challenge of managing his or her weight

iv. This message would help the person trying to lose weight to feel better about himself or herself
d. Call to Action

   i. This message motivates the person trying to lose weight to take immediate action

   ii. This message encourages the person trying to lose weight to take small, concrete steps

   iii. This message encourages the person trying to lose weight to take action toward his or her weight loss goals
Appendix D: Study 2 Participant Demographics

Table 14. Demographic Characteristics of Participants

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Appendix E: Study 2 Interface Screenshot

Weight Management Message

You have obviously fallen off the wagon with your healthy eating plan. You’re not moving forward. I don’t understand why you feel frustrated and unmotivated about the situation. You should suck it up and do what it takes to get on track. Stop eating so much. It’s that simple. You know you need to lose weight. You’re not getting any younger and the extra weight is not doing your health any favors. It’s hard on your heart and joints, so there’s just no excuses. Feeling down and moping around about eating right clearly isn’t helping, so figure out something else.

Please answer the following series of questions about this weight management message. Please evaluate the message as a whole.

This message is:

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Appendix F: Study 2 Scenarios & Messages

Study 2 Scenarios:

**Eating Scenario:** You have been working to lose weight for a while now, and feel fairly knowledgeable about healthy eating. Lately, though, you haven’t been making the progress you wanted. You have found it difficult to eat healthy foods or stick to proper portions, and are feeling unmotivated to eat right.

**Exercise Scenario:** You have been working to lose weight for a while now, and feel fairly knowledgeable about exercise recommendations. Lately, though, you haven’t been making the progress you wanted. You have found it difficult to be physically active, and are feeling unmotivated to exercise.

**Messages in Eating Scenario:**

**HPC1:** Hey, how are you doing? I totally understand that it can be frustrating to try to eat healthy all the time. It can be tough to constantly make the right food choices. Sometimes it’s easier to splurge! It is for me, too! But you’re making great progress, even if it feels slow. I think that your feeling of frustration is a totally normal one that many people experience when they try to lose weight, and it shows you’re moving in the right direction. I think that if you can just keep going now, soon you’ll feel motivated to eat healthy again.

**LPC1:** I don’t understand why you’re feeling frustrated and unmotivated about your eating. You’re moping around instead of doing what you need to do. You should lose this weight because you’re not getting any younger and carrying extra weight isn’t healthy. The weight is hard on your heart, joints, and puts you at risk for many other conditions. You should start eating right again to improve the situation, but I don’t see that happening. Eating healthy isn’t rocket science. You know you need to lose weight, so instead of feeling sorry for yourself, pick yourself up and get back to it.
**HPC2:** I completely get that you feel stuck right now in trying to lose weight. Eating right can be really challenging. I have a tendency to eat when I’m stressed, or just forget to watch my portions. So I think those feelings of frustration are totally normal. But you’re making amazing progress! I’m proud of how you’re continuing to make healthy choices, even though it’s tough. You’re developing perseverance right now by moving forward through the challenging parts of the weight loss process. I think that if you can just keep going now – even if it feels slow – soon you’ll feel more energized.

**LPC2:** You have obviously fallen off the wagon with your healthy eating plan. You’re not moving forward. I don’t understand why you feel frustrated and unmotivated about the situation. You should suck it up and do what it takes to get on track. Stop eating so much. It’s that simple. You know you need to lose weight. You’re not getting any younger and the extra weight is not doing your health any favors. It’s hard on your heart and joints, so there’s just no excuses. Feeling down and moping around about eating right clearly isn’t helping, so figure out something else.

**HDM1:** What’s your biggest challenge in eating healthy? Eating at restaurants? Me too! Most restaurants serve huge portions, and the food is loaded with calories. But it is possible to make healthier choices even when eating at a restaurant. I’ve been finding that more and more restaurants are putting their nutrition info online or on their menu, so it’s easier to find healthy options. Or can you think of something else that could work for you? Also, you can always box up part of your meal instead of eating it in one sitting. That way you can indulge a bit and still feel like you’re moving toward your goals.

**LDM1:** Eating healthy in order to lose weight is important. I mean, we all know the health consequences of being overweight – it’s hard on your heart, your joints, and puts you at risk for other conditions. You’d be doing better if you took off some extra weight, and I agree it’s something you need to do. Eating at restaurants is tough – most serve huge portions of food loaded with fat, carbs, salt, and calories. Still, you know you need to lose the weight for your health, so it’s important to make healthy choices.

**HDM2:** What’s the biggest challenge you face in trying to eat healthy? Finding time to do it? Me, too! Sometimes it seems to take more time to eat fresh, healthy foods than to grab whatever’s immediately at hand. But I’ve found there are actually lots of ways to eat healthy even when I’m busy. I try to take some time on the weekend to plan my eating throughout the week. That way, if I need something like a quick, healthy snack, I have what I need ready to go in the fridge. To get in fresh produce, most grocery stores sell fruits and veggies that are pre-washed and cut – easy!

**LDM2:** It’s important to eat right in order to lose weight. And we all know that losing weight is important. Extra weight is hard on your heart and joints, and can make it difficult to be as active as you would want. Even though being at a healthy weight is
really important, it’s difficult to find time to eat right. It seems like most food that is convenient or quick – like fast food – is terrible for you. It’s loaded with preservatives, fat, sugar, and salt. But being at a healthy weight is important for your health, so you have to do the best you can.

**HSA1:** I’ve noticed you’ve been hard on yourself lately because you’re not losing weight as quickly as you’d like. But it’s not your fault. Losing weight and eating healthy are hard! Even though eating right is tough, I’ve seen you succeed in situations similar to this. The same grit and determination that have served you so well in the past will continue to help you now. I mean, you’re creative and great at thinking on your feet. You’ll definitely be able to use that creativity and innovation to think up ways to eat healthfully even when it’s challenging.

**LSA1:** It must not be fun to keep failing at losing weight. It’s probably pretty discouraging to be trapped in a cycle of losing and regaining weight, and feeling like you’re never quite have a handle on eating right. But being at a healthy weight is important for so many reasons – it helps prevent diabetes, certain kinds of cancer, heart disease, arthritis – I could go on. If you lost weight you’d be able to be more active as well. Losing weight, and eating healthy in order to do so, isn’t easy, but it’s what you have to do for your health.

**HSA2:** It seems like you’ve been feeling bad about yourself because you’re not losing weight as quickly as you’d like. But please don’t beat yourself up. It’s hard to lose weight, and to make the healthy choices needed in order to do so. But I’ve seen in the past that you’re an active, energetic person who goes after what you want. And you’re one of the most tenacious and determined people I know. That tenacity and determination will give you the strength you need right now to make healthier choices each day even though it’s challenging.

**LSA2:** You must feel terrible about not being able to get that extra weight off. It’s probably pretty discouraging to be on the weight-loss roller coaster, where you’re losing and regaining, and are never quite in control. But losing weight – and making healthy choices in order to do so – is still so important. Being at a healthy weight helps prevent diabetes, heart disease, arthritis – I could go on. I mean, eating healthy isn’t necessarily enjoyable or fun, but it has to be done so you can try to get off the extra weight for your health.

**HCA1:** I know you told me that losing weight is important to you, but that you feel like you’re stalled out right now. Have you thought about any ways to break out of this rut? I think I can help you – it would definitely be more fun to tackle this together! Maybe today we could start writing down what we eat? Even if you don’t change anything, and,
say, eat a piece of chocolate cake, we’ll still be more aware of what we’re actually eating. And I think that’s a great starting point. I think if we can see at the end of the day that we’ve taken in fewer calories, it’ll be fun and I think we’ll feel terrific! Small steps like that will build on each other and soon we’ll be moving toward our goals again.

**LCA1:** I know losing weight is important to you, but you’re clearly stalled out right now. Wanting to lose weight makes sense – it’s good for our health, especially as we age. Being at a healthy weight is important for so many reasons – it helps prevent diabetes, cancer, heart disease, arthritis – I could go on. Of course, you’re stuck in a rut and aren’t feeling motivated to eat healthy right now. Maybe eventually you’ll go in the right direction again.

**HCA2:** I know you feel stuck right now in the weight loss process, but you’re not alone. We can work on this together – it would be fun to do this as a team! What would help you start moving in the right direction now? Maybe today we could try to get more fresh fruits and veggies into our meals, even if we don’t change anything else. Or, starting today, we could pick a different small goal – like cutting down on one sweet a day. We wouldn’t feel like we were depriving ourselves, and it could start a positive chain reaction that will move us in the right direction.

**LCA2:** It’s clear you’re stuck right now in this weight loss process. But remember how important it is. Losing weight would be so good for your health, and that’s especially important as we age. I mean, being at a healthy weight helps prevent things like diabetes, certain kinds of cancer, heart disease, and arthritis. Even though you’re not motivated to eat healthy right now, wait the feeling out. Eventually, it’s possible that at some point you may be enthusiastic about eating right again.

**HCombined 1:** I totally understand that it can be frustrating to try to eat healthy all the time, but you’re making great progress, even if it feels slow. Please don’t beat yourself up about not losing weight as quickly as you want. Losing weight is hard to do. But you definitely have always had the grit and determination to do what you want, and eating healthy will be no exception. I can help you through feeling stalled out – it would definitely be more fun to tackle this together! Maybe today we could start writing down what we eat? Also, I think we share the same struggle with healthy eating – going to restaurants. Personally, I’ve found it helpful to check the nutrition facts on the menu or to box up part of my meal to take home. Or maybe you can think of something else that would work for you?

**LCombined1:** I don’t understand why you’re feeling frustrated and unmotivated about your eating. You’re moping around instead of doing what you need to do. You keep failing at losing weight and are trapped in a cycle of losing and regaining weight. I mean,
wanting to lose weight makes sense – it helps prevent diabetes, certain kinds of cancer, heart disease, arthritis – I could go on. Maybe you’ll eventually feel like you’re going in the right direction with your eating again. I remember you told me that eating at restaurants is especially tough – most serve huge portions of food loaded with fat, carbs, salt, and calories. Still, you know you need to lose the weight for all the health reasons we’ve talked about, so it’s important to make better choices.

**EatHcom2:** I completely get that you feel stuck right now in trying to lose weight, and those feelings of frustration are totally normal. But you’re making amazing progress! Please don’t beat yourself up. Losing weight is hard. But I know that the tenacity and determination you’ve always had will give you the strength you need right now to continue trying to eat healthy. And you’re not alone. We can work on this together – it would be fun to do this as a team! Maybe today we could try to get more fresh fruits and veggies into our meals, even if we don’t change anything else. I know that it’s really challenging to find time to eat fresh, healthy foods sometimes, but I’ve found there are actually lots of ways to eat healthy even when I’m busy. To get in the fresh produce, most grocery stores sell fruits and veggies that are pre-washed and cut – easy! Or maybe you have some other ideas?

**EatLcom2:** You have obviously fallen off the wagon with your healthy eating plan. You’re not moving forward, and I don’t understand why you feel frustrated and unmotivated about the situation. I mean, you must feel terrible about not being able to get that extra weight off. You’re definitely stuck right now. Losing weight is necessary for your health, because it helps prevent diabetes, cancer, heart disease, and arthritis that will shorten your life. Most food that is convenient or quick is terrible for you and is loaded with preservatives, fat, sugar, and salt. But being at a healthy weight is important for your health, so you have to do the best you can.

**Messages in Exercise Scenario**

**HPC1:** Hey, how are you doing? I totally understand that it can be frustrating to try to exercise consistently. It can be tough to make the time to be physically active. Sometimes it’s more appealing to relax on the couch. It is for me, too! But you’re making great progress, even if it seems slow. I think that your feeling of frustration is a totally normal one that many people experience when they try to lose weight, and it shows you’re moving in the right direction. I think that if you can just keep going now, soon you’ll feel motivated to exercise again.

**LPC1:** I don’t understand why you’re feeling frustrated and unmotivated about your exercise. You’re moping around instead of doing what you need to do. You should lose this weight because you’re not getting any younger and carrying that extra weight isn’t
healthy. The weight is hard on your heart, joints, and puts you at risk for many other conditions. You should start exercising more often to improve the situation, but I don’t see that happening. Exercising isn’t rocket science. You know you need to lose weight, so instead of feeling sorry for yourself, pick yourself up and get back to it.

**HPC2:** I completely get that you feel stuck right now in trying to lose weight. Exercising regularly can be really challenging. I have a tendency to skip workouts or to sit for too long without getting up to move. So I think those feelings of frustration are totally normal. But you’re making amazing progress! I’m proud of how you’re continuing to make healthy choices, even though it’s tough. You’re developing perseverance right now by moving forward through the challenging parts of the weight loss process. I think that if you can just keep going now – even if it feels slow – soon you’ll feel more energized.

**LPC2:** You have obviously fallen off the wagon with your exercise plan. You’re not moving forward. I don’t understand why you feel frustrated and unmotivated about the situation. You should suck it up and do what it takes to get on track. Start moving more. It’s that simple. You know you need to lose weight. You’re not getting any younger and the extra weight isn’t doing your health any favors. It’s hard on your heart and joints, so there’s just no excuses. Feeling down and moping around about exercising clearly isn’t helping, so figure out something else.

**HDM1:** What’s your biggest challenge in exercising? Lack of time? Me, too! It’s hard to find time to add one more thing to the schedule. But I think there are simple ways to be more active even in the busy-ness of life. For the last several weeks I’ve been finding that it works for me to fit physical activity in throughout my day. It’s easy to park further away from the store, or walk around the block a few times a day – and even these little bursts of exercise add up. I also bought an inexpensive pedometer, and that makes getting extra steps almost seem like a game.

**LDM1:** Exercising in order to lose weight is important. I mean, we all know the consequences of being overweight – it’s hard on your heart, your joints, puts you at risk of other conditions, and the list goes on. You’d be doing better if you took off some extra weight, and I agree it’s something you need to do. Finding time to exercise is tough – it takes forever to drive to a gym, workout, and then shower. Still, you need to lose weight for your health, so it’s important to make healthy choices.

**HDM2:** What’s the biggest challenge you face in trying to exercise? Getting started? I’m with you! It’s really hard to get out of bed early in the morning or to get off the couch to go exercise. But I’ve found there are some good tricks to help me start, even when I don’t initially want to. I try to pick activities that are fun. After all, you don't have to do a long, intense exercise session - just a few quick strolls throughout the day are enough to help me feel great. Or, have you considered meeting with a friend to exercise? I know when I
do that it makes it harder to skip out. I’ve found that once you start moving a little bit more, you’ll be so glad you did.

**LDM2:** It’s important to exercise in order to lose weight. And we all know that losing weight is important. Extra weight is hard on your heart, your joints, puts you at risk for other conditions, can make it difficult to be as active as you would want, and the list goes on. Exercising is hard – especially when aches and pains interfere. It’s much more appealing to relax on the couch. But being at a healthy weight is important, and it’s something you need to do. So you have to do the best you can to be active.

**HSA1:** I’ve noticed you’ve been hard on yourself lately because you’re not losing weight as quickly as you’d like. But it’s not your fault. Losing weight and exercising regularly are just hard! Even though exercising is tough, I’ve seen you succeed in situations similar to this. That same grit and determination that have served you so well in the past will continue to help you now. I mean, you’re creative and great at thinking on your feet. You’ll definitely be able to use that creativity and innovation to think up ways to fit exercise into your day – even when it’s challenging.

**LSA1:** It must not be fun to keep failing at losing weight. It’s probably pretty discouraging to be trapped in a cycle of losing and regaining weight, and feeling like you never quite have a handle on eating right. But being at a healthy weight is important for so many reasons – it helps prevent diabetes, certain kinds of cancer, heart disease, arthritis – I could go on. If you lost weight, you’d be able to be more active as well. Losing weight, and exercising in order to do so, isn’t easy, but it’s what you have to do for your health.

**HSA2:** It seems like you’ve been feeling bad about yourself because you’re not losing weight as quickly as you’d like. But please don’t beat yourself up. It’s hard to lose weight, and to exercise in order to do so. But I’ve seen in the past that you’re an active, energetic person who goes after what you want. And you’re one of the most tenacious and determined people I know. That tenacity and determination will give you the strength you need right now to become more physically active even though it’s challenging.

**LSA2:** You must feel terrible about not being able to get that extra weight off. It’s probably pretty discouraging to be on the weight-loss roller coaster, where you’re losing and regaining, and are never quite in control. But losing weight – and exercising in order to do so – is still so important. Being at a healthy weight helps prevent diabetes, heart disease, arthritis – I could go on. I mean, exercising isn’t necessarily enjoyable or fun, but it has to be done so you can try to get off the extra weight for your health.

**HCA1:** What’s the biggest challenge you face in trying to exercise? Getting started? I’m with you! It’s really hard to get out of bed early in the morning or to get off the couch to
go exercise. But I’ve found there are some good tricks to help me start, even when I don’t initially want to. For example, when I keep my work out clothes and shoes ready I’m much more likely to follow through. Or, have you considered meeting with a friend to exercise? I know when I do that it makes it harder to skip out. I’ve found that once you start, you’ll be so glad you did.

**LCA1:** I know losing weight is important to you, but you’re clearly stalled out right now. Wanting to lose weight makes sense – it’s good for our health, especially as we age. Being at a healthy weight is important for so many reasons – it helps prevent diabetes, cancer, heart disease, arthritis – I could go on. Of course, you’re stuck in a rut and aren’t feeling motivated to exercise right now. Maybe eventually you’ll go in the right direction again.

**HCA2:** I know you feel stuck right now in this weight loss process, but you’re not alone. We can work on this together – it would be fun to do this as a team! What would help you start moving in the right direction now? Maybe today we could try to get more steps in each day, even if we don’t change anything else. Do you have any ideas for other exercises we could do together? Or even separately but we could keep tabs on our progress. We wouldn’t feel like we were completely overhauling things, and it could start a positive chain reaction that will move us in the right direction.

**LCA2:** It's clear you're stuck right now in this weight loss process. But remember how important it is. Losing weight would be so good for your health, and that's especially important as we age. I mean, being at a healthy weight helps prevent things like diabetes, certain kinds of cancer, heart disease, and arthritis. Even though you’re not motivated to exercise right now, wait the feeling out. Eventually, it's possible that at some point you may be enthusiastic about exercising again.

**HCom1:** I can help you follow through with exercise – it would definitely be more fun to tackle this together! Today, we could meet up to go for a walk. I know sometimes it’s challenging to find time to exercise, but I’ve been finding that it works for me to fit physical activity in throughout the day. It’s easy to park further away from the store, or walk around the block a few times a day – and even these little bursts of exercise add up. In fact, I just read that more moderate, brief workouts can be really as effective! I totally understand that it can be a drag to exercise consistently, but you’re making progress even if it seems slow. So please don’t beat yourself up because you’re not losing weight as quickly as you want. You definitely have always had the grit and determination to do what you want, which can happen with exercise, too.

**LCom1:** I don’t understand why you’re feeling frustrated and unmotivated about your exercise. You’re moping around instead of doing what you need to do. I mean, it must
not be fun to keep failing at losing weight. It’s discouraging to be trapped in a cycle of losing and regaining weight. You’re stalled out right now. Losing weight helps prevent diabetes, cancer, heart disease, arthritis that will shorten your life – I could go on. Finding time to exercise is tough. Still, you need to lose weight for your health, so it’s important to make healthy choices.

**HCom2:** I completely get that you feel stuck right now in trying to lose weight. But you’re making amazing progress! Please don’t beat yourself up. Losing weight is hard. But I know that your tenacity will help you continue exercising. I know sometimes it’s really hard to keep exercising when you don’t want to, but they say you don’t have to do a long, intense exercise session – just a few quick strolls throughout the day are enough to help me feel great. Would you like to meet up to exercise? That way, it would be more fun and hard to skip! We could work on this together – maybe today we could both try to walk a bit more to get more steps in, even if we don’t change anything else.

**LCom2:** You have obviously fallen off the wagon with your exercise plan. You’re not moving forward, and I don’t understand why you feel frustrated and unmotivated about the situation. I mean, you must feel terrible about not being able to get that extra weight off. Losing weight is good for your health, because it helps prevent diabetes, cancer, heart disease, and arthritis that will shorten your life. Exercising is hard and aches and pains are par for the course. But being at a healthy weight is important, and it’s something you need to do. So you have to do the best you can to be active.
Appendix G: Study 2 Measures

Modified Version of the Regulation of Eating Behavior Scale (adapted from Leong, Madden, Gray, & Horwath, 2012)

Intrinsic Motivation
i. Because it is fun to exercise and create meals that are good for my health
ii. Because I like to find new ways to exercise and create meals that are healthy
iii. Because I take pleasure in exercising and fixing healthy meals
iv. For the satisfaction of moving my body and eating healthy

Integrated Regulation
i. Because eating healthy and exercising are an integral part of my lifestyle
ii. Because eating healthy and exercising is part of the way I’ve chosen to live my life.
iii. Because it has become an integral part of who I am
iv. Because eating healthy and exercising is consistent with other aspects of my self

Identified regulation
i. Because I believe that eventually it will allow me to feel better
ii. Because I believe that it is a good thing I can do to feel better about myself in general.
iii. Because I think it is a good idea.
iv. Because eating healthy and exercising is a way to ensure long-term health benefits.

Introjected regulation
i. Because I do not want to be ashamed of how I look.
ii. Because I believe I must absolutely be thin.
iii. Because I would be ashamed of myself if I were not eating healthy and exercising.
iv. Because I would be humiliated if people thought I was not in control of my eating and exercise behaviors.
External regulation
   i. Because other people insist that I do.
   ii. Because other people close to me (eg, partners or parents) will be upset if I do not.
   iii. People around me nag me to do it.
   iv. Because it is expected of me.

Amotivation
   i. I do not really know; I truly have the impression I am wasting my time.
   ii. I do not know why I bother.
   iii. Honestly, I do not know. I cannot see what I am getting out of it.
   iv. I do not know. I cannot see how my efforts to eat healthy and exercise are helping my health situation.

Scenario Realism
   i. This scenario is believable
   ii. It’s possible that I could encounter a situation like this in real life
   iii. It’s difficult to imagine myself in this scenario* (reverse scored)

Message Realism
   i. This message is believable
   ii. It’s possible that I could encounter a message like this in real life
   iii. It’s difficult to imagine myself hearing this message* (reverse scored)

Message Quality
Person-Centeredness:
   i. This message focuses my feelings
   ii. This message criticizes my feelings
   iii. This message helps me understand my feelings and situation
   iv. The message validates my feelings.

Situational-Counterarguments
   i. This message provides helpful tips
   ii. This message gives suggestions that I could probably implement
   iii. This message gives suggestions that would have serious drawbacks* (reverse scored)
   iv. This message helps me see ways to overcome weight management challenges

Self-Efficacy Affirmation
   i. This message would help me feel more confident in my ability to manage my weight
   ii. This message helps me feel capable of handling my weight management
iii. This message helps me feel able to meet the challenge of managing my weight
iv. This message helps me feel worthy of taking care of my health

Call to Action
i. This message motivates me to take immediate action
ii. This message encourages me to take small, concrete steps
iii. This message encourages me to take action toward my weight loss goals
iv. This message

Message Effectiveness
This message was:
   i. Helpful/unhelpful
   ii. Appropriate/inappropriate
   iii. Sensitive/Insensitive
   iv. Supportive/Unsupportive
   v. Effective/Ineffective
   vi. Successful/unsuccessful
   vii. Appropriate/Inappropriate

Behavioral Intention
i. I would refocus my efforts to exercise for the next month
   I would prioritize exercising for the next month
ii. I would prioritize exercising for the next month
iii. I would try to improve my exercise for the next month
iv. I would work harder to exercise for the next month

General Motivation
i. Would be effective in motivating me to eat healthy
ii. Would motivate me to make positive changes in my eating choices

Health & Weight Management

Height & Weight for BMI:
What is your height in feet and inches?

What is your current weight in pounds?
General Health Status:
How would you rate your general health status?

Satisfaction with Life Subjective Wellbeing Scale:
i. In most ways my life is close to ideal
ii. The conditions of my life are excellent
iii. I am satisfied with my life
iv. So far I have gotten the important things I want in life.
v. If I could live my life over, I would change almost nothing
vi. I am as happy now as when I was younger

Nutrition:
How many times a week do you eat fast food meals?
How many servings of fruit or vegetables do you eat each day?
How many regular sodas or glasses of sweet tea do you drink each day? (one glass is an 8 oz serving)
How many times a week do you eat beans (like pinto or black beans), chicken or fish?
How many times a week do you eat salty snacks like chips or crackers?
How many times a week do you eat desserts and other sweets?

Eating Behavior:
I carefully watch the quantity of food which I eat
I eat and just can’t seem to stop
My emotions cause me to eat
I eat when I’m not really hungry

Exercise Behavior:
How many times a week do you typically exercise?

Exercise Intensity:
How many of these exercise sessions each week are moderate or vigorous in intensity?

Exercise Duration:
What is the duration of a typical exercise session?

Exercise Limitation:
In the past 6 months, have you had any health conditions prevent or limit your ability to exercise?
Current Weight Loss Efforts:
Are you currently actively trying to lose weight?

Weight Loss Program:
Do you currently participate in a weight loss program?
(For example, Weight Watchers, Jenny Craig, Overeaters Anonymous, workplace wellness programs, or local support groups)
### Appendix H: Health Characteristics of Participants

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N</th>
<th>%</th>
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<tbody>
<tr>
<td><strong>Self-rated health</strong></td>
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<td></td>
</tr>
<tr>
<td>Very poor - poor</td>
<td>77</td>
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