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Getting Old At The Top: The Role Of Affective Abilities And Leadership Role Characteristics In The Relationship Between Age And Leadership Behaviors

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GETTING OLD AT THE TOP: THE ROLE OF AFFECTIVE ABILITIES AND LEADERSHIP ROLE CHARACTERISTICS IN THE RELATIONSHIP BETWEEN AGE AND LEADERSHIP BEHAVIORS

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DEDICATION

I dedicate this dissertation to my family. Without Mom, Dad, and Claire none of this would have been possible. They have provided me constant support in every form not just in graduate school, but in every step of my life. My Mom has always been the inspiration for me to follow whatever dreams I have in my head at the time. She has shown me that with hard work and dedication you can achieve great things. My Dad has always been the inspiration for me to be the best person I can possibly be outside of work and school. His compassion and listening ear have always been a benchmark I strive to achieve. Lastly, Claire has motivated me through some of the most challenging times in my life by the pure drive to give her something to look up to. I'm so excited that as I'm finishing this stage of my life she is beginning a stage in her life where I now look up to her.

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CHAPTER 1: AN INTRODUCTION TO THE AGING LEADER

Leadership behaviors and the outcomes they foster have historically been a central issue to both organizational researchers and practitioners alike. Interestingly, though, as the workforce continues to age, with reports suggesting 27% of the workforce will be over the age of 55 by 2022 (Bureau of Labor Statistic, 2014), reviews of the literature on age and leadership highlight the scarcity of such research (Avolio & Gibbons, 1988; Zacher, Clark, Anderson, & Ayoko, 2015; Walter & Scheibe, 2013). Zacher and colleagues highlight this issue in their recent chapter on leadership across the life span, stating, "Hardly any theoretical or empirical work exists in the leadership literature on the influences of leader age, follower age, age-related changes, and leader-follower age differences on leader behavior, follower attribution and identification processes, and leadership effectiveness" (p. 88).

The importance of issues surrounding the relationship between age and leadership is reflected in recent theoretical reviews from both the leadership as well as the lifespan literatures. These reviews are consistent in their calls for research on the processes and boundary conditions surrounding the relationship between age and various leadership behaviors and outcomes (Rosing & Jungmann, 2015; Walter & Scheibe, 2013; Zacher et al., 2015). In an attempt to address these issues, the current dissertation is designed to investigate the question, "How does age influence leadership behaviors?". The proposed study also aims to further the understanding of age-leadership relationships, through an examination of how the relationship between age and various affective abilities (positivity, empathy, and emotion regulation) interact with characteristics of leadership roles (see Figure 1 for a general theoretical model).

CHAPTER 2: LITERATURE REVIEW AND HYPOTHESES

There is a large body of literature examining the relationship between age and a wide variety of work outcomes, both performance based and attitudinal (for reviews, see Cleveland & Lim, 2007; Heggestad & Andrew, 2012; McDaniel, Pesta, & Banks, 1994). This body of literature generally finds increases in positive work attitudes with age, alongside ambiguous trends in the relationship between age and job performance. While age-performance trajectories are generally non-significant for general task behaviors, these effects are moderated by characteristics of the job. In a meta-analysis examining the effect of age on job performance, Sturman (2003) found that in their overarching sample containing employees ranging in age from of 17 to 65 years old, older workers displayed stronger performance in more complex jobs. Sturman explains the increased task-performance of older workers in complex jobs as being associated with the importance of experience and accumulated, or crystallized, knowledge in such settings. Furthermore, meta-analytic evidence suggests that older workers tend engage in more contextual work behaviors than their younger counterparts (e.g., citizenship behaviors, counter-productive workplace behaviors, interpersonal relations; Ng & Feldman, 2008).

As leadership roles are often defined as requiring both experience and interpersonal behaviors, the research on age and job performance would lead one to assume that older individuals display more effective leadership behaviors. However, reviews of the age and leadership literature (e.g., Walter & Scheibe, 2013; Zacher et al., 2015) suggest that the relationship between age and leadership behaviors (i.e., task, change-oriented, and relational) is somewhat more complex.

As is the issue with much of the research on age and work outcomes, the ambiguous findings surrounding age and leadership behaviors can be attributed to a lack of research on

mediators and boundary conditions (Walter & Scheibe, 2013). In the following sections, I will review the existing literature on age and leadership, I will then review the literature on age and affective abilities highlighting their role in the process through which age leads to changes in leadership behaviors.

Age and Leadership

Leadership has historically been studied from both a trait and a behavioral perspective (DeRue, Nahrgang, Wellman, & Humphrey, 2011). Research taking the trait approach has examined a wide range of individual characteristics such as personality, skills and abilities, and demographics (e.g., DeRue et al., 2011; Judge, Bono, Ilies, & Gerhardt, 2002; Mumford, Campion, & Morgeson, 2007) in an effort to describe what effective leaders are like. On the other hand, research on the behaviors associated with leadership describes what leaders do, using a variety of behavioral dimensions that are associated with effective leadership. For example, theories of transactional, transformational, and authentic leadership attempt to define the various behaviors surrounding task, change-oriented, and relational behaviors displayed by effective leaders (Avolio, Walumbwa, & Weber, 2009; Bass, 1985; Yukl, 2013). While recent research has attempted to integrate these two approaches, with meta-analyses examining the relationships between various traits and leadership behaviors (e.g., DeRue et al., 2011; Eagly & Johnson, 1990; Eagly, Johannesen-Schmidt, & van Engen, 2003), the direct effect of age on leadership behaviors has been noticeably absent from these studies.

Recent reviews of the age-leadership literature (Rosling & Jungmann, 2015; Walter & Scheibe, 2013; Zacher et al., 2015) highlight the scarcity of research on age and leadership behaviors, and suggest that the research that does exist lacks empirical tests of the mediators and moderators that may influence relationships. While the current state of the age-leadership

literature is somewhat sparse, there is a small and important body of research on the effect of age on various leadership behaviors. In their review of the research on age and leadership, Walter and Scheibe (2013) identify 20 studies that directly examine the relationship between age and some form of leadership behavior. While this seems like an especially small number of studies considering the large body of research on leader traits, research on the effect of age on various leadership behaviors has established a number of important relationships, with evidence for emerging trends in some areas alongside unresolved conflicts in others.

Defining leadership behaviors. The research on leadership behaviors presents a number of behavioral paradigms for describing the various behaviors displayed by leaders (DeRue et al., 2011). For example, early behavioral theories that grew out of the Ohio State Leadership Studies (Stogdill, 1969) describe initiating structure (e.g., establishing rewards, organizing activities, clarifying roles) and consideration (e.g. being friendly, treating followers as equals, being concerned for follower well-being) as two domains under which leadership behaviors generally fall (Judge, Piccolo, & Ilies, 2004; Stogdill, 1969). Full-range leadership theory has extended the domains of initiating structure and consideration to focus on a broader set of behaviors that describe transformational, transactional, and laissez-faire leadership behaviors (Avolio, Sosik, Jung, & Berson, 2003; Bass, 1985). Within the full-range model, transactional leadership is broken down into dimensions of contingent reward and management by exception. Whereas contingent reward describes behaviors associated with general managerial tasks (e.g., using rewards to motivate behavior), management by exception describes leadership behaviors that are reactive to deviations from the norm (e.g., offering performance incentives to a low performing employee). The transformational dimensions of the full range model focus largely on behaviors that motivate followers through the establishment of a common vision. This set of behaviors

engage employees through leaders establishing quality behavioral examples (idealized influence), energizing followers through charismatic behaviors (inspirational motivation), presenting followers with difficult and challenging goals and standards (intellectual stimulation), and attending to the needs and values of individual group members (individualized consideration) (Avolio et al., 2003; Bass, 1985).

In their integrative meta-analysis on leadership behaviors and traits, DeRue et al. (2011) highlight how, even though the behavioral theories described above have dominated the research on how leadership behaviors are related to leadership effectiveness, specific behavioral components are often examined in isolation from one another. The authors propose that across behavioral leadership theories, behaviors can be broken down into the dimensions of task, change-oriented, and relational leadership behaviors. This taxonomy is also applied in the literature on managerial performance and development (Braddy, Gooty, Fleenor, & Yammarino, 2014; Scullen, Mount, & Judge, 2003) as well as within reviews of the research on age-leadership behaviors (Walter & Scheibe, 2013; Zacher et al., 2015).

These broad conceptualizations of task, relational, and change-oriented behaviors also mirror the behavioral dimensions of task, contextual, and innovative behaviors that have been widely accepted in the large body of literature on overarching job performance (e.g., Rotundo & Sackett, 2002; McDaniel et al., 2004; Ng & Feldman; 2013, 2008). As such, the current dissertation will apply a taxonomy of task, change-oriented, and relational leadership behaviors for two main reasons. First, as the small body of literature on age and leadership behaviors measures a wide range of leadership behaviors across multiple theories, these dimensions allow me to encompass the wide variety of leadership behaviors that are related to managerial performance across multiple levels of leadership (i.e., mid-level and executive). Second, this

taxonomy allows for the application of parallel insights from the age - job performance literature in an effort to establish theoretical foundations for the expected relationship between age and leadership behaviors.

Task, relational, and change-oriented behaviors. The dimensions of task, relational, and change-oriented leadership behaviors are defined as:

- Task: Behaviors directly associated with efficient and effective follower performance (e.g., initiating structure, contingent reward).
- Relational: Behaviors that focus on quality interpersonal relationships (e.g., mentoring, empowerment, participative leadership).
- Change-oriented: Behaviors that prepare for, and facilitate, change and adaptation of both followers and the organization as a whole (e.g., transformational leadership, innovation, risk taking) (DeRue et al., 2011; Yukl, 2013).

Similar to the dimensions of leadership defined above, the job performance literature identifies task, contextual, and innovative behaviors as sub-dimensions comprising overarching job performance (Ng & Feldman, 2008; Rotundo & Sackett, 2002). Although leadership behaviors are distinct from these general job performance dimensions, the well-established literature on age and job performance offers some parallel insights across the dimensions of leadership behaviors. For example, multiple meta-analyses on the relationship between age and multi-dimensional job performance generally find null effects of age on task and innovative performance, with positive relationships between age and contextual performance (Avolio & Waldman, 1994; Martocchio, 1989; McEvoy & Cascio, 1989; Ng & Feldman, 2013; 2008).

While the research on age and leadership behaviors is much less abundant than that on age and job performance, studies that do examine the relationship between age and leadership

behaviors find null effects of age on task leadership behaviors similar to that seen in age-job performance studies (e.g., Doherty, 1997; Gilbert, Collins, & Brenner, 1990; Vecchio, 1993). The research on change-oriented leadership behaviors tends to show decreases with age, which is inconsistent with the null age-innovative performance relationships seen in the job performance literature. The handful of studies that examine age and relational leadership behaviors offer conflicting findings, with some studies finding that older leaders display fewer relational behaviors, while others suggest an increase in these behaviors with age. This suggests that, although there may be some parallels between job performance and leadership behaviors regarding the effect of age, there is a need to further develop an understanding of the nature of age-leadership relationships.

As with the large body of research on individual characteristics and leadership, the literature on age and job performance lacks an investigation of leadership as an important outcome. What the age-job performance literature does offer, however, is some theoretical explanations (i.e., changes in affect and motivation, coping behaviors, and job characteristics) for the relationships seen between age and various work behaviors that directly apply to the relationship between age and leadership behaviors. I will next review the literature on the relationship between age and leadership behaviors (for a full review see, Walter & Scheibe, 2013).

Task leadership behaviors. Task leadership behaviors are defined as behaviors exhibited by a leader that allow for the general performance of followers and maintenance of organizational functioning (Yukl, 2013). For example, contingent reward or transactional leadership behaviors describe leadership activities that foster performance through a system of rewards for behaviors. These behaviors may involve setting up systems to ensure that

expectations for performance are clear, and that employees understand the rewards associated with meeting such expectations (Judge & Piccolo, 2004). Research on the relationship between age and task leadership behaviors generally finds that older and younger leaders engage in these behaviors equally (Barbuto, Fritz, Matkin, & Marx, 2007; Ng & Sears, 2012; Zacher, Rosing, & Frese, 2011). For example, in a study looking at the role of legacy beliefs in the age-leadership relationship, Zacher et al. (2011) found that, while there is an interaction between age and legacy beliefs in predicting university professors' transactional leadership behaviors, older and younger leaders display equal levels of transactional leadership. Barbuto et al. (2007) give a more detailed picture of the effect of age on leadership behaviors in their study of the relationship between demographic characteristics and full-range leadership behaviors. The authors sampled leaders and followers from a variety of industries, with followers rating their leaders on all nine dimensions of full range leadership. Their findings show that, while there are some age differences across transformational dimensions of leadership, there is no direct effect of age on transactional leadership behaviors.

These examples suggest that younger and older leaders engage in basic task leadership behaviors equally. Although this trend of null effects is generally seen across all studies examining age and task leadership behaviors, Pinder and Pinto (1974) did find that when various management profiles were examined, age differences on some task leadership behaviors were present. More specifically, the authors first conducted a cluster analysis to create management profiles based on various leadership behaviors, and then examined the age makeup of the resulting clusters. Contradictory to the null effects of age and task leadership behaviors seen across all other studies looking at these relationships, Pinder and Pinto found that the oldest leaders in their sample were most likely to engage in specific scheduling, establishing priorities,

and giving subordinates specific orders – clearly task leadership behaviors. While these results stem from comparisons across various leader profiles where age was only one component of the profiles, as opposed to a direct age-leadership behavior analysis, the authors do offer some interesting explanations surrounding the motivations of leaders across the lifespan. The authors suggest that differences seen in the makeup of leadership clusters by age may be due to variance in attitudes between younger and older leaders. They suggest that younger leaders are driven to establish themselves early in their career by engaging in behaviors displaying independence, leading to decreases in interpersonal behaviors and increases in impulsivity. This explanation highlights a motivational and affective component that may be underlying some of the differences observed between younger and older leaders.

While there are only a handful of studies that report relationships between age and task leadership behaviors, the literature on age and general task performance is much more established and offers some parallel insights into the null effects of age on task leadership behaviors. The parallel null effects seen between the age-task performance and age-task leadership behaviors literature can most likely be explained by the strength of the situation surrounding task behaviors in both domains. Multiple meta-analyses on the age-task performance relationship consistently find null effects (e.g., McEvoy & Cascio, 1989; Ng & Feldman, 2008), with these effects being explained by the nature of task behaviors as essential for job performance. Within the domain of leadership behaviors, it is likely that tasks such as scheduling, establishing expectations, and ensuring rewards for performance, for example, are essential to leadership performance and exist in a similar strong situation to other task performance behaviors. Even though the literature on the effect of age on job performance suggests that there are null effects of age on task leadership behaviors, it is likely that leadership

roles contain tasks that are different from those evaluated in age-job performance studies. As leadership roles are often characterized by more autonomy than non-leadership roles, it is also likely that the tasks associated with leadership roles exist in a somewhat weaker situation. The potential differences in leader and non-leader job roles along with the small body of research on the relationship between age and task leadership behaviors create an unclear picture of this effect. As such, I ask the following research question.

Research Question 1: What is the relationship between age and the frequency of task-oriented leadership behaviors?

Change-oriented leadership behaviors. Change-oriented leadership behaviors are defined as behaviors displayed by leaders that foster and manage effective change for both followers and the organization (Yukl, 2013). Behaviors such as charismatic and inspirational leadership, as well as the inspirational motivation, idealized influence, and intellectual stimulation dimensions of transformational leadership can be classified as change-oriented leadership behaviors as they are focused on motivating and challenging followers towards positive change (DeRue et al., 2011). While DeRue et al. (2011) classify all transformational leadership behaviors as change-oriented, individual consideration, defined as attending to the needs and values of individual group members as they pertain to an overarching vision (Bass, 1985), fits more closely with the theoretical definition of relational leadership. Leader behaviors that are associated with innovation, risk taking, and change management are also classified as change-oriented (Ng & Feldman, 2013; Walter & Scheibe, 2013), as they are focused on organization-level change.

Research on the relationship between age and change-oriented leadership behaviors generally finds that older leaders are less likely to engage in change-oriented behaviors than their

younger counterparts (Walter & Scheibe, 2013). Taking a closer look at the literature examining the relationship between age and change-oriented leadership behaviors, studies can generally be broken into two main categories based on how change-oriented behaviors are defined. The first, and most common, group of studies examines the effect of age on risk-taking and innovative behaviors. These studies generally find that younger leaders engage in more risk-taking in military battles (Simonton, 1980), spend more resources on research and development (Barker & Mueller, 2002; McClelland & O'Brien, 2011), and show a higher tolerance for risk (Karami, Analoui, & Kakabadse, 2005). Research examining the effect of age on transformational leadership behaviors (e.g., Ng & Spears, 2012; Zacher, Rosing, & Frese, 2011) comprises a second group of studies. Interestingly, the few studies that focus on the relationship between age and the dimensions of transformational leadership display results that are somewhat less consistent than those that focus on risk or innovation.

Findings that reflect the effect of age on transformational leadership holistically have found null effects (Ng & Spears, 2012; Zacher et al., 2011); however, studies that examine the dimensions separately show negative, null, and positive effect sizes, depending on the specific behaviors investigated. For example, Zacher et al. (2011) found that in a sample of university professors, there was no relationship between age and overall transformational leadership behaviors. The authors also looked at the dimensions of intellectual stimulation and idealized influence separately, finding a negative relationship between age and intellectual stimulation, and a null effect of age on idealized influence. One limitation of this study, however, is the use of university professors and their research assistants. It may be that in academic relationships, the nature of behaviors associated with intellectual stimulation and idealized influence are different than in more managerial leadership roles. For example, a professor's ability to stimulate a

student intellectually could be viewed as a key component, or even as a task behavior. A similar issue may be present in studies examining risk taking among military leaders (Simonton, 1980). For example, motivating individuals to move beyond their own well-being in pursuit of a greater goal could be defined as a task behavior necessary for military leaders to be successful.

This difference is highlighted in Oshagbemi's (2004) study examining transformational leadership behaviors among managers from various industries. In this study, the author found that, when age differences were examined across change-oriented transformational leadership dimensions, younger leaders displayed more idealized influence behaviors, while older and younger leaders engaged in intellectual stimulation and inspirational motivation equally. However, as with many of the studies examining relational leadership behaviors, these findings were based on small mean differences, highlighting the need for stronger methodological approaches to questions surrounding age and leadership.

The above findings suggest that older leaders engage in less risk-taking and innovation-related behaviors, with conflicting relationships among the transformational leadership behaviors. These findings suggest that while some age effects may increase the frequency of change-oriented behaviors, others may hinder such behaviors. As such I ask the following research question:

Research Question 2: What is the effect of age on change-oriented leadership behaviors?

Relational leadership behaviors. Relational leadership behaviors are defined as behaviors that are targeted at fostering and maintaining quality relationships within the workplace (Yukl, 2013). For example, both consideration and participative leadership behaviors are considered relational, as they have a central focus on follower inclusion in decisions (DeRue et al., 2011). The individualized consideration dimension of transformational leadership can also

be classified as relational, as it is defined by behaviors that display genuine concern for the individual needs and goals of one's followers (Bass, 1985). Behaviors that involve mentoring or sponsorship involve the development of quality leader-follower relationships in an effort to drive performance, and are thus classified as relational in nature, as well. Research on the relationship between age and relational leadership behaviors has yielded conflicting findings of null, positive, and negative effects across various studies. While these conflicting results come from only a handful of five studies, a more detailed look at this small body of literature offers some insights into the state of the research on age and relational leadership behaviors.

Looking at the five studies examining age and relational leadership behaviors reviewed by Walter and Scheibe (2013), the conflicting results between age and relational leadership behaviors appear to be, in part, due to an effect of rating source. More specifically, the two studies that apply leader ratings of behavior frequency show a positive relationship with participative (Oshagbemi, 2004) and interpersonal (Pinder & Pinto, 1974) leadership behaviors. Two of the three studies that examine age and relational behaviors from the followers' perspective however find a negative relationship (Gilbert et al., 1990; Vecchio, 1993), with one showing no relationship (Barbuto et al., 2007). While these findings do indeed suggest that older leaders rate themselves higher on relational behaviors, with their followers rating them lower, a closer look at these studies suggests the results may be more methodological in origin.

Aside from it being inappropriate to infer the existence of trends based on only these five studies, some of the studies described above examine age-leadership relationships using frameworks that do not necessarily fit into the behavioral taxonomy applied in the current dissertation. Furthermore, some of the findings, while interesting empirically, are based on small mean differences that may lack practical significance. For example, Gilbert et al. (1990) found

that older leaders are less "enjoyable" and engage in less "friendship". While these findings may suggest lower levels of relational leadership behaviors, the authors' behavioral dimensions do not directly fit the definition of relational leadership that has become established within the literature (i.e., DeRue et al., 2011; Yukl, 2013). For example, the authors operationally define "friendship" in a leadership context as "*getting together outside of work*" and "*socializing with one another's family*". While this does seem to be a relational behavior, it is not necessarily related to leadership within an organization. On the other hand, the author's conceptualization of "enjoyableness" does fit the relational leadership definition and is focused on maintaining a positive work environment for followers. The authors' findings do point to lower levels of "enjoyableness" by older leaders; however, this conclusion is based on a mean comparison within a large sample that shows differences of only .35 on a 5-point Likert scale (Over 55 = 3.32, Less than 31 = 3.67). While these findings do represent a statistically significant difference in behaviors displayed by older and younger leaders, these small differences likely do not represent a practically noticeable difference between the two groups. A similar issue can be seen in Oshagbemi (2004), where results suggest that leader-rated relational behaviors are more frequent in older leaders. Here again, these findings represent a statistically significant difference based on mean comparisons showing small mean differences on participative leadership (50 and up = 3.24, 49 and down = 2.95). Two other studies base their conclusions on cluster analyses, using mean cluster age to determine effects (Pinder & Pinto, 1970), and a sample of principals and teachers (Vecchio, 1993). Barbuto et al. (2007) conducted a methodologically strong study of age and leadership behaviors, applying multivariate analyses to test the relationship between age and various leadership behaviors in a sample of managers varying in level and industry – finding null effects of age and relational leadership behaviors.

The studies discussed above highlight important age-leadership behavior relationships across various leader profiles, as well as leaders in various settings. However, across these studies the authors take very different approaches to what defines relational leadership behaviors, as well as the context within which they examine age-leadership relationships.

The literature on age and job performance offers some parallel insights regarding the relationship between age and relational leadership behaviors. Within the literature on age and job performance, older individuals are consistently shown to display higher frequencies of contextual workplace behaviors than younger employees (Cleveland & Lim, 2007; Ng & Feldman, 2008). Contextual workplace, or citizenship, behaviors are defined as those that go above and beyond normal organizational functioning (Rotundo & Sackett, 2002). These behaviors include, helping and cooperating with others, demonstrating effort, and supporting organizational objectives (Cleveland & Lim, 2007; Rotundo & Sackett, 2002). It is within these behavioral domains that positive age-performance relationships are most consistently demonstrated. For example, in a meta-analysis examining the effect of age on multi-dimensional job performance, Ng and Feldman (2008) found the strongest age effects to be with citizenship behaviors targeted at the organization and tasks. While the research on age and relational leadership behaviors offers some conflicting findings, many of the contextual workplace behaviors defined in the job performance literature align with relational leadership behaviors. For example, relational leadership behaviors such as consideration and empowerment (DeRue et al., 2011) align with the contextual behaviors of helping and cooperating, and supporting organizational objectives (Cleveland & Lim, 2007; Rotundo & Sackett, 2002). Applying the literature on age and contextual workplace behaviors to the effect of age on relational leadership behaviors, it is expected that similar positive effects will exist. As such I hypothesize the following:

Hypothesis 1: There is a positive relationship between age and relational leadership behaviors.

Age and Affective Abilities

Research on age and affective abilities consistently highlights a process of losses (e.g., Charles, 2010) and gains (e.g., Blanchard-Fields, 2007) experienced by individuals later in life. These losses and gains are specifically discussed as influencing individuals' emotion recognition and regulation, positive affect, and empathy. Losses experienced in the domain of emotion recognition are described as being a function of declines in older individuals' ability to attend to subtle and ambiguous emotion cues (Labouvie-Vief, 2003; Zhao, Zimmer, Shen, Chen, & Fu, 2016). These declines in emotion recognition are often associated with declines in empathy – an ability that is rooted in the recognition of others' emotions (Blanke, Rauers, & Riediger, 2016). Research also demonstrates that older individuals experience declines in high-activation negative emotions such as anger and stress (Richter & Kunzmann, 2011).

Hypothesis 2: There is a negative relationship between age and empathy.

Pertaining to gains, increases in emotion regulation (e.g., Scheibe & Carstensen, 2010) and positivity (e.g., Gana, Saad, Amieva, 2014) are consistently seen in older individuals. Increases observed in older individuals' propensity to experience positive emotions as well as their ability to better regulate their emotions are generally described as being a function of both accumulated life experience (Hess & Auman, 2001; Staudinger & Pasupathi, 2000) and increases in proactive emotion-focused coping strategies (Carstensen, Isaacowitz, & Charles, 1999; Scheibe & Carstensen, 2010). More specifically, Staudinger and Pasupathi (2000) define *life pragmatics* as an ability rooted in the accumulated social skill one develops over time. Furthermore, theories such as socio-emotional selectivity theory (SEST; Carstensen, 1992;

Carstensen et al., 1999) and SOC-ER (Urry & Gross, 2010) highlight older individuals' tendency to focus on positive as opposed to negative stimuli. As the current dissertation focuses on increases in emotion regulation and positivity, I will next review the literature on age and these abilities through the lens of relevant age and affective theories (i.e., SEST, SOC-ER).

Positivity and emotion regulation. Research on the relationship between age and affectivity generally finds that as individuals age, they experience more low-activation positive emotions (i.e., contentment, satisfaction), while the frequency of high-activation positive emotions (i.e., excitement, enthusiasm) and low-activation negative emotions (i.e., depression, lethargy) remain stable (Gana et al., 2015; Scheibe et al., 2013). Along with age effects on the experience of discrete emotions, older individuals also report lower levels of general negative affectivity (Gana et al., 2015). Although there is some evidence that these losses and gains are a result of changes in brain structures associated with emotional processing, Scheibe and Carstensen (2010) highlight how changes in cognitive and behavioral coping strategies are much more parsimonious explanation. More specifically, the effect of age on how individuals experience emotions can be explained through strategies used by older individuals in the process of selecting and attending to various stimuli in their environment (Rovenpor, Skogsberg, & Isaacowitz, 2013; Scheibe & Carstensen, 2010). Changes in how older individuals attend to their environment can broadly be explained by increases in antecedent, as opposed to response, based regulation (Scheibe & Carstensen, 2010). Antecedent-based regulation explains increases in general positivity through older individuals' propensity to proactively engage in cognitive strategies and environment selection before emotional responses occur (Scheibe & Carstensen, 2010).

SEST highlights older individuals' use of antecedent based regulation through the suggestion that social interactions are driven by various social goals that change with age (Carstensen, 1995). Within SEST, social goals are conceptualized as either knowledge- or emotion-related. Younger individuals, who perceive they have limitless time left, are likely to focus on knowledge-related goals. On the other hand, as individuals age, and their perceived time left decreases, they experience a shift toward focusing more on emotion-related social goals (Carstensen, Isaacowitz, & Charles, 1999). This shift to social goals manifests itself in a quality over quantity effect pertaining to social interactions (Richter & Kunzmann, 2011; Scheibe et al., 2013; Walter & Scheibe, 2013).

The tendency for older individuals to focus on emotion related goals while selecting positive over negative stimuli, is further developed in Urry and Gross' (2010) definition of SOC-ER. SOC-ER posits that individuals compensate for various losses in emotional abilities by selecting and optimizing emotion regulation strategies that build on their strengths. Urry and Gross apply components of SEST theory within SOC-ER to help explain the increases in both positivity and emotion regulation seen in later life.

Rovenpor et al. (2013) highlight the interaction of positivity and emotion regulation in a study examining differences in situation selection between younger and older individuals. The authors conducted a lab study wherein individuals were placed in a room with a number of positive, negative, and neutral items (e.g., magazine, movies, etc.) to interact with. Their findings demonstrate that, although there was no main effect of age on stimuli selection, when older individuals were high in emotion regulation they were more likely to interact with positive stimuli. The authors findings, coupled with theoretical propositions made by SEST and SOC-ER, suggest that older individuals apply various cognitive and behavior strategies in an effort to

maintain positivity and in an effort to achieve emotion focused goals. Based on this I hypothesize the following:

Hypothesis 3: There is a positive relationship between age and positivity.

Hypothesis 4: There is a positive relationship between age and emotion regulation.

Affective abilities and relational leadership behaviors. In their review of affect and leadership, Gooty, Connelly, Griffith, and Gupta (201) discuss how leadership behaviors are deeply rooted in affective and emotional processes. The authors highlight that while research on emotions and leadership is largely rooted in theory (i.e., affective events theory, emotional intelligence), "much remains to be done in the domain of explanatory theory" (p. 998). The current dissertation applies lifespan theories (i.e., SEST, SOC-ER) to explain the relationship between age and relational leadership behaviors. The relationship between age and both positivity and emotional regulation is primary discussed as being a function of older individuals' propensity towards quality social interactions (SEST: Carstensen, 1992) and situations that allow for the use of antecedent-based emotion regulation (Scheibe & Carstensen, 2010; Urry & Gross, 2010). While these theories describe affective changes that likely influence a number of domains across an individual's life, they are largely rooted in the social environment. As such it is expected that changes in affective abilities will play a role on how age influences the relational components of leadership. Based on this the following is hypothesized:

Hypothesis 5: The positive relationship between age and relational leadership behaviors is mediated by the positive effect of age on positivity.

Hypothesis 6: The positive relationship between age and relational leadership behaviors is mediated by the positive effect of age on emotion regulation.

Leader level as a moderator. The literature on the relationship between age and job performance consistently points to job complexity, or the cognitive demands of the job, as a moderator of the relationship between age and job performance (Sturman, 2003; McDaniel et al., 2012; Ng & Feldman, 2008). More specifically, while age-job performance trajectories generally display small positive effects, older individuals tend to more positive outcomes in jobs that require the application of accumulated experience. On the other hand, older individuals experience worse outcomes when the application of flexible thinking to novel situations is required (e.g., Sturman, 2003; Walter & Scheibe, 2013). This effect is explained through the age-related losses and gains experienced within the domains of fluid and crystallized intelligence.

As individuals age, they experience gains in crystallized intelligence (accumulated knowledge) and losses in fluid intelligence (ability to process new information) (Kanfer & Ackerman, 2004; McDaniel et al., 2012). From a performance standpoint, this means that older individuals perform better than their younger counterparts in jobs where they can rely on their accumulated experience and knowledge. On the other hand, when job demands require flexible adaptation to novel and dynamic situations, older individuals likely see worse performance outcomes compared to younger employees. McDaniel et al. (2012) point to this interaction between age and job complexity as "…the most parsimonious explanation for the effects of age on work performance" (p. 285).

Although there have been no studies to date that test the moderating effect of cognitive and affective demands on the relationship between age and leadership behaviors, there are theoretical reasons to support this idea. Walter and Scheibe (2013) propose a theoretical model of age and leadership behaviors that highlights both the cognitive and emotional demands of leadership positions as potential moderators in the process. The authors suggest that leadership

roles that require the stable application of accumulated experiential knowledge facilitate the emotional gains associated with age, leading to increased performance across the various leadership behaviors. Conversely, complex leadership roles that rely more heavily on the application of fluid intelligence may undermine the positive effects of age-related gains in emotional abilities, leading to worse outcomes across leadership behaviors.

One approach to defining the complexity of leadership roles can be drawn from the organizational theory literature and span of control (Havaei, Dahinten, & MacPhee, 2015; Katz & Kahn, 1966). Span of control is defined as the number of people directly supervised by a manager, and is associated with varying levels of cognitive and affective demands, depending on a leader's level within the organization (Katz & Kahn, 1966). Katz and Kahn specifically highlight leadership at lower organizational levels (i.e., mid-level managers) as characterized by technical knowledge and an understanding of systems and rewards. As one moves up the organizational chart to the executive level, leadership is characterized by decreased structure, and an increased focus on the broader system. These differences in leadership structure based on organizational level suggest that leaders in lower level roles likely benefit from the application of accumulated experience, or crystallized knowledge, while the abstract and unstructured nature present in higher levels creates a reliance on fluid and adaptable cognitive functioning. This thinking suggests that older leaders may display more positive leadership behaviors when they are in lower level roles due to reduced reliance on fluid intelligence. On the other hand, the age-related benefits of affective changes are likely undermined by the cognitive demands present in higher-level leadership roles. The skills and knowledge required at lower and upper levels of leadership are not necessarily discrete. It is likely that upper level leaders grew into these roles based on the skills developed at lower levels. It may be that the cognitive demands of different

leadership roles are perceived differently based on varying skill sets necessary. Research on age and coping (i.e., SOC-ER) also suggests that individuals engage in coping strategies to compensate for such losses. As such, it may be that older leaders who are in higher-level positions have developed coping strategies to compensate for increased cognitive and affective demands that allow them to maintain performance. Based on this I ask the following research questions.

Research Question 3: How does the role of affective abilities in age-leadership relationships behaviors differ for mid-level managers and executives?

CHAPTER 3: METHOD

Participants and Procedure

Participants for this dissertation include 618 working managers and executives who have participated in a leadership development program through the Center for Creative Leadership (CCL). The mean age of the sample was 42.57 years old with ages ranging from 19 to 64 years old, with 56% of the sample comprising female leaders. Leader level within the organization was also used in the current dissertation. The majority of leaders were either executives (43%) or upper middle managers (29%), with others being in first level (2%), middle (9%), and top management (8%) positions.

CCL makes 360-degree feedback data (ratings from peers, subordinates, supervisors, and self) from development programs available to researchers who have submitted a proposal that is deemed to contain novel theoretical contributions as well as methodological rigor. The current dissertation uses measures from the CCL Benchmarks survey, as well as a linked administration of the California Psychological Inventory (CPI). The Benchmarks survey contains responses from peers, direct reports, supervisors, and self-reports. For the purposes of this dissertation, only self-report data from both the Benchmarks and CPI scales was used.

The CPI (Gough & Bradley, 1996) contains 260 dichotomous items measuring 18 psychological dimensions (i.e., empathy, sensitivity, leadership potential). Previous research on leadership behaviors has applied the 360-Benchmark tools finding it to be a valid measure of task, relational, and change behaviors (Braddy et al., 2014; Fleenor et al., 2010; Kulas, 2013; Scullen et al., 2003).

Measures

Leadership behaviors. The CCL Benchmarks survey was used to measure task, relational, and change-oriented leadership behaviors. In total, the Benchmarks survey contains 155 items measured on a 5-point Likert scale reflecting how much an individual perceives him/herself to display each behavior (1 = Strongly Disagree, 5 = Strongly Agree). The Benchmarks items are targeted at measuring leadership behaviors and performance across 16 dimensions (i.e., change management, participative leadership, leadership derailment).

After personal communication with a Senior Research Scientist at CCL, it became clear that although CCL uses these dimensions for the purpose of leadership development, they were not created entirely on the basis of their psychometric properties. Although the dimensions of the Benchmarks survey were not developed based solely on a psychometric analysis, research examining the structure of the Benchmarks survey has found that the items do load onto psychometrically independent dimensions (Scullen et al., 2003). Specifically, in their examination of the construct validity of developmental leadership ratings, Scullen and colleagues found that, across the CCL Benchmarks items, two higher order factors of task and contextual performance were identified. Lower order factors of technical and administrative skills were found to comprise the task dimension, with human skills and citizenship behaviors comprising the contextual dimension. This research supports the idea that within the Benchmarks survey there are psychometrically valid dimensions of leadership behaviors besides the 16 dimensions listed by CCL. Although previous research (e.g., Scullen et al., 2003) has identified psychometrically sound scales within the CCL item pool, these scales do not directly reflect the leadership behavior domains of interest in the current dissertation. As such, I will create unique scales from this item pool that measure task, relational and change-oriented leadership behaviors.

To ensure that the scales used within the current study best reflect the leadership behavioral dimensions of interest, the total Benchmarks item pool was used to create scales that best reflect the task, relational, and change-oriented dimensions of leadership behaviors. In order to create the leadership behavior scales, Hinkin's (1998) guidelines for scale development was used to identify items that uniquely measure task, relational, and change-oriented leadership behaviors within the 155-item pool. Hinkin describes the six steps necessary to develop reliable and valid scales as item generation, questionnaire administration, item reduction, confirmatory factor analysis, convergent/discriminant validity, and replication. Although the Benchmarks survey has been shown to be valid across multiple studies (i.e., Braddy et al., 2014; Scullen et al., 2003) I will be creating unique scales from this larger item pool. To ensure these scales display adequate psychometric properties I focus on Hinkin's best practices for item reduction and confirmatory factor analysis.

Item reduction. Alongside the dimensions of task, relational, and change-oriented leadership behaviors the Benchmarks survey contains items that are likely to load onto a variety of other dimensions. For example, items measuring work-family balance and career derailment are unlikely to fit within the dimensions of interest within this dissertation. To identify items that fit the behavioral dimensions of interest, while also decreasing the item pool to a manageable size, items were first coded by myself based on theoretical definitions (i.e., DeRue et al., 2011; Yukl, 2013) corresponding to task, relational, and change-oriented leadership behaviors. Each item in the Benchmarks survey was coded as task, relational, change-oriented, or other. Each item had the potential to be coded as multiple dimensions. Once coded, items coded as other or as fitting multiple dimensions (for example, "*develops good relationships through change*" could be both change and relational) were removed from the item pool. This process resulted in a pool

of items that were coded as uniquely task, relational, or change-oriented leadership behaviors. From the initial item pool of 155 items, 18 items were coded as uniquely task (Appendix A), 29 as relational (Appendix B), and 5 as change-oriented leadership behaviors (Appendix C). This left an initial item pool of 52 items across the three dimensions.

Using the decreased item pool, exploratory factor analysis (EFA) was conducted to examine the factor structure of the resulting items for each behavioral dimension as well the overall structure of the full item pool. To establish scales for each of the behavioral dimensions EFAs were conducted within each behavioral dimension. Within each EFA I evaluated the factor structure, inter-class correlations, item wording, and individual item loadings in an effort to further reduce the item pool size and obtain unidimensionality within each behavioral dimension scale. To evaluate the factor structure, an Eigen value cutoff of 1.00 was used to identify relevant factors. Single item loadings, within and across factors, were evaluated using an Eigen value cutoff of .30. All EFAs were conducted using principal components analysis with varimax rotation.

To examine the reliability of each behavioral scale, Cronbach's alpha was used to determine internal consistency. Spearman-Brown split-half reliability estimates are also reported. Split half-reliability estimates are computed by randomly dividing the item pool into two parallel forms. The internal consistency of these two item pools is then computed. Based on these internal consistencies, the Spearman-Brown Coefficient is computed representing the split half-reliability (Thompson, Green, & Yang, 2010). Split-reliability estimates were computed using SPSS version 22.

Task leadership behaviors EFA. An EFA was run using the 18 task coded items, resulting in seven factors that displayed Eigen values greater than one – suggesting the presence of a 7-

factor structure. These 18 items displayed an internal consistency of .59. Within this structure there were a number of items that displayed Eigen values greater than .3 across multiple factors. There were also items that displayed Eigen values less than .30 within factors. Based on these metrics 12 items were removed from the task item pool. For example, the items "*moves quickly when confronting an employee problem"* and "*can effectively lead an operation from inception to completion*" displayed factor loadings greater than .30 across multiple dimensions and were thus removed from the item pool. This process yielded six items measuring task leadership behaviors with an EFA structure with two factors with Eigen values greater than 1.00. Within this 2-factor structure, Factor 1 explained the majority of variance (35.86%, EV = 2.15) with Factor 2 just passing the Eigen value cutoff (16.88%, EV = 1.01). Within these six items, one item, "*actively promotes his/her direct reports to senior management"* was the only item that loaded onto Factor 2 and was thus removed. After removal of this item, a single factor structure emerged. This structure resulted in only one factor with an Eigen value great than 1.00 (EV = 2.15) and explained 43.03% of variance within the items. The five items displayed an internal consistency of .68. To further examine internal consistency, a Spearman-Brown split half reliability coefficient was computed. Using the five task behavior items a split-half reliability was computed with a 2-item and 3-item pool. The item pools showed internal consistencies of .54 and .44. The resulting Spearman-Brown split-half coefficient was equal to .65. The final task behavior item pool contains items that align with the definition of task leadership behaviors as those associated with the daily functioning of an organization (DeRue et al., 2011). Example items include, "*provides prompt feedback, both positive and negative*" and "*rewards hard work and dedication to excellence*". See Appendix D for the final task behavior item pool.

Relational leadership behavior EFA. An EFA was run using the 29 items coded as relational leadership. EFA results displayed ten factors with Eigen values greater than one, suggesting the presence of a 10-factor structure. These 29 items displayed an internal consistency of .29. The 10-factor structure resulted in a number of items that displayed Eigen values greater than .30 across multiple dimensions. There were also items that displayed Eigen values less than .30 within the dimensions. Based on these metrics 17 items were removed from the relational item pool. For example, the items "*can deal effectively with resistant employees"*, "*gets things done without creating unnecessary adversarial relationships*", and, "*is sensitive to signs of overwork in others*" displayed loadings greater than .3 across multiple dimensions and were thus removed from the pool. Other items, such as, "*actively seeks opportunities to develop professional relationships with others*", displayed low Eigen values across all dimensions and thus were deleted as well. This process yielded 12 items measuring relational behaviors with a single factor EFA structure explaining 37.47% of variance within the items and an Eigen value of 4.50. The resulting 12-item pool displayed an internal consistency of .85. To further examine internal consistency, a Spearman-Brown split half reliability coefficient was computed. Using the 12 task behavior items a split-half reliability was computed with two randomly selected 6-item pools. The two item pools showed internal consistencies of .74 and .73. The resulting Spearman-Brown split-half coefficient was equal to .83. The final item pool contains items that align with the definition of relational leadership behaviors as behaviors that focus on quality interpersonal relationships (DeRue et al., 2011). Example items includes, "*listens to employees both when things are going well and when they are not*", "*helps people learn from their mistakes*", and "*is open to the input of others*". See Appendix E for the final relational behavior item pool.

Change leadership behavior EFA**.** An EFA was run using the five items coded as change-oriented leadership behaviors. EFA results displayed one factor with an Eigen value of greater than 1 (EV = 2.29), suggesting a single factor structure. This single factor explained 45.87% of variance within the items. Based on the EFA results and single factor structure no items were removed from this item pool. The 5-item change-oriented leadership behavior scale displayed an internal consistency of .70. To further examine internal consistency, a Spearman-Brown split half reliability coefficient was computed. Using the five change behavior items a split-half reliability was computed using a 2-item and 3-item pool. The two item pools showed internal consistencies of .57 and .57. The resulting Spearman-Brown split-half coefficient was equal to .67. The final item pool contains items that align with the definition of change-oriented leadership behaviors as behaviors that prepare for, and facilitate, change and adaptation of both followers and the organization as a whole (DeRue et al., 2011). Sample items include, "*leads change by example*", "*adjusts management style to changing situations*", and "*adapts to the changing external pressures facing the organization*". See Appendix F for the final change-oriented behavior item pool.

Full item pool EFA. To establish the dimensionality of the final 22-item pool an EFA was run to examine the overall factor structure. The overall EFA results yield three factors with Eigen values great than one explaining a total of 43.32% of the item variance - supporting the presence of a 3-factor structure. Items do tend to load across dimensions; however, this is to be expected as the all items represent leadership behaviors and are correlated with each other. Looking at the individual item loadings the expected structure is present with items generally loading within unique dimensions based on their definition as task, relational, or change-oriented leadership behaviors. Looking at the specific leadership behavior dimensions, the change-oriented and task

leadership behavior items clearly load onto separate factors. The relational leadership behavior items generally load onto a common factor. However, there are items from this scale that show strong cross loadings across the other factors. For example, the relational item, "*helps employees learn from their mistakes"*, loads strongly onto both the change and task dimensions as well as the relational dimension. Another example, is the relational item, "*actively cultivates a good relationship with superior*", which loads strongly onto the change dimension along with the relational dimension. These cross loaded items are to be expected as a behavior such as learning from mistakes, while perceived as relational, may also be expected as a task behavior that leads to employee towards positive change. Factor loading information can be seen in Table 1.

Based on the factor Eigen values, item factor loadings, and theoretical foundation the EFA results support the presence of a 3-factor task, relational, and change-oriented behavior structure within the final item pool. The final item pool includes five task, twelve relational, and five change-oriented leadership behavioral items.

California Psychological Inventory (CPI). The CPI is a widely-used personality inventory that applies 18 personality dimensions (or "Folk scales") to categorize people into groups based on their tendency towards interpersonal behaviors and normative behaviors (Gough & Bradley, 1996). For example, "visualizers" are described as being low interpersonal and low normative – these are reserved individuals who quietly contemplate their environment (Kulas, 2013). While these categorizations, or profiles, have historically been used as counseling and developmental tools, there is a body of research that applies both the broad CPI profiles, as well as the underlying dimensions, to organizational behavior and leadership research (e.g., Anderson & Schneier, 1978; Blake, Potter, & Slimak, 1993; Kulas, 2013; Gough, 1990). The CPI dominance dimension has been the major focus of such research (e.g., Blake et al., 1993; Young,

Arthur, & Finch, 2000). There have also been two studies that apply the full profile model of the CPI to identify leader types who are likely to engage in both positive and negative leadership behaviors (Gough, 1990; Kulas, 2013).

The current dissertation applies CPI dimensional scales to evaluate emotional abilities within the sample of leaders. Within the literature on affect and leadership, positivity, emotional regulation, and empathy have been identified as abilities that are not only important for leadership, but also as factors that display changes across the lifespan (Gooty et al., 2010; Scheibe et al., 2013; Walter & Scheibe, 2013). The CPI dimensions of Self-Control (emotion regulation), Amicability (Positivity), and Empathy were used to measure affective abilities. The items that make up these dimensions are presented to participants as statements that are then rated as true or false by the rater. Sample items include, "*I usually feel that life is worthwhile*" (positivity), "*I am often said to be hotheaded*" (emotion regulation), and "*I always try to consider the other person's feelings before I do something*" (empathy). Participants receive a 1 or a 0 on each statement, with the mean of the items creating the scale score. Scale scores within the CCL data were used, as I was unable to use single item data. The lack of single item data as well as the dichotomous nature of CPI items prevents the computation of reliability information for the three affective abilities scores used in the current dissertation. While the lack of single item data is a limitation, the CPI has been consistently shown to be a reliable a valid scale supporting the use of dimensional scale scores.

CHAPTER 4: RESULTS

Results Overview

All analyses were conducted using structural equation modeling following Anderson and Gerbing's (1998) guidelines for establishing construct validity through confirmatory factor analysis (CFA) of measurement models prior to testing structural and path models rooted in theory. Descriptive statistics, reliabilities, and correlations for all variables can be seen in Table 5. The following results section will begin by presenting a series of CFAs that are relevant for each stage of hypothesis testing. I will then present results for the direct effect of age on task (*RQ1*), change-oriented (*RQ2*), and relational (*H1*) leadership behaviors. Next I will present results for the main effect of age on empathy (*H2*), positivity (*H3*), and emotion regulation (*H4*). This will be followed by results of a full mediation model where affective abilities mediate the relationship between age and relational leadership behaviors (*H5/6*). I will conclude by presenting results of a multi-group analysis testing how this mediation is moderated by leader level (*RQ3*). The results section is outlined below:

Results will be discussed in the following order:

1. **Leadership and age**: Results of CFA conducted examining a 1-factor and 3-factor model of leadership will be discussed. I will then address the potential for common method variance (CMV) as all leadership behavior items were collected using self-report surveys during a single administration. CMV has the potential to bias the relationship between indicators making it difficult to interpret the relationships between latent variables (Williams & McGonagle, 2016). Results of a third CFA conducted to test for the presence of CMV amongst the leadership dimensions will be discussed. CFA were then conducted with the inclusion of age alongside the leadership variables – with and without

accounting for CMV. All main effect hypotheses and research questions pertaining to age and leadership were evaluated both with and without the consideration of CMV. However, due to limitations of this method within larger path models, all mediation analyses did not account for CMV.

2. **Age and affective abilities.** Results from a path analysis will be discussed reflecting relevant hypotheses. All analyses concerning the effect of age on affective abilities were conducted using a path analysis including single indicator latent variables. No CFA were conducted, as all variables are composed of a single indicator and identified using set variances and factor loadings.
3. **Affective abilities as a mediator.** Results of a full CFA including age, the three leadership dimensions, and the three affective abilities will be presented. Results from the full structural model testing the direct and indirect effects of age on leadership behaviors as mediated by affective abilities will then be presented.
4. **Leader level as a moderator.** A full model CFA (age, leadership, and affective abilities) was conducted for executives and upper management separately and results are discussed. Results from a multi-group analysis testing the moderating effect of leader level on the indirect effect of affective abilities on the age-leadership relationship are then presented.

Confirmatory Factor Analyses and Hypotheses Tests

Prior to hypothesis testing, a number of CFAs were conducted to examine model fit, reliability of indicators, factor loadings, and discriminant validity across latent variables. Separate CFAs were conducted for each set of latent constructs and their relevant hypotheses. Model fit for the CFAs were determined by examining commonly used fit statistics with

recommended cutoffs in parentheses (West et al., 2012): chi-squared ($p < .05$), RMSEA (< .08), CFI (> .95), and SRMR (< .10). Reliability of indicators was examined through the squared multiple correlations of each indicator as well as the error variances of each indicator. These values represent the amount of variance explained in the latent variable by the indicator as well as the measurement error associated with each indicator. Factor loadings of the indicators onto their respective latent variables were examined, along with latent variable intercorrelations in order to establish construct validity as well as convergent and discriminant validity. All hypotheses and research questions were tested using structural equation modeling in Mplus 7 (Muthén & Muthén, 1998-2015) following Anderson and Gerbing's (1998) guidelines for establishing construct validity through of the measurement model and testing structural models rooted in theory.

Age and leadership behaviors. CFAs were conducted using the items comprising the three dimensions of leadership behaviors. Indicators for the task leadership behavior dimension consisted of the five task behavior scale items. Indicators for the change-oriented leadership dimension consisted of the five change-oriented behavior scale items. The relational leadership scale consists of twelve items measuring a unidimensional construct. By using this large number of indicators, the power of the latent variable has potential to be decreased. To avoid this issue, the relational leadership behavior items were parceled into a smaller number of indicators (Little, Rhemtulla, Gibson, & Schoemann, 2013).

Little et al. (2013) describe a number of approaches that can be used to effectively parcel univariate scale items into indicators that are composed of multiple scale items. The authors put forth a number of advantages to parceling such as higher reliability estimates, reduced sources of sampling error, and fewer parameter estimations. To decrease the number of parameter

estimations associated with using twelve indicators a *balancing* approach (Little et al., 2013) to parceling was used to create four indicators that equally represent the relational leadership behavior latent construct. The *balancing* approach to parceling uses a process of combining the item with the highest item-scale correlation with the item with the lowest item-scale correlation into a parcel. This process is then repeated with items being distributed across 3-4 parcels. This process ensures that variance representing the latent construct is evenly distributed across parcels. These parcels are then used as indicators in model estimation. This process resulted in four parcels representing the relational leadership behavior indictors. The four parcels have an internal consistency of .94.

To examine the overall model fit of the leadership behavior dimensions three CFAs were conducted. The first two compared a 1-factor and a 3-factor model. A third model was then run to test for the presence of common method variance (CMV) within the model. Model 1 represents the CFA of the 3-factor model. Results of the CFA suggest adequate fit statistics (see Table 2 for all model fit information). All factor loadings were significant and indicator squared-multiple correlations ranged from .21 – .64, suggesting that the indicators reliably measure the latent constructs. Discriminant validity between the three leadership behavior constructs is represented by the intercorrelations of the latent variables. Results from Model 1 show that the three leadership constructs are highly correlated (r = .83 – .92). These high correlations are in conflict with EFA results and suggest that the three leadership behavioral dimensions may not be distinct.

To further examine this issue, a CFA was conducted for a 1-factor model (Model 2). Model 2 assumes all indicators load onto a single leadership dimension. Model 2 displayed adequate fit statistics (see Table 2). All factor loadings were significant and indicator squared-

multiple correlations ranged from .20 – .62 suggesting that the indicators reliably measure their latent constructs. To test whether the 3-factor or 1-factor model better represents the data a chi-square difference test was conducted. The chi-square difference test compares the observed difference between the chi-square values for the two models against a chi-square critical value based on the degrees of freedom difference between the two models (Anderson & Gerbing, 1998). A significant difference offers support for rejecting the null hypothesis that the models are equivalent. Comparing Model 1 and Model 2 a significant chi-square difference was found ($\Delta\chi^2 = 40.29 > \chi^2(3) = 5.99$). The significant chi-square difference, alongside theoretical support for a multi-dimensional model of leadership behavior, offers support to retain this model.

Although there is support for the 3-factor model of leadership behaviors, the latent variable inter-correlations are still much higher than expected. As discussed in Williams and McGonagle (2016), theories that test relationships between constructs "may become compromised when indicators used to represent the constructs are assessed with a common or shared measurement method" (p. 339). CMV has the potential to bias the relationship between indicators making it difficult to interpret construct relationships. The indicators used to represent the constructs of task, change-oriented, and relational leadership behaviors were all collected using self-report data in a single administration and likely are subject to CMV. CMV within these indicators is one potential reason for the high inter-correlations observed between the latent variables.

To account for CMV within the leadership indicators, an unmeasured latent method construct (ULMC) was included in the 3-factor CFA. The ULMC is a latent variable that has no indicators of its own, but shares the indicators with the substantive latent constructs. Williams and McGonagle (2016) discuss how this method accounts for systematic error across the

indicators for all substantive constructs. The source of this error, however, is still unknown, a limitation highlighted by the authors. Model 3 consists of a 3-factor CFA including the three dimensions of leadership behaviors with the inclusion of the ULMC. The presence of CMV is evaluated through the indicator factor loadings on the ULMC, the substantive factor loadings and inter-correlations, and a chi-square difference test of models with and without the ULMC. Model 3 shows adequate fit across all metrics (see Table 2). All indicators, with the exception of two, show significant factor correlations with the ULMC suggesting the presence of CMV. Examining the substantive constructs, all factor loadings except one remain significant with their respective latent constructs. Indicator squared-multiple correlations all remain significant and range from .28 - .64 – suggesting they remain reliable. Prior to the inclusions of the ULMC the factor correlations ranged from .83 - .92. Model 3, which includes the ULMC, shows a decrease in these values ($r_{rm,cm}$ = .79, $r_{rm,tm}$ = .77, $r_{tm,cm}$ = .64) similar to those presented in a previous leadership behavior meta-analysis (DeRue et al., 2011). Comparing Model 2 and Model 3 a significant chi-square difference was found ($\Delta\chi^2 = 87.35 > \chi^2(17) = 27.59$). The significant chi-square difference offers support for the retention of a model including the UMLC and the presence of CMV.

Prior to hypothesis testing, CFAs were conducted including age alongside the leadership behavioral dimensions. I will report the CFA results with and without the inclusion of the UMLC. Model 4 represents the CFA with age and the three leadership dimensions without the inclusion of the UMLC. This model displayed adequate fit (see Table 2). All indicators show significant factor loadings onto their latent constructs. Inter-correlations between the constructs range from .04 – .92, suggesting a lack of discriminant validity between leadership variables.

Squared-multiple correlations are significant and range from .23 - .64, suggesting they are reliable. Factor correlations for Model 4 are shown in Table 3.

Model 5 represents the CFA for age and the three leadership dimensions with the inclusion of the UMLC. This model displayed adequate fit (see Table 2). All indicators except for one show significant factor loadings onto their latent constructs. Inter-correlations between the constructs range from .19 – .65, supporting discriminant validity. Squared-multiple correlations are significant and range from .26 – .64, suggesting they are reliable. Factor correlations for Model 5 are shown in Table 4.

Main effect of age on leadership behaviors. Research questions 1 and 2 along with Hypothesis 1 refer to the main effect of age on task, change-oriented, and relational leadership behaviors. To test these effects two models were run. Model 6 tests the main effect of age on leadership behaviors without the inclusion of a UMLC and Model 7 tests these effects with the inclusion of a UMLC. Results from Model 6 show no significant relationship between age and task (b = .04, SE = .05, p = .38), change-oriented (b = .03, SE = 05, p = .50), and relational (b = .07, SE = .04, p = .14) leadership behaviors. This model does not support the hypothesis that age is positively related to relational leadership behaviors and suggests that there is no effect of age on task or change-oriented leadership behaviors.

Model 7, which includes the UMLC, shows a significant positive relationship between age and task leadership behaviors (b = .19, SE = .06, p < .01) and relational leadership behaviors (b = .20, SE = .06, p < .01). Results of this model show a non-significant relationship between age and change-oriented leadership behaviors (b = .12, SE = .07, p = .07). This model supports the hypothesis that age is positively related to relational leadership behaviors. Pertaining to the

research questions, these results suggest that age is positively related task leadership behaviors, but unrelated to change-oriented leadership behaviors.

Based on the results from Model 6 and 7, as well as chi-square difference tests, it appears that CMV is biasing the relationships between indicators and influencing the relationship between latent constructs. As age is unlikely related to method bias, it appears that when CMV is accounted for, age differences in leadership behaviors are present. However, without the removal of CMV from the leadership dimensions, the effect of age on leadership behaviors seems to be suppressed. The evidence from the UMLC factor loadings, decreased substantive inter-correlations between latent variables, and significant chi-square difference tests all support the use of the UMLC in models including leadership behavior indicators. As such Model 7 (UMLC included) is retained for the interpretation of hypothesis and research questions pertaining to the main effects of age on leadership behaviors, and H1 is supported.

Age and affective abilities. Hypotheses 2 – 4 pertain to the positive effect of age on the affective abilities of empathy, positivity, and emotion regulation. To test these hypotheses a path analysis was conducted regressing the three affective abilities onto age. Single indicator latent variables were created for age, empathy, positivity, and emotion regulation. To create these single indicator latent variables, the indicator error variances were set to 0 and factor loadings were set to 1 (Anderson & Williams, 1992; Law & Wong, 1999). There is no fit information presented for path models that consist of only single indicator latent variables. The path model is represented in Model 8. Results of the path model do not support Hypothesis 2, as there is no significant effect of age on empathy ($b = .03$, $SE = .04$, $p = .40$). Hypotheses 3 and 4 were supported as indicated by significant positive path coefficients from age to positivity ($b = .26$, $SE = .04$, $p < .01$) and age to emotion regulation ($b = .23$, $SE = .04$, $p < .01$).

Affective abilities mediation model. Hypotheses 5 and 6 refer the mediating effect of positivity and emotion regulation on the relationship between age and relational behaviors. Prior to hypothesis testing a CFA was conducted using age, empathy, positivity, emotion regulation, and the three leadership behavior variables (Model 9). The CFA displayed adequate fit across all metrics (see Table 2). For all multi-indicator variables (three leadership behaviors) indicators displayed significant factor loadings, with squared-multiple correlations ranging from .22 – .64 – suggesting these indicators are reliable. See Table 5 for correlations of all latent variables. While hypotheses 5 and 6 concern the mediating effect of positivity and emotion regulation on age-relational leadership behaviors, a structural model was estimated including all three affective abilities and all three leadership behaviors. This model estimated the indirect effect of age on task, change-oriented, and relational leadership behaviors through empathy, positivity, and emotion regulation. This model also estimates the direct effect of age on task, change-oriented, and relational leadership behaviors. All model estimates reflect bootstrapped confidence intervals (N = 1000). Within the full model, age and affective abilities accounted for 5% of variance in task leadership behaviors (R^2 = .05), 5% of variance in change-oriented leadership behaviors (R^2 = .05), and 6% of variance in relational leadership behaviors (R^2 = .06).

Direct and indirect effects of age on relational leadership behaviors. My analysis examining the indirect effect of affective abilities on the relationship between age and relational leadership behaviors offer support a mediating effect of emotion regulation, with results suggesting a non-significant indirect effect for positivity. For relational leadership behaviors the overall model displayed a non-significant direct effect of age on relational leadership behaviors (b = .03, SE = .04, p = .51, *95% CI* = - .04, .10), a significant total indirect effect (b = .03, SE = .02, p = .03, *95% CI* = .01, .06), with a non-significant total overall effect

(*b* = .06, *SE* = .04, *p* = .13, *95% CI* = -.01, .13). Looking at the specific indirect effects, bootstrapped confidence intervals show no significant indirect effect of positivity on the relationship between age and relational leadership behaviors (*b* = .01, *SE* = .02, *p* = .75, *95% CI* = .03, .02) – failing to support Hypothesis 5. Results do show a significant indirect effect for emotion regulation on the relationship between age and relational leadership behaviors (*b* = .03, *SE* = .01, *p* = .02, *95% CI* = .01, .06) supporting Hypothesis 6. There was no significant indirect effect of empathy on the relationship between age and relational leadership behaviors (*b* = .01, *SE* = .01, *p* = .41, *95% CI* = -.01, .02).

Direct and indirect effects of age on task leadership behaviors. For task leadership behaviors the overall model displayed a non-significant direct effect of age on task leadership behaviors (*b* = .04, *SE* = .05, *p* = .42, *95% CI* = - .04, .12), a non-significant total indirect effect (*b* = .00, *SE* = .02, *p* = .96, *95% CI* = -.03, .03), with a non-significant total overall effect (*b* = .04, *SE* = .05, *p* = .42, *95% CI* = -.04, .12). Looking at the specific indirect effects, bootstrapped confidence intervals show no significant indirect effect of positivity (b = .03, SE = .02, p = .13, 95% CI = -.06, .00), emotion regulation (*b* = .02, *SE* = .02, *p* = .14, *95% CI* = .00, .05), and empathy (*b* = .01, *SE* = .01, *p* = .44, *95% CI* = - .01, .02) on the relationship between age and task leadership behaviors.

Direct and indirect effects of age on change-oriented leadership behaviors. For change-oriented leadership behaviors the overall model displayed a non-significant direct effect of age on change-oriented leadership behaviors (*b* = .02, *SE* = .05, *p* = .66, *95% CI* = - .06, .10), a non-significant total indirect effect (*b* = .01, *SE* = .02, *p* = .65, *95% CI* = -.02, .03), with a non-significant total overall effect (*b* = .03, *SE* = .05, *p* = .53, *95% CI* = -.05, .10). Looking at the

specific indirect effects, bootstrapped confidence intervals show no significant indirect effect of positivity (b = -.01, SE = .02, p = .66, *95% CI* = -.04, .02), emotion regulation (b = .01, SE = .01, p = .59, *95% CI* = -.02, .03), and empathy (b = .01, SE = .01, p = .41, *95% CI* = - .01, .02) on the relationship between age and change-oriented leadership behaviors.

Leader level as a moderator. A multi-group analysis was conducted to test for a moderating effect of leader level on the full mediation model finding that the indirect effect of affective abilities on age-leadership behaviors does not differ by leader level. Leaders in upper management (N = 239) and executive (N = 264) positions were used for this analysis as they made up the majority of the sample. The mean age for upper management was 41.82 (SD = 6.78) and the mean age for executives was 43.02 (SD = 6.68). An independent samples t-test showed no significant age difference between these two groups (t = 1.99, SE = .60, p = .63). To test for a moderating effect of leader level a chi-square difference test is conducted between an invariant (Model 10) and variant model (Model 11). Both of these models displayed adequate fit with the data (see Table 2). The invariant model assumes no moderation and holds all direct and indirect path coefficients constant between the two groups. The variant model assumes group differences and allows all direct and indirect path coefficients to vary between the two groups. The multi-group analysis results show no significant difference between leaders in executive and upper management positions ($\Delta\chi^2$ = 15.94 > $\chi^2(15)$ = 25.00) – suggesting the invariant model be retained. These results suggest the mediating effect of affective abilities on leadership behaviors is the same between leaders of both levels.

Results summary. The following is a summary of findings pertaining to hypotheses and research questions.

- **Age and leadership:** The retained model applies a UMLC to account for CMV. This model suggests there is a positive relationship between age and both relational (H1) and task (RQ1) leadership behaviors, with no age effect on change-oriented leadership behaviors (RQ2).
- **Age and affective abilities:** The path model testing the main effect of age on affective abilities finds no relationship between age and empathy (H2). There is positive relationship between age and both positivity (H3) and emotion regulation (H4).
- **Indirect effect of affective abilities:** The model testing the indirect effect of affective abilities on the relationship between age and leadership behaviors found a non-significant indirect effect of positivity on the relationship between age and relational leadership behaviors (H5) and a significant indirect effect of emotion regulation on the relationship between age and relational leadership behaviors (H6). Supplemental analyses tested all other potential indirect effects finding no significant relationships.
- **Leader-level as a moderator:** A multi-group analysis found no moderating effect of leader-level on the indirect effect of affective abilities on the relationship between age and leader behaviors (RQ3).

CHAPTER 5: DISCUSSION

The current dissertation is designed to extend the literature on age, affect, and leadership through two main contributions. First, I apply the framework of task, relational, and change-oriented leadership behaviors (DeRue et al., 2011; Rotundo & Sackett, 2022; Walter & Scheibe, 2013) that has been established within the job performance literature to leadership. This established taxonomy allows for more theoretically meaningful tests of relationships in an effort to help to resolve conflicts within the age-leadership literature. Second, I offer empirical tests of theoretical models of age, affect, and leadership (i.e., Walter & Scheibe, 2013; Zacher et al., 2015). More specifically, beyond the main effects of age on leadership, I examine the role that affective abilities play in this process. I also examine the boundary conditions of this process. The literature on the relationship between age and job performance offers empirical evidence that the effect of age on workplace behaviors is moderated by cognitive demands (e.g., Struman, 2003). The role of cognitive demands has also been proposed in theoretical models of age and leadership (Walter & Scheibe, 2013). As such, I test the moderating effect that leader-level has on the process through which age-related changes in affect play a role in age-leadership behavior relationships.

Summary of Findings

Results from the current dissertation suggest there is a positive effect of age on both task and relational leadership behaviors – with the effect on relational behaviors being mediated by emotion regulation. My analysis of the direct effect of age on leadership behaviors shows that when controlling for CMV there is a positive relationship between age and task and relational leadership behaviors with no age effects on change-oriented leadership behaviors. Further, when controlling for CMV, the correlations between the three leadership variables mirrored those

found in previous leadership behavior meta-analyses (i.e., DeRue et al., 2011). My next set of hypotheses tested the relationship between age and affective abilities. Hypothesis 2 was not supported, as there was no effect of age on empathy. Age did show a positive effect on both positivity and emotion regulation offering support for Hypotheses 3 and 4. I next examined the mediating effect of affective abilities in the relationship between age and leadership behaviors. Hypothesis 5 was not supported, as positivity did not have a significant indirect effect through age on relational leadership behaviors. However, there was a significant indirect effect of emotion regulation on the relationship between age and relational leadership behaviors, supporting Hypothesis 6. Supplemental analyses were also conducted finding no mediating effect of affective abilities between age and task or change-oriented leadership behaviors – offering further support for the unique importance of emotions in how individuals engage socially in later life. Lastly, my test of leader level as a moderator found no significant differences in the mediation model – suggesting leaders at executive and upper management positions experience this process similarly.

Theoretical Implications

Main effects of age on leadership behaviors. Results showing that there is a positive effect of age on task and relational leadership behaviors have important implications for both the leadership and lifespan psychology literature. The large body of literature on age and job performance consistently finds that older employees engage in more contextual work behaviors (e.g., citizenship behaviors, relational behaviors), while displaying task and change-type behaviors at the same frequency as their younger counterparts (e.g., McDaniel et al., 2012; Ng & Feldman, 2008; 2013). Although leadership behaviors could be defined as a specific type of job performance, the small body of literature on age-leadership behaviors has examined these

relationships across a wide variety of leadership behavioral definitions such as transformational behaviors (Ng & Spears, 2012; Zacher et al., 2011), research and development spending (Barker & Mueller, 2002; McClelland & O'Brien, 2011), risk tolerance (Karami et al., 2005), and participative leadership (Oshagbemi, 2004). Within the handful of studies on age and leadership behaviors the results are often conflicting with positive, negative, and null effect being seen across a variety of samples and construct definitions.

The current dissertation aims to resolve these conflicts by applying the established job performance dimensions of task, relational, and change-oriented behaviors (Ng & Feldman, 2008; Rotundo & Sackett, 2002), alongside theories from lifespan psychology (i.e., SEST: Carstensen, 1992), to a large sample of leaders working in a variety of settings and at a variety of levels within their organizations. My findings that older leaders engage in more relational leadership behaviors align with previous research from both the literature on age and job performance and age and leadership. More specifically, it appears that as leaders age they are more likely to engage in contextual, or relational, behaviors such as mentoring, fostering quality relationships, and managing conflict. SEST (Carstensen, 1992) and Social Competence (Hess & Auman, 2001; Staudinger & Pasupathi, 2000) suggest that as individuals age they seek out more positive relationships as well use life experience to manage current relationships more positively. My findings that older leaders engage in more relational leadership behaviors further extends the application of these theories to not only a work context, but further into the domain of leadership.

My findings that older leaders across all levels engage in more task leadership behaviors is interesting when considered alongside the null-relationships seen in the job performance literature. Ng and Feldman (2008) suggest that the null relationships often found between age and task behaviors can be attributed to the strong situation surrounding task behaviors. While

this makes intuitive sense, the results from this dissertation suggest that task leadership behaviors may involve a weaker situation than task behaviors in non-leadership roles. In a meta-analysis examining age and job performance, Sturman (2003) found that in high complexity jobs there is a positive relationship between job performance and both age and experience. It may be that leadership can be defined as a complex job role where the role of experience becomes especially important leading to increases in task behaviors.

Main effects of age on affective abilities. There is a large body of literature suggesting that as individuals age they experience changes in a variety of affective abilities (for reviews see, Scheibe & Carstensen, 2010; Walter & Scheibe, 2010). The literature on age and affective abilities generally highlights positive changes in empathy (e.g., Richter & Kunzmann, 2011), positivity (e.g., Scheibe & Zacher, 2013), and emotion regulation (e.g., Gross, 1998). The positive effect of age on positivity and emotion regulation within the current sample of leaders highlights the robustness of the effect of age on these emotional abilities. Interestingly though, within this the current dissertation there was no effect of age on empathy. The literature on age and emotions, as well as the literature on emotions and leadership, offer two conflicting explanations for this null effect. Research on age and emotions suggests that the older individuals may see declines in emotion recognition associated with declines in fluid intelligence (Richter & Kunzmann, 2011; Walter & Scheibe, 2013). While the current dissertation did not measure emotion recognition, this is an essential component of empathy. Richter & Kunzmann (2011) discuss how while older individuals display higher levels of sympathy and emotion sharing, their ability to identify others' emotions exhibits declines depending on the relevance of emotional content. It may be that older leaders, who often have to deal with a variety of emotional content, may experience deficits in the emotion recognition component of empathy

resulting in the null effect. Research on leadership and emotions offers a somewhat more hopeful explanation. In a review of leadership and emotions, Gooty and colleagues (2010) discuss how affective abilities, especially empathy, are integral to leader success. It may be that all leaders within this sample must display a certain level of empathy in order to be successful creating a range restriction in empathy. Across the three affective abilities, empathy did indeed display the highest mean and lowest standard deviation – supporting this potential explanation.

The role of affective abilities in age-leadership behavior relationships. Results surrounding the mediating role of affective abilities in the relationship between age and leadership behaviors offer theoretical contributions through the application of lifespan theories of age-related affective changes to the questions of age and leadership. The application of theory surrounding age-related changes in affect (i.e., SEST; Carstensen, 1992) within the current study fills an important gap in the age-leadership literature. In their review of the age and leadership literature, Walter and Scheibe (2013) highlight this gap, "…our review further revealed that leadership research has largely neglected a class of well-specified and empirically validated aging theories." (p. 888).

My finding that emotion regulation mediates the relationship between age and relational leadership behaviors has theoretical implications for age and leadership research as well as the literature on lifespan psychology. Theoretical models of age and leadership (Walter & Scheibe, 2013; Zacher et al., 2015) highlight the importance of individual mediators such as affective abilities in the process through which age leads to changes in leadership behaviors and outcomes. Findings from the current dissertation offer empirical insights into the role that affective abilities play in this process. For example, Walter and Scheibe (2013) present a model of age, affect, and leadership that suggests positivity and emotion regulation mediates the relationship between age

and leadership behaviors. While the current dissertation generally supports this model, my findings highlight some important distinctions.

Most importantly, it appears that affective abilities play an especially important role in relational leadership behaviors and are less important for task and change-oriented leadership behaviors. Furthermore, while both emotion regulation and positivity are positively related to age, only emotion regulation plays a role in the relationship between age and relational leadership behaviors. Research on age and emotion regulation strategies suggests that as individuals age they engage in more antecedent-focused coping strategies targeted at changing their environment to maintain more positive emotions. This is reflected in older individuals' propensity to seek more positive relationships and emotion related goals (SEST; Carstensen, 1992). SEST posits that older individuals regulate their emotions through this selective relationship maintenance explaining why emotion regulation plays a unique role in relational leadership behaviors. This line of thinking is further supported by the absence of a mediating effect of emotion regulation in the relationship between age and task leadership behaviors. My findings show that there is a positive effect of age on task behaviors; however, this is likely explained by the role that increased experience plays in the complex roles of leadership. As such, it would seem that age is positively related to both task and relational leadership, but through a different process.

Results of the current dissertation suggest that the relationship between age and relational leadership behaviors is mediated by emotion regulation. Although it was not tested here, there is theoretical reason to believe that the positive relationship between age and task leadership behaviors is mediated by increased experience. Taken together these findings extend the literature on age and leadership by highlighting the potential for differential processes through

which age affects leadership behaviors. It is likely that older leaders change their behaviors due to a variety of influences both individual and contextual.

Gooty et al. (2010) reviewed the literature on affect and emotions within the leadership literature, highlighting a number of theoretical and methodological issues. The authors highlight the need for researchers interested in studying affect and leadership to apply existing affective theories within their studies, while also employing psychometrically valid measures of affect. My findings that the relationship between age and relational leadership behaviors is mediated by emotion regulation has further implications for leadership and affect literature. By integrating theories from lifespan psychology with the age-job performance literature my findings offer insights into how affective abilities influence leadership behaviors from a lifespan perspective.

Leader level as a moderator. Research on age and job performance has suggested that job complexity may act as a moderator – with experience becoming more important in more complex jobs (Sturman, 2003). This thinking has been tied to the relationship between age and leadership behaviors in theoretical models (e.g., Walter & Scheibe, 2013), but has yet to be tested empirically. The findings from the current dissertation suggest that the indirect effect of affective abilities on the relationship between age and leadership behaviors is the same for leaders at different organizational levels.

One potential explanation for this finding may be that all leadership roles can be defined as complex. This is supported by my findings that although there is no moderating effect of leader level, there is a positive direct effect of age on task leadership behaviors. Meta-analytic findings show that in complex job roles, age and experience has a positive effect on job performance – where as an inverted-U trajectory is found in jobs of less complexity. Based on this previous research, the positive direct effect of age on task leadership behaviors in the current

sample, offers two main theoretical contributions. First, as research on age and task-behaviors has generally found null effects attributed to a strong situation, the findings here highlight the weaker situation leadership behaviors exist in. Second, as positive age-job performance relationships are generally seen within complex jobs, it can be assumed that leadership at all levels can be characterized by a higher level of complexity than non-leadership roles.

Practical Implications

Considering that leaders make up a large portion of the workforce that is affected by the processes associated with age, the findings from the current study offer practical implications that align with those offered by the age-job performance literature and some that are unique to aging leaders.

The main effects of age on task and relational leadership behaviors suggest that older leaders do indeed behave different than their younger counterparts. Research on age-related changes in motives displays parallel findings – that older individuals tend to be driven by more social motives, as a focus on emotional goals increases (SEST; Carstensen, 1992). This suggests that as changes in affect occur, older leaders may display more relational behaviors because these are the sorts of behaviors they are motivated to engage in. While many organizations already have programs in place that foster mentoring between younger and older employees, these findings highlight the potential for the reciprocal benefits of these relationships. Research on the relationship between age and motivation consistently finds that older individuals show higher levels of generativity motives – a desire to develop younger individuals with a decreased focus on their own gains (e.g., Kooij & Van de Voorde, 2011; Zacher et al., 2011). Findings from the current dissertation, coupled with previous research highlighting increases in generativity motives, suggest that organizations should focus on creating mentoring

opportunities that are rooted in both relational leadership behaviors and the dissemination of experiential knowledge.

Mentoring programs that focus less on task-based learning and more on how to navigate organizational relationships offer an opportunity for older individuals to satisfy both their motivational needs as well as their behavioral inclinations. This practice will likely have a positive two-fold effect. First, by aligning leadership roles with the affective and motivational needs of older leaders, organizations will likely see increased performance across these leadership dimensions. Second, since older individuals experience increases in experiential knowledge, these mentoring opportunities will allow for knowledge transfer between more experienced senior leaders and younger developing leaders.

By shifting job roles and resulting performance evaluations, organizations can take advantage of increases in contextual job performance seen in older employee. As older leaders increase in their use of relational leadership behaviors these behaviors could potentially be weighted more heavily than other basic task related activities. Ng and Feldman (2008) mirror this thinking in their meta-analysis on age and job performance suggesting that; "…older employees' performance in contextual activities may need to be weighed as or more heavily than their performance in core task activities" (p. 408). I do not suggest that older leaders should be relieved of their normal task responsibilities, but that organizations that place older leaders in mentoring roles should incentive these behaviors by weighing them accordingly in performance reviews.

The importance of attending to changing needs, behaviors, and goals of older leaders is especially important considering my findings that this process does not vary by leader level. The findings presented in the current dissertation suggest that older leaders display similar behavioral

changes across both upper-management and executive levels and that these changes are equally affected by changes in affective abilities. While these findings are limited by the sample, they suggest that interventions such as mentoring opportunities, targeted at harnessing increases in relational behaviors and experience, should be made available to leaders at all levels of the organizations from management to executives.

Limitations and Future Directions

The main limitation of the current dissertation surrounds its cross-sectional nature. As is a major issue with much aging research, cross-sectional designs make it difficult to disentangle age effects from cohort effects. Cohort effects are defined by individuals' behavior being a product of their broader social environment during development (Rhodes, 1983; Walter & Scheibe, 2013). In order to address these issues, ideal research designs would follow leaders over their organizational tenure to track individuals' age trajectories across both affective abilities and leadership behaviors. Aside from creating longitudinal studies that track lifespan trajectories of leadership behaviors, research on emotions suggests that more condensed diary sampling methods may offer theoretical insights. For example, increases in emotion regulation seen with age may cause older leaders to behave more consistently on a day-to-day basis. By sampling leaders' behaviors and affect successively over a short period of time, researchers may gain insights about the effect of age on the stability of leadership behaviors.

Another limitation is in the self-report nature of the data. Older leaders may simply rate themselves as higher on certain behaviors and lower on others due to social expectations or stereotypes. This idea is supported by discrepancies in studies on age and relational leadership that find positive age effects on self-reported relational leadership behaviors (Oshagbemi, 2004; Pinder & Pinto, 1974) and negative effects of other-reported leadership behaviors (Gilbert et al.,

1990; Vecchio, 1993). To address this issue, future researchers should examine the effect of age-related changes in affect on leadership behaviors from both the leader and follower perspectives in one common model linking specific followers to their leaders and testing for agreement on behavioral ratings. The self-report nature of the current sample also presents limitations through the potential of CMV. CMV has the potential to bias the relationship between latent constructs through shared variance among indicators (Williams & McGonagle, 2016). While the current dissertation was able to account for CMV within analyses examining the direct effect of age on leadership behaviors through the application of a UMLC, limitations of this method prevented accounting for CMV in larger mediation models. The inability to account for CMV in these models likely resulted in attenuated estimates of direct effects within the mediation models. Future research should attempt to measure leadership behaviors using a multi-method approach to avoid the presence of CMV.

A third limitation involves the secondary nature of the data used within the study. Although the data obtained from CCL offer a large sample of leaders across a variety of industries and organizational levels, the lack of a priori factor structures within the measures prevented the use of the most ideal measures of constructs in some cases. Although the current dissertation followed best practices for scale development by using EFA and CFA to establish a factor structure amongst the leadership behavior scales, this process yielded high levels of CMV. The secondary nature of the data also inhibited the information available for the CPI scales used to measure affective abilities. Although individual CPI item data and scale scores were available, information of which items made up scales scores was not given. The result of this was the application of single indicator latent variables representing affective abilities. This process resulted in a lack of reliability information when making subsequent latent variables – potentially

influencing latent variable relationships. While this is a limitation, analyses including single indicator latent variables resulted in expected findings that align with previous research – suggesting the variables were in fact reliable and valid. Future researchers should attempt to include other empirically validated measures of affective abilities in research examining age, affect, and leadership.

Considering the scale development process, a fourth limitation was the use of a single coder when developing the leadership behavior scales. Including multiple coders in this process would have allowed for inter-rater reliability metrics as well as the potential for increased construct validity.

A fifth limitation concerns the test of leader level as a moderator. There is competing theory from the age and leadership literature (see Walter & Scheibe, 2013) and the age and job performance literature (Sturman, 2003) regarding the effect of job complexity. To test this I used leader level as a proxy for high and low complexity environments. However, due to the lack of information pertaining to the specific job roles – it is unclear whether higher level leadership positions were in fact more complex. The CCL data set includes leaders from a variety of industries and organization size – making job complexity difficult to operationalize in the current data set. These factors may have contributed to the null findings surrounding these tests.

Conclusion

There is a large body of literature that highlights the practical importance of understanding factors that influence the well-being of the aging workforce. Interestingly though leadership has been largely absent from these discussions**.** The current dissertation was designed to add to the literature on age and leadership through an examination of the affective and situational factors that affect the relationship between age and leadership behaviors. Drawing on

theory from both the lifespan psychology and leadership literature, I offer empirical support for a model of age leadership that highlights the importance of emotion regulation in the relationship between age and relational leadership behaviors. Taken together, my findings provide evidence for the relationship between age and leadership behaviors, offer an explanatory mechanism for the process through which this relationship exists, and highlight the importance of attending to aging leaders at all levels of the organization.

TABLES

Table 1

Eigen Value Loadings for Retained Scale Items

Item	Relational Dimension	Change-Oriented Dimension	Task Dimension
Change 1		.467	
Change 2	.336	.386	
Change 3		.668	
Change 4	.426	.397	
Change 5		.638	
Relational 1	.301	.487	
Relational 2	.672		
Relational 3	.622		
Relational 4	.359		.444
Relational 5	.622		
Relational 6	.310		.568
Relational 7	.630		
Relational 8	.564		
Relational 9		.321	.504
Relational 10		.650	
Relational 11	.433	.486	
Relational 12		.327	.534
Task 1			.737
Task 2	.457		.458
Task 3		.367	.524
Task 4			.581
Task 5		.398	.483

Note: Eigen values less than .30 suppressed.

Table 2

Model Fit Statistics

Model	Chi-Square	df	RMSEA	CFI	SRMR
1	159.26**	74	.04	.97	.03
2	199.55**	77	.05	.95	.04
3	112.20**	60	.04	.98	.03
4	183.80**	85	.04	.96	.03
5	126.67**	71	.04	.98	.03
6	183.80**	85	.04	.96	.03
7	126.67**	71	.04	.98	.03
8	-	-	-	-	-
9	283.39**	118	.05	.95	.04
10	825.10	279	.09	.80	.08
11	809.16	264	.09	.80	.08

Model 1: 3-Factor leadership behavior CFA, Model 2: 1-Factor leadership behavior CFA, Model 3: 3-Factor leadership behavior CFA w. UMLC, Model 4: Age and leadership behavior CFA w.o. UMLC, Model 5: Age and leadership behavior CFA w. UMLC, Model 6: Direct effects of age on leadership behaviors w.o. UMLC, Model 7: Direct effects of age on leadership behaviors w. UMLC, Model 8: Main effects of age on affective abilities path analysis, Model 9: Full CFA including all variables, Model 10: Multi-group invariant mode, Model 11: Multi-group variant model

Table 3

Leadership and Age Correlations without UMLC

	1	2	3	4
1. Age	1.00			
2. TM	.04	(.68)		
3. CM	.03	.83**	(.70)	
4. RM	.07	.89**	.92**	(.94)

**p < .05, **p < .01. Note: TM = Task leadership behaviors, CM = Change-oriented leadership behaviors, RM = Relational leadership behaviors.*

Table 4

Leadership and Age Correlations with UMLC

	1	2	3	4
1. Age	1.00			
2. TM	.19**	(.68)		
3. CM	.12	.46**	(.70)	
4. RM	.20**	.64**	.65**	(.94)

**p < .05, **p < .01. Note: TM = Task leadership behaviors, CM = Change-oriented leadership behaviors, RM = Relational leadership behaviors.*

Table 5

Descriptive Statistics and Correlations for all Variables

	M	SD	1	2	3	4	5	6	7	8
1. Age	42.57	6.68	1.00							
2. Gender	-	-	.08*	1.00						
3. TM	3.93	.47	.04	.04	(.68)					
4. CM	3.99	.45	.03	-.03	.83**	(.70)				
5. RM	3.99	.43	.06	.04	.89**	.92**	(.94)			
6. Empathy	60.64	8.23	.03	.13**	.13**	.21**	.18**	NA		
7. Positivity	57.09	8.46	.26**	.01	.01	.06**	.13**	.26**	NA	
8. Emotion Regulation	56.88	8.58	.23**	.04	.02	.00	.12*	-.10**	.70**	NA

**p < .05, **p < .01, Note: TM = Task leadership behaviors, CM = Change-oriented leadership behaviors, RM = Relational leadership behaviors, M = Mean, SD = Standard Deviation.*

FIGURES

Figure 1. Theoretical model of age and leadership behaviors.

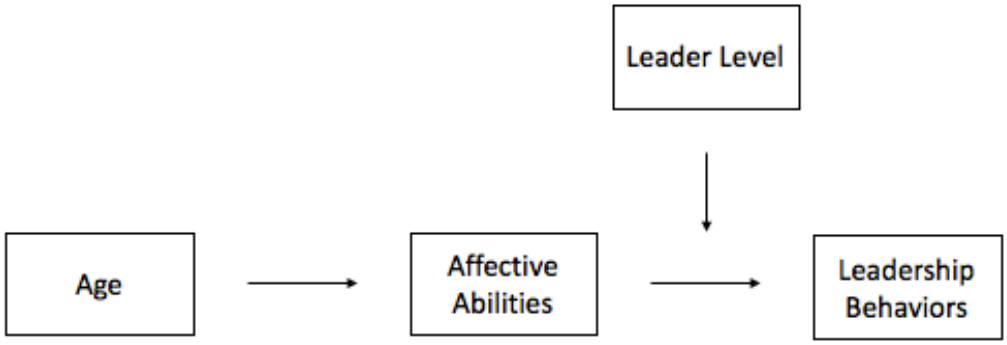


Figure 2. Model 1: 3-Factor CFA of leadership behaviors.

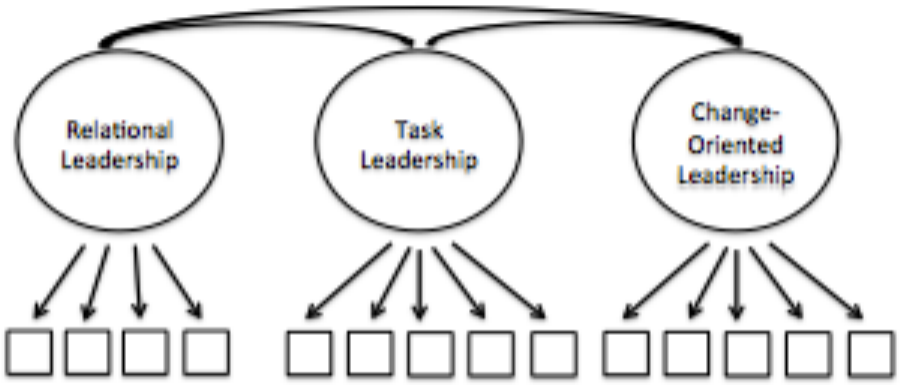


Figure 3. Model 2: 1-Factor CFA of leadership behaviors.

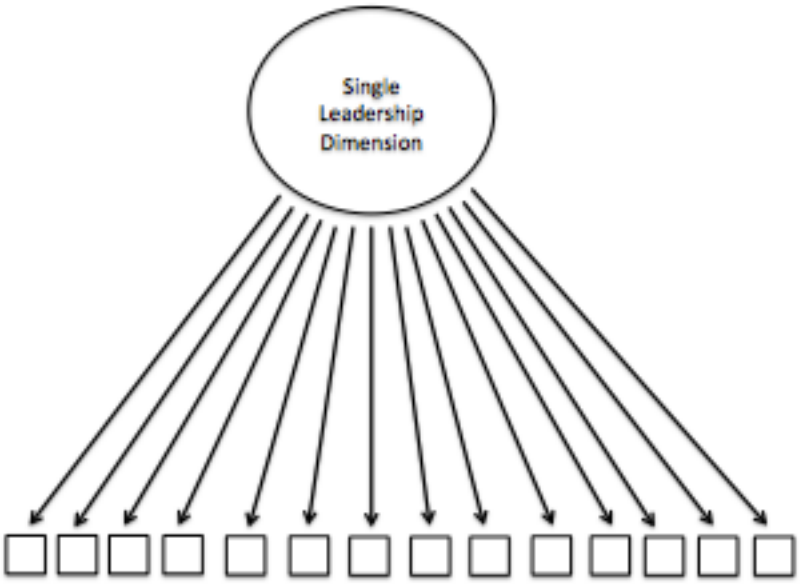


Figure 4: Model 3: 3-Factor CFA of leadership behaviors w. UMLC.

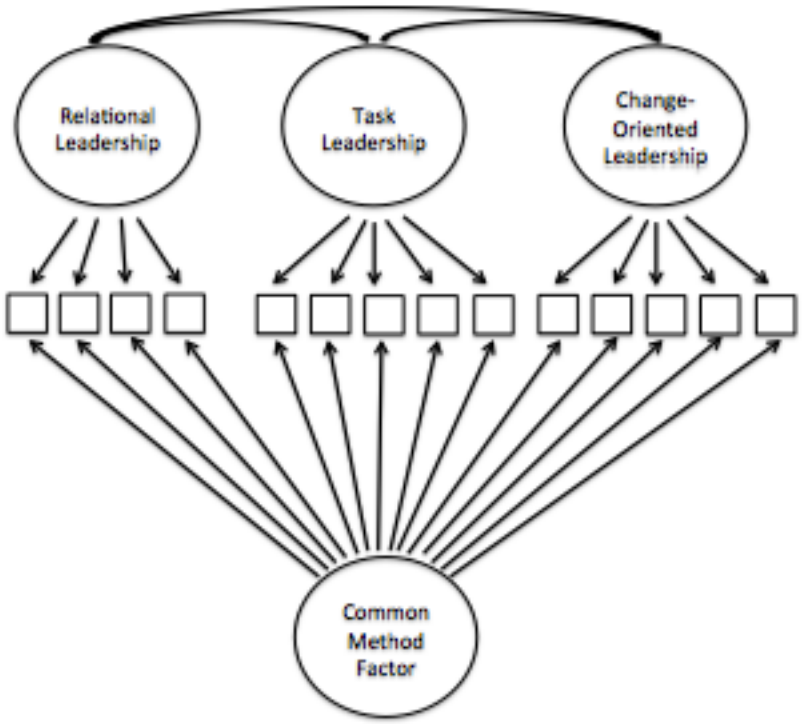


Figure 5. Model 4: Age and leadership CFA without UMLC.

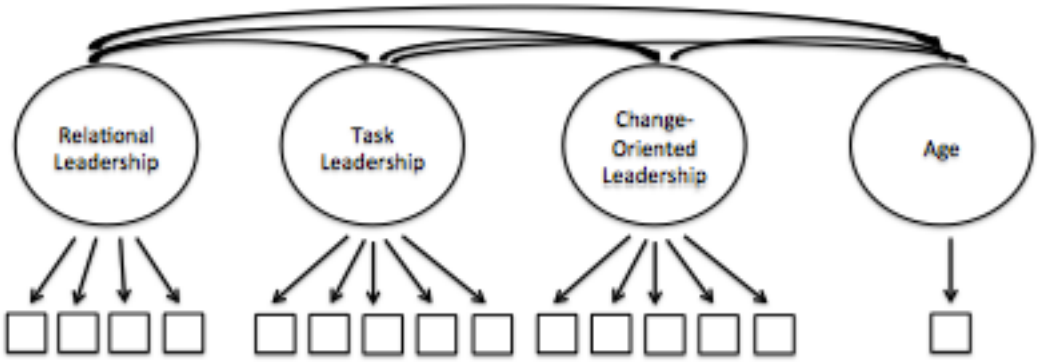


Figure 6. Model 5: Age and leadership CFA with UMLC.

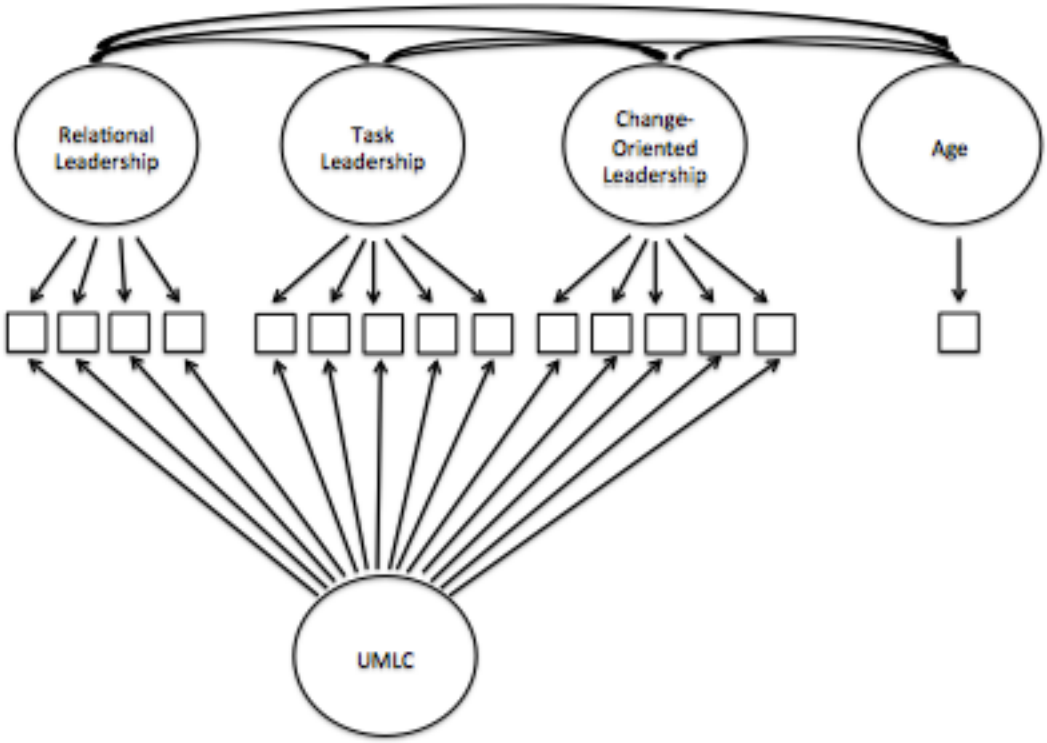


Figure 7. Model 6: Direct effect of age on leadership behaviors without UMLC.

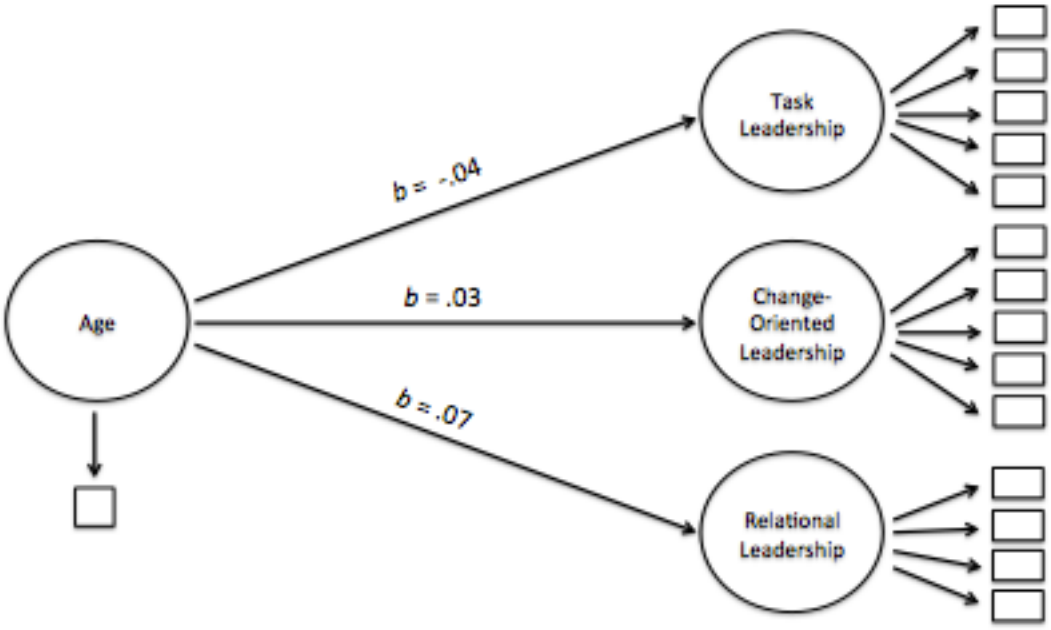


Figure 8. Model 7: Direct effect of age on leadership behaviors with UMLC.

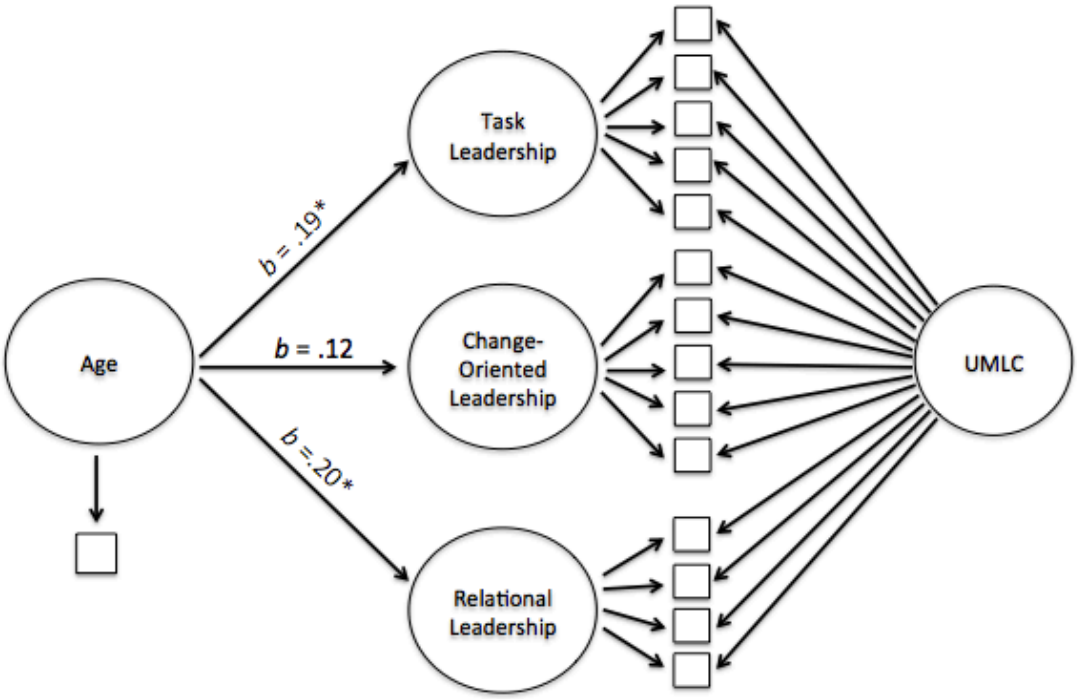


Figure 9. Model 8: Path analysis of the effect of age on affective abilities.

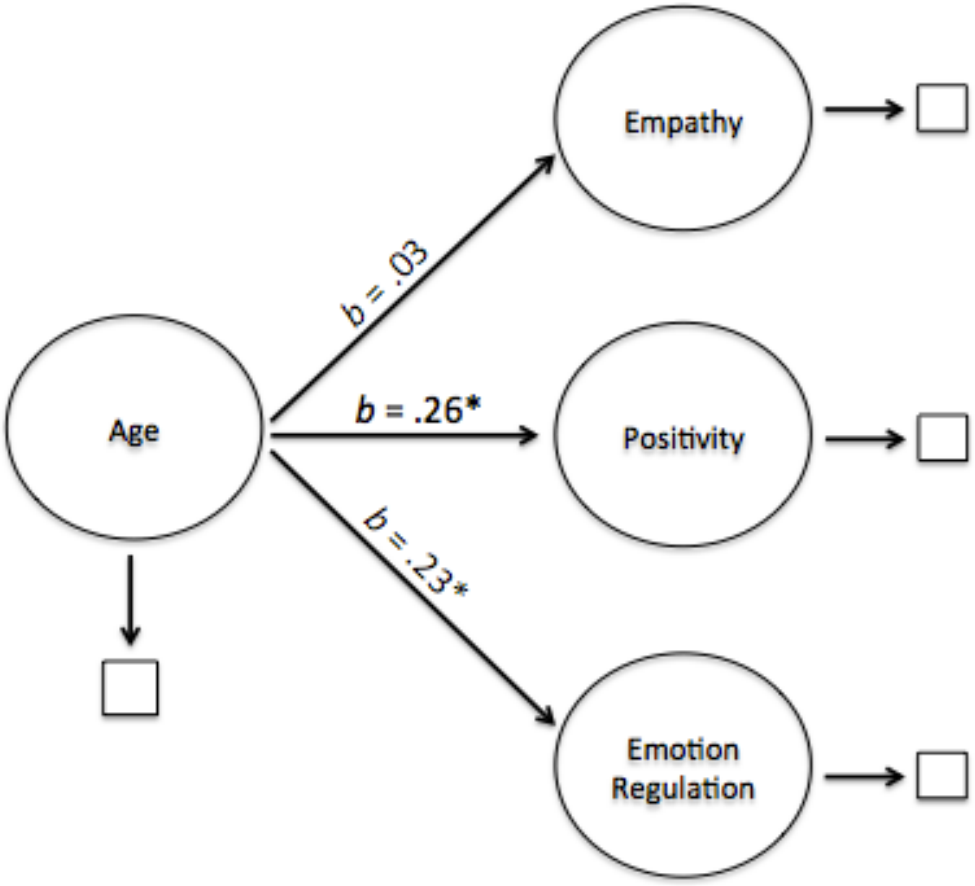
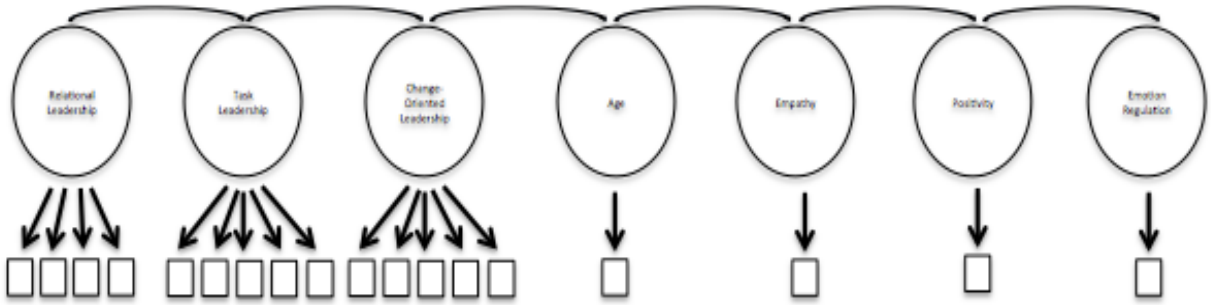


Figure 10: Model 9: Full CFA of all variables of interest.



APPENDIX A

Initial Task Leadership Behavior Items
Acts decisively when faced with a tough decision such as laying off workers, even though it hurts him/her personally.
Quickly masters new technical knowledge necessary to do the job.
Is willing to delegate important tasks, not just things he/she doesn't want to do.
Provides prompt feedback, both positive and negative.
Pushes decision making to the lowest appropriate level and develops employees' confidence in their ability to make those decisions.
Acts fairly and does not play favorites.
Uses his/her knowledge base to broaden the range of problem-solving options for direct reports to take.
Quickly masters new vocabulary and operating rules needed to understand how the business works.
Finds and attracts highly talented and productive people.
Moves quickly in confronting a problem employee.
Learns a new skill quickly.
Is able to fire or deal firmly with loyal but incompetent people without procrastinating.
Correctly identifies potential performance problems early.
Rewards hard work and dedication to excellence.
Can effectively lead an operation from its inception through completion.
Interacts with staff in a way that results in the staff feeling motivated.
Appropriately documents employee performance problems.
Actively promotes his/her direct reports to senior management.

APPENDIX B

Initial Relational Leadership Behavior Items
Can deal effectively with resistant employees.
Gets things done without creating unnecessary adversarial relationships.
When working with a group over whom he/she has no control, gets things done by finding common ground.
When working with peers from other functions or units, gains their cooperation and support.
Is sensitive to signs of overwork in others.
Is willing to help an employee with personal problems.
Tries to understand what other people think before making judgments about them.
Develops employees by providing challenge and opportunity.
Quickly gains trust and respect from his/her customers.
Can settle problems with external groups without alienating them.
Is open to the input of others.
Uses effective listening skills to gain clarification from others.
Encourages direct reports to share.
Is calm and patient when other people have to miss work due to sick days.
Involves others in the beginning stages of an initiative.
Understands the value of a good mentoring relationship.
Listens to individuals at all levels in the organization.
Keeps individuals informed of future changes that may impact them.
Listens to employees both when things are going well and when they are not.
Effectively builds and maintains feedback channels.
Allows new people in a job sufficient time to learn.
Involves others before developing plan of action.
Actively seeks opportunities to develop professional relationships with others.
Uses mentoring relationships effectively.
Helps people learn from their mistakes.
Actively cultivates a good relationship with superior.
Conveys compassion toward them when other people disclose a personal loss.
Is straightforward with individuals about consequences of an expected action or decision.
Uses good timing and common sense in negotiating; makes his/her points when the time is ripe and does it diplomatically.
Can deal effectively with resistant employees.

APPENDIX C

Initial Change-Oriented Leadership Behavior Items
Leads change by example.
Accepts change as positive.
Adapts plans as necessary.
Adjusts management style to changing situations.
Adapts to the changing external pressures facing the organization.
Leads change by example.
Accepts change as positive.

APPENDIX D

Final Task Leadership Behavior Scale Items
Provides prompt feedback, both positive and negative.
Correctly identifies potential performance problems early.
Acts fairly and does not play favorites.
Uses his/her knowledge base to broaden the range of problem-solving options for direct reports to take.
Rewards hard work and dedication to excellence.

APPENDIX E

Final Relational Leadership Behavior Scale Items
Develops employees by providing challenge and opportunity.
Quickly gains trust and respect from his/her customers.
Is open to the input of others.
Uses effective listening skills to gain clarification from others.
Encourages direct reports to share.
Listens to individuals at all levels in the organization.
Keeps individuals informed of future changes that may impact them.
Listens to employees both when things are going well and when they are not.
Allows new people in a job sufficient time to learn.
Helps people learn from their mistakes.
Actively cultivates a good relationship with superior.
Uses good timing and common sense in negotiating; makes his/her points when the time is ripe and does it diplomatically.

APPENDIX F

Final Change-Oriented Leadership Behavior Items
Leads change by example.
Accepts change as positive.
Adapts plans as necessary.
Adjusts management style to changing situations.
Adapts to the changing external pressures facing the organization.
Leads change by example.
Accepts change as positive.

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ABSTRACT

GETTING OLD AT THE TOP: THE ROLE OF AFFECTIVE ABILITIES AND LEADERSHIP ROLE CHARACTERISTICS IN THE RELATIONSHIP BETWEEN AGE AND LEADERSHIP BEHAVIORS

by

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Advisor: Dr. Marcus W. Dickson

Major: Psychology (Industrial- Organizational)

Degree: Doctor of Philosophy

Leadership behaviors and the outcomes they foster have historically been a central issue to organizational researchers and practitioners alike. Interestingly, though, as the workforce continues to age, research on leadership from a lifespan perspective has been surprisingly rare. The current dissertation aims to address this gap in the literature through two main contributions. First, the main effect of age on the dimensions of task, relational, and change-oriented leadership behaviors is examined. Second, I examine how characteristics of leadership roles interact with of age-related changes in affective abilities in the relationship between age and leadership behaviors. Results suggest that there is a positive effect of age on task and relational leadership behaviors with no effect on change-oriented leadership behaviors. Emotion regulation is identified as a mediator in the relationship between age relational leadership behaviors. Implications for theory and practice are discussed.

AUTOBIOGRAPHICAL STATEMENT

After completing an honors degree in psychology from the University of Windsor in 2012, Greg Thrasher entered the doctoral program in Industrial-Organizational Psychology at Wayne State University. At Wayne State, Greg has developed a research program that focuses on leadership, aging, motivation, and affect – with his dissertation representing a culmination of these interests. Greg has benefited from support from both the Psychology Department and the Institute of Gerontology at Wayne State. Outside of Wayne State, Greg has accepted a position as an assistant professor in School of Business Administration's Management Department at Oakland University in Auburn Hills, MI.