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Intersections of Gender and Age: Identification and Attributional Processes on
Leadership Effectiveness

by

Kayla Lynne Bigerton

A dissertation submitted to the School of Psychology of

Florida Institute of Technology

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

in

Industrial Organizational Psychology

Melbourne, Florida

December, 2022

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Abstract

Title: Intersections of Gender and Age: Identification and Attributional Processes on Leadership Effectiveness

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As more women enter leadership roles and the ages of leaders becomes more diverse, there is a need for more intersectional research. An intersectional approach was used to assess the impact of leader gender and age on leadership effectiveness through identification and attributional processes. In doing so, different age conceptualizations were also examined. Gender did not have an impact on identification and attributional processes and age had mixed results. Age similarity was not significantly related to leader identification, but perceived leader age had a negative relationship with idiosyncratic fit. Further, social age was examined with different age ranges representing "young", "middle-aged", and "old" leaders. When social age was measured from the follower's perspective, there were significant differences found for idiosyncratic fit by leader social age and gender profile. Idiosyncratic fit also had a significant indirect effect on leadership effectiveness (i.e., perceived overall leadership effectiveness and LMX). When prescribed age ranges were used, these results were rendered insignificant. Overall, this study contributes to intersectional research examining follower perceived leadership effectiveness.

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Acknowledgement

I will forever be grateful for the support given to me by my faculty, friends, and family. I would like to first express my deepest appreciation to Dr. Jessica Wildman, my advisor. Her insight has helped me develop personally and professionally. I am so grateful for her support and empathy throughout this journey. I would also like to express my sincere thanks to my whole committee. I appreciated their thoughtful questions and valuable feedback.

Thank you to all my friends that were so understanding and willing to support me in any way that they could. Words cannot express my gratitude for our friendship. Special thanks to Dr. Tessly Dieguez for her willingness to pick up the phone whenever I needed a listening ear.

I could not have undertaken this journey without my family. The unconditional love and encouragement from my parents and sisters are well noted. I would like to thank my husband for your patience and love throughout this whole process. I could not have undertaken this without you. Lastly, Spooky and Creed, thank you for being the purr-fect companions.

Dedication

This dissertation is dedicated to my baby, Delilah.

I can't wait to meet you.

Chapter 1

Introduction

The demographics of who comprises managerial roles has changed and continues to change. In 1980, there were no industries in which management positions were predominantly filled by women (Scarborough, 2018). Women now hold the majority of management positions in people-centered fields, such as the human resource field (Torpey, 2017). However, the Bureau of Labor Statistics (BLS) reports that although women currently occupy almost half of the workforce, they occupy only a little more than a third of management positions overall (BLS, 2022). Advancement opportunities for women become slimmer as they work up the corporate ladder, because there is a “broken rung” that holds women back from continually being promoted up the corporate ladder (McKinsey & Company, 2022).

Not only has the gender breakdown of leadership roles changed, the age breakdown has also been dynamic. In 2026, approximately 41% of those over 65 years of age will be a part of the workforce, which is quite higher than the 22% of those over 65 years old that participated in the workforce in 1996 (BLS, 2019). There was a 63% increase in the number of workers over the age of 65 from 2009 to 2019 and this increase is expected to continue (Coate, 2021). The midpoint age, in which half the managers are older and half are younger is 46.5 (BLS, 2022). The proportion of middle-aged managers is shrinking as the aging population takes up more space in the workforce. For example, in 2011, 20.11% of managers were 16-

34 years old, 53.51% of managers were 35-54 years old, and 26.37% of managers were over 55 years old (BLS, 2012). In 2021, 21.38% of managers were 16-34 years old, 49.68% of managers were 35-54 years old, and 28.93% of managers were over 55 years old (BLS, 2022).

With these changing demographics in mind, it is important to understand how leadership effectiveness is impacted. Research examining leader age and leadership outcomes is scant and inconclusive (Walter & Schiebe, 2013) and is often excluded from reviews and meta-analyses on leadership outcomes (Zacher et al., 2015). In meta-analyses examining gender and leadership effectiveness, leadership effectiveness is not clearly defined (e.g., an aggregation of satisfaction, productivity, and group performance are used) and measured (e.g., a combination of studies using subordinate, peer, and manager ratings are used). Therefore, these meta-analyses have not found a clear and consistent relationship between gender and leadership effectiveness (e.g., Eagly et al., 1995; Paustian-Undersdahl et al., 2014). Presently, research has an incomplete picture of how gender and age demographics influence leadership effectiveness.

There is also limited understanding of how identification and attribution processes may explain the relationship between demographics and leadership effectiveness. Identification processes explore leadership effectiveness through the lens of how a follower identifies with their leader and attributional processes explore leadership effectiveness through the lens of societal norms (DeRue et al.,

2011). These processes, although acknowledged and discussed, went untested in DeRue and colleagues' (2011) meta-analytic framework of leadership effectiveness due to a lack of studies, but may further explain the unclear findings of previous research that has examined demographics and leadership effectiveness.

Further, a holistic understanding of the impact of leader demographics such as age and gender on leadership effectiveness is missing because intersectionality is not often used as a guiding theory. Although women have identified key leadership obstacles as age, gender, and family responsibility (Liu & Wilson, 2001), gender and age are rarely examined together. Intersectionality theory suggests that singular traits do not explain the experience of individuals, therefore more than one component provides a more comprehensive understanding of relationships. In order to provide a more complete picture of how demographics influence leadership effectiveness, gender and age should be examined through an intersectional lens.

Current research has an incomplete understanding of how demographics impact leadership effectiveness, the processes that contribute to these relationships, and how gender and age interact to influence leadership effectiveness. There are also inadequate techniques used to test relationships between demographics and leadership outcomes. There are three primary reasons why leadership research is not presently capturing experiences in leadership appropriately: 1) non-generalizable samples in women's leadership studies, 2) age is often controlled

without justification, and 3) age tends to be conceptualized chronologically, despite several more suitable conceptualizations.

Women's leadership research often does not consider the experiences of women across different ages. Current research on women leaders tends to use samples of mainly middle-aged managers (median age of 44 years old; Eagly et al., 2003), despite middle-aged managers (between 35 and 54 years old) making up only 50% of the managerial workforce (Bureau of Labor Statistics, 2021). Therefore, the findings of past leadership studies may only be generalizable to half of the managerial population and only useful for a smaller subset of women managers.

In addition to this, in women's leadership research, age is often controlled for without justification (Bernierth & Aguinis, 2016). Without having solid evidence of how age impacts outcomes in women's leadership studies, researchers that control for age may be doing so irresponsibly. Further, chronological age is often used as a default age conceptualization, despite the potential to use other age conceptualizations, such as perceived relative age, that may make more sense in some leadership studies. Presently, leadership studies would benefit from efforts made to examine gender and age together with appropriate conceptualizations and without controls.

The current issues in studies, such as non-generalizable samples, controlling demographics without reason, and poor consideration as to demographic

conceptualizations, result in the known research on gender and leadership having inaccurate effect sizes. The current research examines the influence of leader demographics, specifically gender and age, on perceptions of leadership effectiveness through two mediational processes: identification and attribution. The leader identification process is investigated through relational demography and personal identification research, while the attribution process is examined through implicit leadership theories and stereotypes. The individual effects of leader gender and age are examined along with demographic interaction effects. The current research will begin to address the lack of research examining how identification and attributional processes explain the relationship between leader demographics and leadership effectiveness. It also takes a more whole-person approach in measuring the interaction of leader gender and age in these relationships.

Chapter 2

Literature Review

Organizational Leadership Research

Early Trait Theory

Leadership trait theory is one of the oldest approaches to studying leadership and is often traced back to the great man theory of leadership. In a series of lectures in the 1840's, Thomas Carlyle, a Scottish philosopher, asserted that most of history could be attributed to the impact of great male heroes and that leadership was inherently masculine (Mouton, 2019; Spector, 2016). Questions contemplated about leadership during this time focused on individuals as born leaders and set out to find what made those men different from non-leader men. In other words, the great man theory suggested that leaders and followers are different types of people.

There are several issues with the great man theory. One issue is that based on the great man theory, men are the sole focus of leadership, despite the existence of women leaders. The other issue with the early trait approach is the inconsistent results yielded from studies. At the time of Carlyle's assertions, the most publicized leaders were men, but this does not mean that no women were leaders when Carlyle was alive. For example, while Carlyle was preaching about leaders that were men, Dorothea Dix was appointed as the Superintendent of Army Nurse for the Union

Army, and she championed mental health reform (National Women's Hall of Fame, n.d.). Historically, women have been leaders, but Carlyle neglected this fact in the great man theory. In addition to this, the postulations are based on anecdotes and not founded on scientific evidence. A benefit of the great man theory is that it sparked the early trait approach, which examined the traits that make an effective leader.

Gordon Allport was among the first trait theorists to investigate what traits make effective leaders (Hogan & Sherman, 2020). Allport used the English-language dictionary to identify over 18,000 words describing personality (Allport & Odbert, 1936). Leadership research began focusing on personality traits characteristic of effective leaders following Allport's landmark study. Unfortunately, there were several inconsistencies in the early trait leadership research due to an underdeveloped understanding of personality.

Early trait research conducted in the first half of the 20th century was reviewed and found to be largely inconclusive (Stogdill, 1948). One reason why the results were inconclusive was a lack of validated trait measures, such as personality measures. Therefore, researchers would come up with different sets of traits that made effective leaders, which made it difficult to compare results across studies and come to conclusions as to which traits lead to more effective leadership. Stogdill (1948) concluded that leadership needed to match the situation behaviorally in order for leaders to be considered effective. Stogdill's (1948) trait

leadership review critiques brought leadership trait research to a temporary halt until the early 2000s.

Early Behavioral Approach

The behavioral approach rose in response to the inconsistent trait approach results. Researchers stopped focusing on who the leader is to determine leadership effectiveness and instead began focusing on what the person does to determine leadership effectiveness. Two studies conducted at Ohio State University and the University of Michigan focused on the behavioral approach (Jex & Britt, 2014).

The Ohio State study sought to understand patterns of leadership behaviors by using The Leadership Behavior Description Questionnaire (Halpin, 1957). The researchers found two categories of behaviors: initiating structure and consideration (Stodgill & Startle, 1948). Initiating structure is “the extent to which an individual is likely to define and structure his own role and those of his subordinates toward goal attainment” (Fleishman & Peters, 1962, p. 130). Behaviors that indicate initiating structure include planning goals and setting expectations (Judge et al., 2004). Consideration is “the extent to which an individual is likely to have job relationships characterized by mutual trust, respect for subordinate’s ideas, and consideration of their feelings” (Fleishman & Peters, p. 130). Behaviors that are indicative of consideration include building relationships with employees and ensuring interactional justice (Judge et al., 2004). The Ohio State studies created a leadership style grid that depicted different combinations of consideration and

initiating structure levels (e.g., high consideration and low initiating structure), with the optimal combination of both being high.

A less popular counterpart to the Ohio State studies includes the University of Michigan studies that also sought to find patterns of effective leader behaviors. The University of Michigan studies identified job-oriented and employee-oriented leadership behaviors as two ends of a continuum rather than a combination of independent leadership styles (Likert, 1961). The Blake and Mouton managerial grid came out of these studies and differentiated leadership styles based on the manager's level of concern for people and production (Blake et al., 1962). This approach puts leaders into different management style buckets depending on their concern for people and results levels. For example, leaders with great concern for people and low concern for results elicit an accommodating leadership style (Blake et al., 1962). In contrast, leaders low in concern for people and high in concern for results elicit an authoritarian leadership style (Blake et al., 1962). This managerial grid has long been criticized for its lack of empirical evidence (Barnardin & Alvares, 1976), which helped fuel the rise of the contingency approach. The behavioral approach was sidelined until the early 2000s as contingency/situational approach arose for a short time in the 1960s and 1970s.

Contingency/Situational Approach

The situational factors surrounding leadership had been primarily ignored in early behavioral approach research (Kerr et al., 1974). In addition, the effectiveness

of behaviors varied across studies (Vroom & Jago, 2007). As a result of inconsistent findings and lack of situational consideration, the behavioral approach became unfavorable and the contingency/situational approach rose in popularity. Proponents of the contingency approach believed that the behavioral approach did not yield consistent empirical evidence, because leadership effectiveness is not determined by the behaviors that a leader employs, but instead by the way the leader adapts behaviors to unique situations. The contingency/situational approach was short-lived because researchers could not collectively identify the appropriate way to lead in specific situations (Barling et al., 2011). In other words, the contingency/situational approach proposed that leaders should employ certain leadership behaviors according to the situation, but this approach failed to find consistent ways to effectively react to different situations. Researchers began to investigate how followers influence leadership effectiveness since followers play a role in how situations unfold differently across contexts.

Dyadic/Follower-Centric Theories

While the trait and behavioral leadership theories struggled to stay relevant and the situational/contingency approach was dying down, dyadic and follower-centric theories began gaining steam in the 1970s, when the implicit leadership theory was first proposed. Since the early trait and behavioral approaches were revived in the 2000s, the dyadic/follower-centric approach has not fallen out of favor.

Implicit leadership theory (ILTs) concerns “preconceptions about the patterning of leadership variables” (Eden & Levitan, 1975, p.736). ILTs demonstrate the importance of the follower and their perceptions. In this sense, it matters less what the leader does to be effective, and it matters more whether the leader matches the follower's idea of what they believe an effective leader is. This has impacted leadership research by showing the influence followers have on determining whether a leader is effective or not. The inclusion of followers into leadership research led to the development of a specific ILT, the romance of leadership.

Romance of leadership (Meindl et al., 1985) kicked off the use of more follower-centric approaches to leadership. Leader-centric theories (i.e., theories focused on aspects of the leader that cause a reaction in followers and organizations) dominated leadership research until a shift began to include followers (Lord et al., 2017). For example, leader-centric research emphasizes the effect a leader can have on follower and organization-wide performance. Recommendations from the romance of leadership literature include: 1) leader outcomes should be carefully considered to avoid misattribution of organization-wide success or failure, 2) follower motivations, perceptions, and characteristics should be considered when evaluating leadership effectiveness, and 3) including a focus on social contagion and the role of interactions in assessing leadership (Bligh et al., 2011).

LMX. Leader-member exchange theory (Graen & Uhl-Bien, 1995) has dominated the literature in terms of evaluating the interactions between leaders and followers from a dyadic/relationship-based approach (Zhu et al., 2019). The initial development of LMX theory began with investigating the Vertical Dyad Linkage Model (Dansereau et al., 1975). The Vertical Dyad Linkage model is a framework that was developed after researchers found that there was no average leadership style exhibited like the Ohio State and Michigan studies suggested (Graen & Uhl-Bien, 1995). Instead, when participants were asked questions about their leaders, followers often responded with whether there were high- or low-quality exchanges that resulted in them being a part of an in-group or out-group at work (Graen & Uhl-Bien, 1995). The Vertical Dyad Linkage model took this information and postulated that the relationships between leaders and followers could be differentiated based on the quality of their exchanges (Dansereau et al., 1975).

LMX advanced the previous Vertical dyad Linkage model by moving past the conceptualizations of differentiating followers into an in-group or out-group and into the concept of Leadership Making. Leadership Making is an approach in which “emphasis is placed not on how managers discriminate among their people but rather on how they may work with each person on a one-on-one basis to develop a partnership with each of them” (Graen & Uhl-Bien, 1995, p.229). In other words, the Leadership Making life cycle describes how leader-follower relationships move from stranger to acquaintance and eventually to a mature, high-

quality, reciprocated partnership (Graen & Uhl-Bien, 1991). LMX theory further solidified the importance of followers when it comes to leadership by postulating that the relationship between the leader and follower determines effectiveness.

Modern Trait and Behavioral Approaches

The early trait and behavioral approaches had been put on hold until the early 2000s. Hunter and Schmidt's (1990) meta-analytic procedures allowed researchers to revisit trait and behavioral research with a structured approach to examining multiple studies (Lord et al., 2017). For example, Judge and colleagues (2004) conducted a meta-analysis and found that the behavioral categories of consideration and initiating structure predict leadership effectiveness, providing meta-analytic evidence support for the behavioral approach. Compared to the 1930s, when leadership personality was first investigated, the Big Five was more established in the early 2000s. This allowed Judge and colleagues (2002) to conduct a meta-analysis on the different personality traits that predict leadership effectiveness. The researchers found that all Big Five personality traits, especially extroversion, predict leadership effectiveness (Judge et al., 2002). As a result of psychometric advances in meta-analytic procedures and measures, the trait and behavioral approaches were revived and modernized in the early 2000s.

As a result of the trait approach revival, new trait models were developed. The most popular model is Zaccaro and colleagues' (2004) model of leader attributes and leader performance. This modern trait model adds to the existing

literature by differentiating the proximal influence of traits on performance. Distal traits, such as personality, cognitive ability, and values, are described as less predictive of leader processes than proximal traits, such as problem-solving, tacit knowledge, and social skills (Zaccaro et al., 2004). Another premise of this model is that the combined influence (i.e., integration) of traits predicts leadership effectiveness better than the independent effects of attributes (Zaccaro et al., 2004). In other words, Zaccaro and colleagues suggest that the combined effect of traits predicts leadership effectiveness better than the independent effects of each trait.

New behavioral models attempting to explain leadership effectiveness also arose from the revival of this behavioral approach. A greater focus on leadership styles (e.g., transformational-transactional, authentic, ethical, etc.) has continued to be researched into the 2020s, primarily due to advancements in leadership style measurement. For instance, Burns first conceptualized transformational leadership in 1978, but transformational leadership did not dominate empirical articles until Bass and Avolio developed the Multifactor Leadership Questionnaire (MLQ) in 1996. Since then, transformational leadership has been the most studied modern behavioral model (Zhu et al., 2019). Several modern models have been made since the revival of both the trait and behavioral approaches. However, there was a lack of integration between the two popular approaches until 2011.

Overall, there have been many shifts in leadership research. Figure 1 illustrates the relative timeline of the shifts described in the previous sections.

Across the history of leadership research, the most prolonged theoretical approach to research has been the great man theory. This suggests that despite changes in gender perspectives, there is likely still bias in leadership perceptions. Further, modern trait and behavioral approaches have only recently been integrated into one of the models that influenced the direction of this paper. The integration of the modern trait and behavioral approaches is described next.

Approach	1840's	1850's	1860's	1870's	1880's	1890's	1900's	1910's	1920's	1930's	1940's	1950's	1960's	1970's	1980's	1990's	2000's	2010's	2020's
Great Man Theory																			
Early Trait Approach																			
Early Behavioral Approach																			
Situational/Contingency Approach																			
Dyad/Follower Centric Approach																			
Modern Trait & Behavioral Approaches																			

Figure 1: Leadership Research Approach Timeline

Integrating Approaches

DeRue and colleagues (2011) advocated for integrating the trait and behavioral approaches. Figure 2 depicts the framework developed to integrate the two approaches (DeRue et al., 2011). To predict leadership effectiveness, traits are considered distal attributes that break down into demographics, task competence, and interpersonal attributes. The model considers the early and modern behavioral approaches in their inclusion of leader behaviors as a mediator, explaining the impact of traits on leadership effectiveness. In addition to the behavioral mediator, the framework includes follower-centric processes (i.e., identification and attributional processes) as explanatory mechanisms for the relationship between traits and leadership effectiveness. Overall, this heavily-cited framework

incorporates some of the most popular theories into one model, which the researchers tested with a meta-analysis.

The outcome measures used in the meta-analysis included performance-related leadership effectiveness criteria (i.e., group performance), affective/relational-related leadership effectiveness criteria (i.e., follower job satisfaction and satisfaction with leader), and overall leadership effectiveness (i.e., a combination, catch-all of other leadership effectiveness measures). The researchers were only able to analyze the impacts of some traits and behaviors on leadership effectiveness due to the number of studies available. Results from the meta-analysis suggest that both traits and behaviors together account for 58% of the variance in overall leadership effectiveness, 31% of the variance in group performance, 56% of the variance in follower job satisfaction, and 92% of the variance in satisfaction with the leader (DeRue et al., 2011). There was also evidence that leader behaviors partially mediate leader traits in predicting leadership effectiveness. Unfortunately, DeRue and colleagues (2011) did not have enough studies to examine the follower-centric identification and attributional mediation processes in their leadership framework.

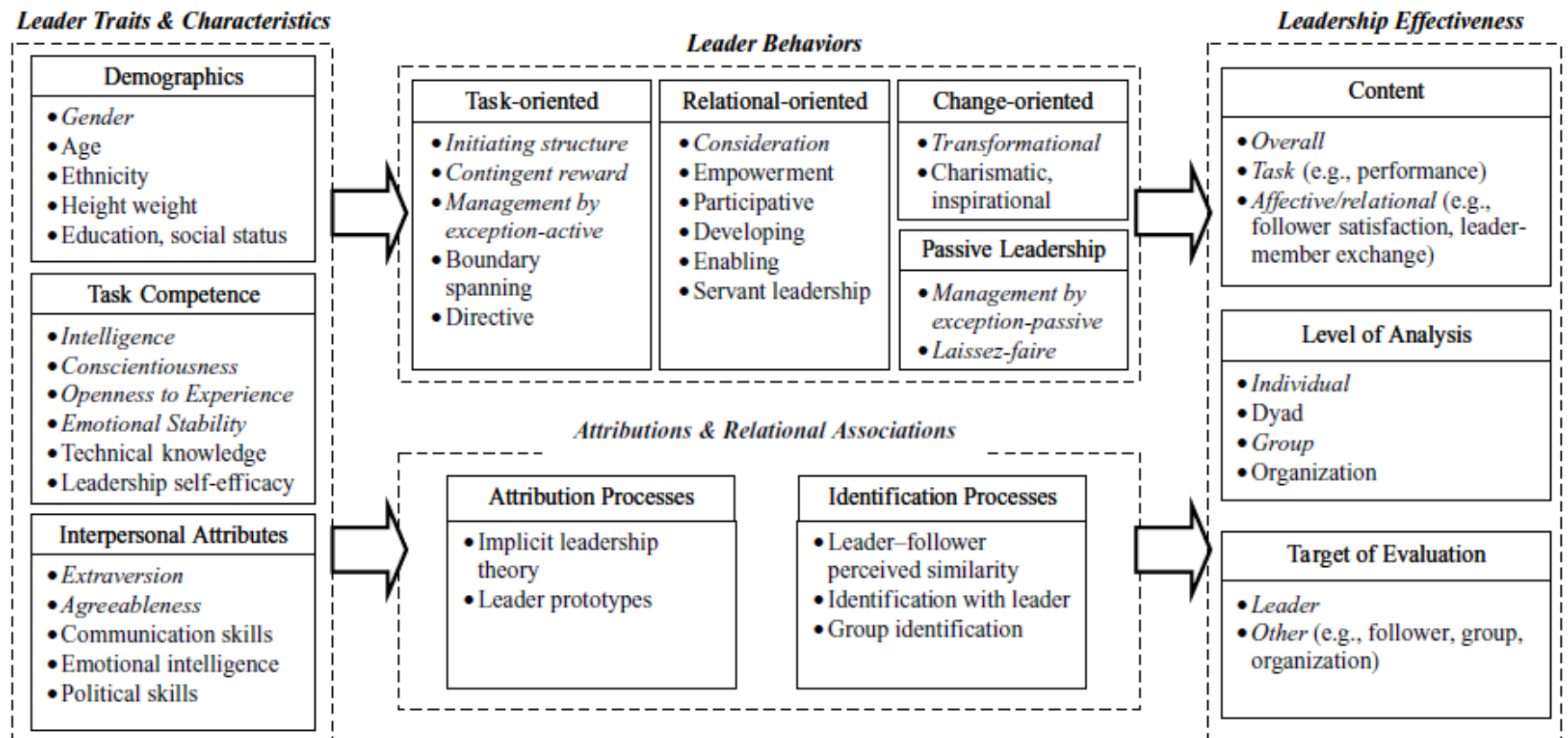


Figure 2: DeRue and Colleague's (2011) Integrated Model of Leader Traits, Behaviors, and Effectiveness

Leadership Effectiveness

Conceptual definitions. Just as there are many definitions of leadership (Bass & Bass, 2008), there is also a lack of conceptual clarity for leadership effectiveness (Dhar & Mishra, 2001). Definitions vary from effectiveness, referring to "a leader's ability to influence his or her subordinates" (Judge et al., 2002, p.767), to effective leaders "drive for results now, while simultaneously building for the future" (Gandz, 2008, p. 30). These definitions both reflect different aspects of leadership: influencing and goal accomplishment. Some definitions have attempted to capture both elements. For example, Cooper and Nirenberg (2012) state that leadership effectiveness is "the successful exercise of personal influence by one or more people that results in accomplishing shared objectives in a way that is personally satisfying to those involved" (p.1). This definition is very similar to the definition of leadership, but with the added term "successful." Instead of defining leadership effectiveness as successful leadership, the different approaches to leadership can be used to differentiate leadership effectiveness conceptualizations.

Leadership effectiveness can be conceptualized differently based on the leadership research approaches (Yukl, 1989; see Table 1). Since each approach takes on a fundamentally different approach to leadership, the conceptualizations of leadership effectiveness differ and have evolved. For example, a leader's leadership style determines their effectiveness according to the behavioral approach and a

leader's ability to adapt to situations determines effectiveness according to the situational approach.

Measurement. Although the two themes in defining leadership include 1) influencing others and 2) accomplishing goals, leadership effectiveness measures typically do not measure these concepts together. The content of leadership effectiveness measures tends to fall into one of three categories: task performance (e.g., sales quotas, goal accomplishment), affective/relational (e.g., leader satisfaction, LMX), and overall leadership effectiveness (i.e., general perceived performance). These three categories appear in the DeRue and colleagues (2011) framework. However only affective/relational and overall leadership effectiveness will be examined in this study because more objective performance-related measures are not follower-centric and are often contaminated by other factors, such as market trends (Judge et al., 2002; Lord et al., 2017).

LMX. The follower and dyadic perspective take on a relational approach to leadership, which means that within this context, leadership effectiveness is determined by relationship quality. Two common scales measure LMX: the Leader-Member Exchange 7 questionnaire (LMX-7; Graen & Uhl-Bien, 1995) and Leader-Member Exchange Multidimensional (LMX-MDM; Liden & Maslyn, 1998). A debate about dimensionality differentiates these two scales. The LMX-7 measures LMX as a global, unidimensional construct, whereas the LMX-MDM

considers LMX as encompassing four dimensions (i.e., affect, loyalty, contribution, and professional respect) that load onto one second-order factor.

Researchers have explored the differences between the LMX-7 and LMX-MDM when examining LMX as a unidimensional construct. Meta-analytic and correlational evidence suggests that the scales are two sides of the same coin. A meta-analytic study found that the type of scale did not moderate LMX relationships (Martin et al., 2016). In other words, there was no difference between the two scales in terms of the effect sizes found when the scales are measured with one overall dimension. Correlations between the LMX-7 and LMX-MDM have also been consistently high, suggesting that they measure the same unidimensional construct. For example, Joseph and colleagues (2011) found a 0.9 correlation between the two scales. Therefore, both scales measure overall LMX equally as well. In addition to this, most studies using the LMX-MDM only report the composite score for LMX instead of utilizing the dimensionality of LMX (e.g., Eisenberger et al., 2010; Erdogan & Enders, 2007). Most studies examine LMX through a unidimensional lens, even if the studies use the LMX-MDM. Therefore, the LMX-7 scale measures the same construct as well as the LMX-MDM and does so with fewer items.

Perceived Overall Leadership Effectiveness. The trait approach typically measures overall leadership effectiveness. In meta-analyses on leader traits, overall leadership effectiveness tends to amalgamate several different types of leadership

effectiveness (e.g., Blake et al., 2022; DeRue et al., 2011; Do & Minbashian, 2020; Judge et al., 2004). In studies on leader traits, overall leadership effectiveness tends to be measured on a short scale (e.g., Chen & Chen, 2018; Simon et al., 2022). Although there is not one commonly used overall leadership effectiveness scale, most scales use similar language. For example, a perceived leadership effectiveness scale developed by De Hoogh and colleagues (2005) asks three questions: "to what extent is the overall functioning of the person you evaluate satisfactory", "how capable is the person you are evaluating as a leader", and "how effective is the person you are evaluating as a leader." A similar six-item scale adapted from van Knippenberg and van Knippenberg (2005) includes statements such as "this team leader is a good leader" and "this team leader is very effective" (Giessner & van Knippenberg, 2008). In sum, perceived overall leadership effectiveness scales tend to be similar in content when used in single studies (as compared to meta-analyses that typically combine many scales to measure overall leadership effectiveness). The most significant consideration when determining the appropriateness of overall leadership effectiveness as a measure is the rater.

Perceived overall leadership effectiveness can be rated by the leader themselves, the leader's manager, or the leader's follower. The most common rater used for overall leadership effectiveness is the follower (Yukl, 2012). There is merit to using self-ratings, manager ratings, and follower ratings for leadership effectiveness, depending on the study approach. For example, a recent study

examined how providing negative feedback impacts daily perceptions of leadership effectiveness and assessed leadership effectiveness through a self-reported, experience sampling methodology (Simon et al., 2022). This is appropriate because the leader-centric study examines within-person processes, which impact the leader's view of their own daily performance. Further, study relying on follower perspectives would include follower ratings of leadership effectiveness because this rater's perspective would be crucial.

Although the follower is the most appropriate rater in the current study, this approach is not without its limitations. A follower's perspective on a leader's effectiveness does not reflect necessarily effect the leader's actual performance. For example, a follower may rate a leader as highly effective, but the leader's actual performance may be poor. As a result of bias, a follower's perspective of leadership effectiveness should not be assumed to be the leader's actual performance. Taking the current study into consideration, gender and age may not be related to actual or objective leader effectiveness. Nonetheless, these leader demographics can influence a follower's perception of leadership effectiveness, which is the focus of the current study. Ultimately, follower perceptions of leadership effectiveness can impact the leader's ability to influence the follower. According to the dyadic/follower approach to leadership, follower perceptions can impact whether a leader is accepted, how the leader is interacted with, and the leader's ability to influence the follower. As a result, studies using a dyadic/follower-centric approach

may find that a follower is the most appropriate rater of perceived leadership effectiveness.

Identification Process

The identification mediation relationship was not tested in DeRue and colleagues' (2011) meta-analysis due to a lack of studies available. To build on that research, this study focuses on explaining how demographics, specifically gender and age, relate to leadership effectiveness. Identification processes examine how followers think of their leaders based on how the follower identifies with the leader. In other words, the "behind the scenes" thought process of followers evaluating leadership effectiveness may look like this: "based on who I am and who my leader is, this is how I feel about our relationship." Identification processes have been identified as relational associations that explain the relationship between leader demographics and leadership effectiveness (DeRue et al., 2011; Zacher et al., 2015). Overall, the general principle behind these theories is that identity colors a follower's perception of leadership effectiveness. This section will cover several theoretical perspectives that take relational demography and personal identification into consideration when assessing leadership effectiveness.

Relational Demography

Relational demography refers to the "comparative similarity or dissimilarity in given demographic attributes of a superior and a subordinate dyad or the

members of an interacting work team" (Tsui & O'Reilly, 1989, p. 403). In other words, demographic similarities tend to bring people together while demographic dissimilarities tend to interfere with interactions. The similarity-attraction paradigm (Bryne, 1971) is the conceptual foundation of relational demography (Tsui et al., 1992). The similarity-attraction paradigm postulates that individuals with demographic, attitudinal, or personality similarities are drawn toward each other and, as a result, interact more often, which can build better relationships (Bryne, 1971). This attraction can lead to increased personal identification between leaders and followers.

Reviews on age and gender similarity in work groups have reported mixed findings in relational demography research (Jackson & Joshi, 2011; Riordan, 2000). A lot of relational demography research examines demographic similarity based on a singular trait. This may explain the lack of consistency in research because the complexity of demographic characteristics is not considered. Dyads can be similar or dissimilar in multiple ways and at different times. Some demographic characteristics may be more important to be similar. For example, there may be a difference in examining gender and age similarities in an industry dominated by men. In this case, gender similarities may be more important than age. Regardless of the context, more than one demographic should be considered when researching relational demography (Jackson & Joshi, 2011).

Overall, demographic similarity influences how much followers identify with their leaders (Kark et al., 2012); however, there is a gap in the research regarding how multiple forms of demographic similarity (e.g., age and gender similarity) influence the identification process. There are mixed reports on demographic similarity outcomes because considering only one type of demographic similarity (which has traditionally been the focus) does not provide a complete picture of the level of similarity between a follower and leader.

Personal Identification

Leadership influences followers through different forms of identification: social identification and personal identification (Kark et al., 2003). Social identity theory postulates that social identity is an "individual's knowledge that he belongs to certain social groups together with some emotional and value significance to him of this group membership" (Tajfel, 1974, p. 292). Social identification occurs when a group becomes self-referential, whereas personal identification occurs when an individual (e.g., a leader) becomes self-referential (Kark et al., 2003). Personal identification is "perceived oneness with another individual, where one defines oneself in terms of the other" (Ashforth et al., 2016, p. 28). In other words, when an individual's self-concept is aligned with their leader, then the follower is experiencing personal identification with said leader. For example, if a follower interprets an insult directed at their leader as a personal attack, this signals that they personally identify with their leader (Becker et al., 1996).

Individuals may actively internalize someone else's attributes as a result of identity threat or a desire for development (Ashforth et al., 2016). Individuals may also naturally feel like they are one with someone else as their relationship grows and becomes more intimate (Ashforth et al., 2016). A follower may emulate the attributes of their leader because the follower feels as though they are inadequate and need to change, the follower sees attributes in the leader that could result in more success and want to improve, or because the follower has become so close to their leader that they now see the leader's attributes as their own.

When followers internalize their leader's attributes, the follower will perceive themselves and their leader to be more similar as they begin to behave like their leader. Perceived similarity impacts performance appraisals (Schraeder & Simpson, 2006), and therefore, personal identification can positively influence the follower's perception of leadership effectiveness (Kark et al., 2003). Furthermore, demographic similarity may influence perceptions of leadership effectiveness through personal identification.

Attribution Process

Attributional processes have also been identified as one path to explaining the relationship between leader demographics and leadership effectiveness (DeRue et al., 2011; Zacher et al., 2015). In contrast to identification processes, attributional processes examine leaders through the lens of societal norms. For example, a thought process within attributional theory may look like this: "Based

on what I believe to be good leadership qualities, and how much my leader matches that, this is how effective I view my leader." This section will cover the impact of leader prototypes on follower perceptions of leadership effectiveness. Overall, the general principle behind these theories is that a follower's preconceived idea of what makes up an effective leader and how their leader compares to that idea determines their perception of leadership effectiveness.

Implicit Leadership Theory

Eden and Levitan (1975) first proposed ILTs to determine the factor structure of leadership behaviors based on the Leadership Behavior Description Questionnaire developed for the Ohio State studies. The study asked students to rate leadership behaviors in a vague, hypothetical situation. Despite having to base their ratings on the limited description of a situation, a consistent factor structure emerged from the participants' ratings. This was evidence that implicit leadership theory determined the factor structure of the results (Eden & Levitan, 1975). Further evidence included results suggesting that inexperienced participants who could not rely on observations based on work experience rated the behaviors similar to those with work experience (Eden & Levitan, 1975). The factor structure used to assess leader behaviors was replicated even when raters had no information regarding the leader's behaviors. In other words, the perceptions of raters are essential to consider when judging leadership effectiveness.

Prototypes

Advancing ILTs, Lord and colleagues (1982) developed Leadership Categorization Theory, which set out to research leadership prototypes using Rosch's (1978) categorization principles. Prototypes are "the most typical example of the category" (Rosch, 1973, p. 330). Leader Categorization Theory postulates that the prototypes are used to determine whether someone fits in a category, such as an "ideal" leader (Lord et al., 1984). This theory uses a recognition-based approach to leadership, in other words, preconceived notions of a leader are used to judge the leader's effectiveness. This path is preferred compared to inference-based leadership (i.e., salient events impact perceptions of a leader), which is often plagued by the romance of leadership (Junker & van Dick, 2014).

There has been a history of inconsistent operationalization of prototypes. However, Junker and van Dick help remedy this issue by proposing two dimensions that researchers should consider when examining prototypes: the norm and the valence of a prototype (2014). The two norms of prototypes include central tendency-based (i.e., typical leader) and goal-directed-based (i.e., ideal leader; Junker & van Dick, 2014). The valence concerns categories that reflect the norm and are not reflective of the norm (e.g., prototypical versus anti-prototypical and ideal versus counter-ideal; Junker & van Dick, 2014). Research suggests that prototypical qualities of a typical leader include sensitivity, intelligence, dedication, and dynamism, while tyranny and masculinity are anti-prototypical (Epitropaki &

Martin, 2004; Offerman et al., 1994). In other words, sensitivity, intelligence, dedication, and dynamism reflect a typical leader, while tyranny and masculinity do not reflect a typical leader. These prototypes and the survey items used to measure them are in Table 2, which is adapted from Epitropaki and Martin (2004). The Global Leadership and Organizational Effectiveness (GLOBE) project found that charismatic, team-oriented, participative, and humane are ideal characteristics and that self-protective and autonomous were found to be counter-ideal (House et al., 1999). Junker and van Dick suggest that ideal categorizations appear superior to typical categorizations, and this may be especially true for leader-follower interaction outcomes (2014).

Leadership categorization theory suggests that the ideal characteristics found for a leader can differ based on three levels of prototype detail: superordinate level, basic level, and subordinate level (Lord et al., 1984). The level of inclusiveness decreases down the hierarchy (Rosch, 1978). The superordinate level is the most inclusive, and the categories become more specific as the different levels are examined (Lord et al., 1984). The different levels used in the current study are depicted in Table 3, because the categories within the levels are unique to every study. The superordinate level is the most inclusive, meaning it contains a large variety of leader types. For example, this level could include the investigation of prototypes for people who are leaders versus people who are not leaders. The basic level is less inclusive but still related to the superordinate level. The use of

basic categorizations is helpful because it increases the specificity of prototypes (Lord et al., 1984). Most studies looking at the impact of gender and age on prototypes examine the phenomenon at the basic level. In the next section, I will discuss how stereotypes influence the attribution process.

Stereotypes

Stereotypes are “a generalized belief about the characteristics that are associated with the members of a social group” (Baumeister & Vohs, 2007, p.940). Stereotype formation occurs as a result of social influences at young ages. For example, gender stereotypes begin forming around 2.5-3 years of age in children (Martin & Dinella, 2001). There is also evidence that cross-culturally, gender stereotypes are solidified by age 10 (Blum et al., 2017). In addition to gender stereotypes, there is evidence that age stereotypes form as young as three years of age (Falamion et al., 2020). These stereotypes inform what individuals consider to be prototypical of a group. For example, individuals with ingrained gender stereotypes are more likely to have beliefs about the role women play in society (Eagly, 1997). Therefore, when presented with the role of stay-at-home caregiver, people who believe gender stereotypes will consider women to be prototypical of this role. These stereotypes that people hold can inform prototypic beliefs held by people.

Stereotypes influence prototypes, especially at the basic level of prototypes (Brewer et al., 1981). Researchers examining age stereotypes found that

participants had more difficulty providing stereotypes for "elderly" persons but had a less difficult time when presented with three different prototypes of an "elderly" person. Participants were able to provide more specific stereotypes when judging a grandmother, elder statesman, and senior citizen (Brewer et al., 1981). This provides evidence that the prototype judgements are less likely to be made at the superordinate (e.g., leader or not) level.

Idiosyncratic Fit

ILT research has historically focused on identifying the prototypes of leaders. Although there are some commonly found prototypes (e.g., dedication, dynamism), these prototypes are not valued equally across individuals (Tavares et al., 2018). For instance, some followers may place higher value on sensitivity, while other followers may value the intelligence of a leader more. In the current study, individual follower perceptions are critical to capture. Therefore, idiosyncratic fit is the most appropriate way to evaluate how well a follower's leader matches a follower's ideal leader prototype. Idiosyncratic fit is "a fit with the individually held leadership prototypes" (Junker & van Dick, 2014, p.1156). In other words, when a follower's leader matches the follower's ideal leader prototypes, then there is high idiosyncratic fit. ILT congruence has a positive relationship with leader performance evaluations (Lord et al., 2020), perceptions of leader competence (Sy et al., 2010), and higher follower satisfaction (Epitropaki & Martin, 2005).

Research on ILTs has recommended using a person-centered approach instead of a focus strictly on the prototypic attributes because there is variability in how important attributes are to individuals (Tavares et al., 2018). In other words, although there have been established leader prototypes (e.g., Offerman et al., 1994), each of these prototypes are not valued the same by all individuals. For example, dedication and dynamism are both prototypes, but follower A may place dedication as most important and dynamism as least important, while follower B places dedication as least important and dynamism in the middle of prototype importance. This means in order to understand how leader demographics influence a follower's perspective of how well the leader fits their individualized idea of an ideal leader, idiosyncratic fit is a better measure than purely examining prototypes, because examining prototypes alone does not provide information on how well the follower believes their leader is compatible with their idea of an ideal leader.

Gender in the Workplace

Defining Gender

Two terms that are often conflated are sex and gender (Pryzgoda & Chrisler, 2000). This study focuses on gender, “the different roles, responsibilities, limitations, and experiences provided to individuals based on their presenting sex/gender” (Johnston & Repta, 2012, p.20-21). Gender research implies a socialization explanation of events, while sex research implies a biological

explanation of events (Deaux, 1985). Sex is “a biological construct that encapsulates the anatomical, physiological, genetic, and hormonal variation that exists in species” (Johnson & Repta, 2012, p.19). Because sex focuses on biological explanations of behavior, most studies focused on societal expectations research gender over sex. In addition to this, in leadership studies, followers may not know their leader's sex, which is typically verified with legal or medical documentation, while gender is expressed outwardly, and therefore, follower bias can be examined.

Research on both gender and sex tends to focus on a binary designation (e.g., man/woman or male/female), especially when it comes to leadership research. However, it is important to note that a binary defines neither concept. For example, the United States recently recognized that there are more than male-female sex categories on legal documents, such as passports (Wamsley, 2021) for intersex people who “are born with sex characteristics (including genitals, gonads and chromosome patterns) that do not fit typical binary notions of male or female bodies” (United Nations Human Rights Office of the High Commissioner, 2019, p.3). In addition to this, men and women are not the only categories within the concept of gender. For example, discrimination against nonbinary (i.e., people with a gender identity outside of male-female) and transgender (i.e., identify as a gender other than their assigned sex at birth) employees has recently begun to be researched (Dray et al., 2020). Despite gender not being binary, societal

expectations and stereotypes have historically been rooted in binary notions because man and woman are the most common gender identities and have been acknowledged by society for a longer period of time. As a result, the role expectations associated with these genders have had more time to solidify. Therefore, most research focuses on the experiences of women and men.

Gender and Identification Processes

Closeness is one method of developing personal identification (Ashforth et al., 2016). The reason for forming close relationships in the workplace differs by gender, such that men more often seek career benefits and women more often seek social support to reduce stress (Morrison, 2009). The definition of closeness is also defined differently by gender. Men tend to define closeness as shared activities (e.g., playing sports together or participating in a shared committee), while women tend to define closeness more intimately with shared feelings (Odden & Sias, 1997; Wood & Inman, 1993). It may be challenging to achieve a level of high intimacy when the goal of a relationship and definition of closeness are different. Therefore, gender plays a role in the formation of personal identification.

Personal identification fostered by closeness can also be increased by shared experiences that help form a bond (Berman et al., 2002; Cronin, 2014). Individuals of the same gender are more likely to share similar experiences because of socialization as children. For example, children begin acting according to societal gender expectations as early as two years old (Martin & Dinella, 2001).

Therefore, as an adult, men may share more experiences in line with their gender, and women may share more experiences in line with their gender because gender role expectations are practiced most of their lives.

Furthermore, even if shared experiences are not explicitly stated, there is a tendency to assume that other people who share similar characteristics that are familiar also share the same beliefs (Van Der Wege et al., 2021). This self-anchoring bias in assessing common ground involves "a tendency to base in-group judgements on the self" (Cadinu & Rothbart, 1996, p. 661). In other words, the individual may project their attributes onto another individual that they assume is similar, which can increase identification because they believe that they share the same attributes (van Veelen et al., 2016). For example, a socially conservative man may assume the men around him are also socially conservative, making him feel comfortable in the group. However, his assumption may not be accurate. Self-anchoring increases a sense of common ground, even if there is no common ground (Van Der Wege et al., 2021). Therefore, gender similarity relates to more personal identification because there is a sense of more familiarity whether there are genuinely shared experiences or not.

Gender and Attribution Processes

Central to gender stereotypes cross-culturally are the concepts of agency and communality (Best & Williams, 1993). These concepts evolved from Bakan's

(1966) work, in which he initially described agency and communion in the following excerpt:

"...agency for the existence of an organism as an individual, and communion for the participation of the individual in some larger organism of which the individual is a part. Agency manifests itself in self-protection, self-assertion, and self-expansion; communion manifests itself in the sense of being at one with other organisms. Agency manifests itself in the formation of separations; communion in the lack of separations. Agency manifests itself in isolation, alienation, and aloneness; communion in contact, openness, and union. Agency manifests itself in the urge to master; communion in noncontractual cooperation. Agency manifests itself in the repression of thought, feeling, and impulse; communion in the lack and removal of repression" (p. 15)

The concepts of agency and communion have been used to describe the behavioral differences between men and women (Eagly, 1987). Agency, a stereotypic quality of men, "orients people to the self and one's own mastery and goal attainment (e.g., ambitious, assertive, competitive)" (Eagly et al., 2020, p.302). Terms that are also used to refer to the concept of agency include masculinity, instrumentality, and competence (Hentschel et al., 2019). Communion, a stereotypic quality of women, "orients people to others and their well-being (e.g., compassionate, warm,

expressive)” (Eagly et al., 2020, p.302). Other terms that refer to communality include femininity, expressiveness, and warmth (Hentschel et al., 2019). Eagly (1987) used the concepts of agency and communality to develop the Social Role Theory.

Social Role Theory (Eagly, 1987) describes how gender stereotypes have formed due to the division of labor, which has influenced the role expectations of men and women. Gender stereotypes form because the gender roles appear to have inherent qualities that seem natural, and therefore, people assume the qualities are inherent to the gender associated with the role (Eagly & Wood, 2011). For example, the role of a caretaker is associated with compassion and warmth, and women have traditionally held the caretaker role. As a result, the qualities of warmth and compassion have become associated with women. Therefore, if the people associated with a role change, then the content of stereotypes associated with those people change (Koenig & Eagly, 2014).

Although role stereotypes can change, research on gender stereotypes has primarily concluded that these stereotypes have remained relatively stable (e.g., Bhatia & Bhatia, 2021; Eagly et al., 2020; Haines et al., 2016). Despite the share of women in the workforce increasing from 28.6% in 1948 to 47% in 2020 (Women’s Bureau, 2020) and the share of responsibility at home becoming more equitable for heterosexual couples, women still handle most household tasks (Brenan, 2020). In addition to this, in 2020, about 6.5% of women worked in roles dominated by men

(Hegewisch & Mefferd, 2021), such as construction, mechanical engineers, and computer network architects (Women's Bureau, 2019). The current division of labor and types of fields that women are entering contribute to the stability of gender stereotypes.

In 1980, there were no industries in which management positions were predominantly filled by women (Scarborough, 2018). In 2021, women occupied about 40% of management positions (Bureau of Labor Statistics, 2021). Women hold a majority of management positions in people-centered fields, such as human resources (Catalyst, 2022). Role congruity theory (Eagly & Karau, 2002) may explain why women obtain more management roles in people-centered, role congruent fields.

Role congruity theory (Eagly & Karau, 2002) postulates that the leadership role is more congruent with agency and less congruent with communality. Therefore, men experience leadership favoritism in obtaining more leadership roles and higher performance ratings (Eagly & Karau, 2002). Leadership roles are often described with more traditionally masculine concepts or what is known as the "think manager, think male" phenomenon (Schein, 1973). This phenomenon occurs across cultures (Schein, 2001). Prejudice against women leaders results from a mismatch in women's role stereotypes and leader's role stereotypes (Koburtay et al., 2019).

Women also experience the "double bind" in which agency and communal traits have to be balanced, such that women who are too communal are seen as ineffective leaders because communality is not associated with leadership, and women that are too agentic are seen as not woman enough because women are not associated with agency (Carli & Eagly, 2011). Women also face penalties for taking an androgynous approach to leadership roles, as it can appear that they are too masculine (Kark et al., 2012). Unfortunately, there is meta-analytic evidence that these stereotypes persist in leadership roles (Duehr & Bono, 2006; Heilman et al., 1989; Koenig et al., 2011), and even in studies that have found some beneficial changes in agency stereotypes of women, there is still a communion advantage for women and an agency advantage for men (Eagly et al., 2019).

Age in the Workplace

Defining Age

Most research conducted in IO psychology operationalizes age as chronological age, or "time since birth" (Schwall, 2012, p.1). Chronological age is beneficial for demographic reporting but may not be as valuable when researching age in the workplace, especially from a follower perspective. The reality of the workplace is that many followers may not know the exact age of their leader. Followers operate off of perceptions of age and how close in age to themselves they perceive their leader to be. In addition to this, chronological age alone does not

capture how a leader is perceived by others (Schwall, 2012). As a result, alternative age conceptualizations have been proposed.

Perceptual age includes alternative age measures comprised of person-oriented and contextual-oriented factors (Cleveland & Shore, 1992). Person-oriented measures include subjective and social age, while contextual-oriented measures include self and other relative age ratings (Cleveland & Shore, 1992). Subjective age is defined as “how old or young individuals perceive themselves to be” (Steitz & McClary, 1988, p. 83). This conceptualization takes into account how individuals may not know someone else’s chronological age, but may still be able to make age-related judgements.

Another limitation of using chronological age is trying to categorize it into groups. There is no general consensus on what the chronological age ranges of young, middle-aged, and old people are. Social age, defined as “age status of an individual as evaluated by others” (Kastenbaum et al., 1972, p. 2000), considers grouping judgements. Instead of using chronological age to categorize people into “young”, “middle-aged”, and “old”, social age captures an individual’s perception of which age category someone fits into.

Perceptions of age groups change as people age (Chopik et al., 2018) though. For example, the age that is considered old is higher for an 18-year-old than for a 30-year-old. This may be explained by perceived relative age, which is defined as “the perceived age of the employee relative to his or her work group”

(Cleveland & Shore, 1992, p. 469). Perceived relative age takes into account the perceiver's age and how this may color their perspective of other people's age.

Lifespan Perspective

Leadership research has neglected age-related theories, such as the lifespan perspective (Walter & Schiebe, 2013). The lifespan approach is defined as a general perspective that demonstrates the complexity of stability and change during the aging process (Baltes, 1987). There are several propositions within the lifespan approach. The propositions are as follows: development is 1) a lifelong process from conception to death, 2) multidimensional, 3) multidirectional, 4) flexible with plasticity, 5) historically embedded and contextual, and 6) multidisciplinary (Baltes, 1987). These propositions can all be applied outside the psychology field of development and within the workplace.

In IO psychology, a takeaway from the proposition of development being a lifelong process is that employees have not only developed up until the point of employment but will also continue to do so throughout their time as an employee. During employment, employees develop cognitively, physically, and emotionally. In addition to that, the development in those areas will not always be one of growth. The lifespan perspective suggests that development is one of both growth and decline. All employees will not follow the same timeline of development either. Individuals are shaped throughout development in different ways and respond differently according to their experiences. Further, the sociocultural

conditions of a time period influence development, such that a pandemic, for example, would influence employees working during that time. Lastly, the lifespan perspective applies to more than just the field of developmental psychology, which warrants its use in leadership research.

Within leadership research, researchers have tended to use a generation approach instead of lifespan (Rudolph & Zacher, 2017). This is unfortunate because generation-related research has many issues, and using a lifespan approach is demonstrably more beneficial to understanding the impacts of age on leadership (Rudolph et al., 2018). The generation approach assumes that similar chronological age is analogous to similar life experiences (Mannheim, 1952). In reality, there is much within-generation variability in terms of development, such that one cannot assume that everyone born in a certain time period behaves the same way. In addition, there is an underlying assumption in generation research that early life development is more important than development later on in life; in other words, there is less variability in an individual's development as they age (Rudolph et al., 2018). This assumption also does not hold. For example, socioemotional selectivity theory has found that socioemotional needs (e.g., support from family, friends, work) change throughout life and until death (Carstensen, 1995). Generational research does not have much merit, but it does demonstrate the importance of context, which is captured in the lifespan model. The lifespan model does consider that time period events, such as world wars, terrorist attacks, and even disruptive

technological advances, influence development. However, the context considered within lifespan accounts for the differences in which people may have experienced those events based on other contexts such as socioeconomic status. In replacement of a generational approach, a lifespan perspective is recommended (Rudolph et al., 2018).

Age and Identification Processes

Much of the research regarding age and identification focuses on subjective age, how old the individual feels, rather than their social age and how old the person seems to others. For example, an extensive literature review on age and social identity by Zacher and colleagues (2019) focused on whether or not employees identified with groups of younger, middle-aged, and older employees and the extent to which they identified with certain age groups. Overall, the researchers have found mixed results for the relationships between chronological age and social identity and a lack of evidence for the role that subjective age plays due to a lack of studies (Zacher et al., 2019). There is even less research on how perceived relative age influences leader identification.

In addition to age having a complex relationship with identification because there are several conceptualizations, age is also positively conflated with career achievements and, as a result, may influence how legitimate a leader appears (Rosing & Jungmann, 2015). Social Comparison Theory (Festinger, 1954) postulates that in the absence of objective information, people begin to compare

themselves to others that have similarities, such as age similarity. For instance, Kearney (2008) suggests that a leader who is a decade older than a follower may have more experience and therefore is not questioned by followers. However, a leader who is a similar age to the follower may be questioned more because the follower engages in social comparison to evaluate why the leader is more qualified than themselves. Kearney (2008) found that leaders who are older than their followers, as opposed to leaders similar in age to their followers, tend to have higher team performance through transformational leadership (Kearney, 2008). In other words, when there is an older leader and a younger follower, there is also less social comparison and more identification that allows the leader to be more effective compared to when the leader and follower are around the same age. The sheer similarity in age may not explain relationships, because it misses information on the direction of the dissimilarity. A follower that is younger than their leader may have the same 10-year age gap in terms of age similarity as a follower that is older than their leader, but the direction of the difference can create different results. For example, a follower that is 10 years older than their leader may identify with their leader less than a follower that is 10 years younger than their leader because the social comparisons may be different and age is conflated with experience.

Overall, there is evidence that social identification, as well as leader identification, may be related to perceived relative age. The literature review

conducted by Zacher and colleagues (2019) focused on social identity and did not focus on personal or leader identification, which is a value-add by the current research. In addition to this, the research conducted by Kearney (2008) used chronological age as their age conceptualization. Therefore, the literature would benefit from more research examining the relationship between chronological age and perceived relative age.

Age and Attribution Processes

In general, age stereotype research focuses on those older than 40 years old, which is in line with when the United States says illegal ageism begins (Age Discrimination in Employment Act, 1967). One issue with this is that individuals older than 40 years of age capture both those who are middle-aged and older. This means the stereotypes can be difficult to interpret when age is broken into three categories. It also communicates that age-related discrimination only occurs in people over 40 years old. Further, if social age matters as much as or more than chronological age, research using this cut-off may not be as valuable. In addition to this, research on age stereotypes focuses on employees in general and does not consider how leadership roles may change stereotypes. Therefore, this section mainly reports on general stereotypes of older employees.

The central stereotypes around older employees are that they 1) lack motivation, 2) are resistant to change, 3) are challenging to train, 4) are not as healthy, 5) lack competence, 6) lack work-life balance, and 7) are less trusting

(Posthuma & Champion, 2009; Ng & Feldman, 2012). These stereotypes are largely based on chronological age and not as commonly researched with social or relative age (e.g., Posthuma & Champion, 2009; Ng & Feldman, 2012). Many of these stereotypes have been refuted, such as the stereotype regarding lack of motivation. Reflective of the multidirectional and multidimensional elements of lifespan development, motivation is proposed to differ based on the type of task and, in some cases, improve with chronological age (Stamov-Roßnagel & Hertel, 2010). Unfortunately, these assertions were just proposals and were not empirically tested. Fortunately, meta-analytic research has been conducted on how chronological age impacts motivation, desire to develop, resistance to change, trust, health, and work-life balance (Ng & Feldman, 2012). Ng and Feldman (2012) found weak, negative relationships between chronological age and career development motivation, motivation to learn, learning self-efficacy, and training motivation that supports the stereotypes that older workers are less willing to participate in training and career development activities. Otherwise, all stereotypes evaluated were not reflective of reality for older employees (Ng & Feldman, 2012). Competence was not evaluated in their 2012 meta-analysis, but Ng and Feldman have also found meta-analytic evidence that there is no direct relationship between chronological age and task performance (2008). In sum, older worker stereotypes lack the evidence to support them.

Research is limited regarding the evidence behind young people's stereotypes because research regarding the content of stereotypes targeted toward young people has only begun recently. Since there are not agreed upon age brackets for what is considered young, Francioli and North (2021) asked an age diverse sample what they consider the age bracket to be for young adults. The researchers found that the young adult age bracket fell between 19 and 27 years of age, which was used as a reference point throughout their research (Francioli & North, 2021). Francioli and North (2021) found that stereotypes targeted toward young people fall into two-second order factors: resourcefulness and ungratefulness. Factors that fall within resourcefulness include ambitious, smart, hip, and techie, whereas factors that fall within ungratefulness include coddled, disrespectful, rookie, and radically progressive (Francioli & North, 2021). Further, although older employee stereotypes are relatively stable, Francioli and North (2021) suggest that the young people stereotypes that they found are reflective of social media and technological advances in society.

Overall, the stereotypes for age are primarily focused on older employees, and most of these stereotypes do not reflect reality. Nonetheless, these stereotypes play a role in influencing ratings of leadership effectiveness for older leaders. Today's young leaders may have different stereotypes than past young leaders, and these have only recently begun to be investigated. When it comes to middle-aged

leaders, there is much mystery as to how well they match the conceptualization of a leader due to a lack of research on middle-aged employees specifically.

Gender, Age, Leadership

Intersectionality Theory

The term “intersectionality” was coined in 1989 by Crenshaw, a law professor and civil rights activist focusing on the multidimensional experiences of Black women (Crenshaw, 1989). This research was essential in highlighting the experience of Black women who assert claims of discrimination, demonstrating how Black women are backed into a corner to claim *either* race-based discrimination *or* gender-based discrimination instead of focusing on the complexity behind the discrimination (Crenshaw, 1989). Overall, intersectionality rejects the idea of a single-axis framework for studying social identities concluding that one component of an individual's identity does not provide a complete picture of their experiences (Crenshaw, 1989).

Intersectionality theory definitions are vague and have different meanings in different research fields (Nash, 2008). For the current research, intersectionality theory examines how “social identities which serve as organizing features of social relations, mutually constitute, reinforce, and naturalize one another” (Shields, 2008, p. 302). Mutual constitution describes how multiple identities influence are not independent of each other; instead, these identities have interdependent relationships (Ken & Helmuth, 2021). An example of this comes directly from

Crenshaw (1989) in that being "Black" alone and being a "woman" alone do not capture the discrimination faced by Black women because it is the multiplicative effects that matter. Social identities may also reinforce each other, such that the way identity is portrayed can change as an individual acquires and refines their identities (Shields, 2008). For instance, as age identity transforms, the engagement in identity portrayal changes as well, such that a woman may identify differently as a young woman than as an older woman. Furthermore, social identities can naturalize (i.e., simplify) one another, such that some categories can become simpler or become a default (Sheilds, 2008). For instance, this is portrayed with gender, such that the default categories are "man" and "woman," despite the existence of multiple genders and the spectrum of gender fluidity (Shields, 2008). In sum, this definition of intersectionality is aligned with the views in this paper.

Another point of contention regarding intersectionality theory is a lack of clear methodology (Nash, 2008). There are several different approaches to intersectional research, such as the anticategorical complexity, intercategorical complexity, and intracategorical complexity approaches (McCall, 2005). The anticategorical complexity perspective assumes that categories are too simplistic and should not be used (McCall, 2005). As a result, personal narratives are a popular methodology for studying intersectionality with this approach (McCall, 2005) because there is no comparison within or outside identity categories. In agreeance with overly simplistic categories, the intracategorical approach focuses

on expanding category boundaries to be more inclusive (McCall, 2005). The methodology typically used within the intracategorical approach concerns single-category comparisons to establish differentiation within categories (McCall, 2005). For example, a study comparing White women and Black women would use an intracategorical approach to expanding the understanding of experiences of the general "woman" category. Both anticategorical and intracategorical approaches to intersectionality are skeptical of categorization, but the intracategorical approach still uses categories for within-group comparisons.

On the opposite side of the continuum of the anticategorical approach to categorization is the intercategory approach. Similar to the intracategorical approach, this approach also makes comparisons, but these comparisons are multigroup comparisons on categorical dimensions (McCall, 2005). This approach, which McCall (2005) recommends, uses multilevel modeling and interaction effects to understand categorical differences better than with the use of additive linear modeling. The intercategory approach is most representative of the current study because it uses categories (i.e., age and gender) but uses the combination of the category dimensions (e.g., younger, older, man, and woman) to understand the intersectionality of leader gender and age.

The multiplicative nature of the intercategory approach illustrates how intersections can result in both oppression and opportunity (Baca Zinn & Thornton Dill, 1996). In other words, an individual may have one demographic identity that

has privilege while having another demographic identity that comes with disadvantages. This can be illustrated in a White woman leader who experiences discrimination for being a woman in a leadership role and has racial privilege. Employees can experience both systematic advantages and disadvantages simultaneously (McCormick-Huhn et al., 2019). This makes for unique outcomes, such that main effects may not be found or sufficiently explain relationships. A study that demonstrates this concept well was conducted on perceptions of dominance for leaders of different races and genders. Livingston and colleagues (2012) found that White women and Black men were penalized for using agentic behaviors, while Black women and White men were viewed more positively for using agentic behaviors. This demonstrated that there were not agentic penalty main effects for race or gender. Instead, it was at the intersection that the agentic penalty impacted White women and Black men negatively. Therefore, the impact of examining both gender and age together may elicit complex findings for the identification and attribution variables, namely, personal identification and idiosyncratic fit.

Gender and Age Intersections

Intersectionality concerns the combined effects of multiple identities, such as race, ethnicity, gender, social class, and more. For the current study, the demographics of concern are gender and age. Gender and age were selected for similar reasons to Bohlmann and Zacher's (2021). These characteristics can be

perceived by others and are often used to categorize people (e.g., older man, younger woman). In addition, the intersection of age and gender has been neglected in research (Choroszewicz & Adams, 2019; Marcus & Fritzsche, 2015; Meliou & Mallett, 2022).

Studies examining the effects of gender and age intersections have found complex relationships between age, gender, and work outcomes. Prototype congruence for jobs perceived to be held by certain genders and ages has been conducted. As a result of age stereotypes that suggest young employees have less experience and are more physically fit, young employees are stereotypically associated with entry-level positions and manual labor. In comparison, older employees are seen as more suitable for senior-level positions and positions that require experience because of stereotypes that they are less physically fit and more experienced (Reeves et al., 2021). Reeves and colleagues (2021) found that discrimination experienced due to being in an age-incongruent role (e.g., an older entry level employee) was more substantial for women. In addition to this, research has found that leaders engaged in proactive behaviors were seen as more or less effective based on proactive behavior motivation, gender, and age (Bohlmann & Zacher, 2021). Older men (60-65 years old) who are achievement-oriented were rated as more effective than younger achievement-oriented men (20-25 years old), and young women who are achievement-oriented were rated as more effective than older achievement-oriented women (Bohlmann & Zacher, 2021). Another study

also found interactive effects between age and gender in work outcomes. Specifically, chronologically younger women with high organizational tenure experienced less sex discrimination, while chronologically older women with high organizational tenure experienced more sex discrimination (Marcus et al., 2019). Overall, research suggests that research is needed on the intersections of gender and age. The evidence found in this research is likely to be complex and further demonstrates the need for an intersectional framework.

Current Study

Research conducted by DeRue and colleagues (2011) advanced the study of leadership effectiveness in outlining identification and attribution processes as important mediators between leader characteristics and leadership effectiveness. These mediators were not examined in their meta-analytic study, which is unfortunate because the field of leadership has highlighted the need for more follower-centric research. The current study takes on a dyadic/follower-centric approach based on leader traits. Identification processes are examined through the perspective of leader identification. Perceived leader traits may influence how much followers identify with their leader, which can have implications for leadership effectiveness. Gender and age characteristics may also determine a leader's effectiveness because prototypes and stereotypes guide a follower's perception of leader effectiveness. In other words, the demographic characteristics

that a leader holds influences both identification and attributional processes that have an impact on perceived leadership effectiveness. Using a follower-centric approach leader identification and idiosyncratic fit are examined as mediators between the leader characteristics and leadership effectiveness to contribute to research on mediational processes and follower perceptions.

Additionally, the current study uses intersectionality as a framework, which is often used to strategically guide the paper and hypotheses into considering more than one identity (Shields, 2013; Syed, 2010). In doing so, it also uses the intercategorical approach to intersectionality by examining leader gender and age interaction effects. Furthermore, the effects when gender and age are examined together are expected to be complex and without main effects. Overall, the current study uses intersectionality as a framework to set up the importance of examining leader demographics outside of the single-axis lens to better understand perceptions of leadership effectiveness.

In order to use this intersectional lens, the demographics measured were taken into careful consideration. This study focuses on the experiences of women and men, because these experiences are often rooted in societal norms and expectations. While it is important to acknowledge that there are other genders, the formal hypothesizing surrounding them would be outside the feasible scope of the current study. The current study plans to include other genders in data collection

and report exploratory findings relevant to these communities to the extent they are uncovered.

Multiple age conceptualizations are considered throughout the study. The person-oriented measure of social age is used because the study focuses on the follower perspective. This study also uses the contextual-oriented measure of perceived relative age from the follower perspective to assess how similar the follower believes the manager is to themselves in age. Chronological age is also captured so that it can be compared to these alternative age conceptualizations. The current study measures leader chronological age, leader social age, and perceived relative age.

Additionally, often times in age literature, the terms “young”, “middle-aged”, and “older” are used. The term “older” can be confusing because it is not always used to describe perceived relative age and instead is used to describe old employees in a general sense (e.g., Ng & Feldman, 2012). The current study examines different types of age conceptualizations and to avoid confusion, “older” and “younger” will be used in reference to perceived relative age and the reference will be provided. For example, when older leaders are discussed, it will be in reference to being older than the follower. When social age is being examined, I will use “perceived to be old”, “perceived to be young”, and “perceived to be middle-aged” to differentiate it from chronological and perceived relative age.

Overall, this study aims to assess the mediation effects of identification and attributional processes on the relationship between perceived leader demographics and leadership effectiveness. In doing so, an intersectional lens is also proposed to examine the combined effects of gender and different conceptualizations of age.

Chapter 3

Hypothesis Development

Identification Process

Gender Similarity and Leader Identification

I expect that gender similarity will be positively related to leader identification because assumptions of shared experiences and gender representation may foster closeness and a desire for career development. Shared experiences increase closeness (Berman et al., 2002; Cronin, 2014) and, as a result, may make people feel more one with each other. Socialization plays a role in shared experiences. For example, boys tend to be socialized into sports, which allows them to relate to each other more when talking about sports. Many sports analogies are used in the workplace that further create the "old boys club" mentality because the men can relate to something that women are often not socialized to at a young age. The socialization in childhood could carry over into the workplace when people find out what they have in common. In addition, there are shared experiences as adults that may increase closeness. For example, women are four times more likely to experience being treated as if they are incompetent compared to men (Parker & Funk, 2017). This means that if a woman feels like they are being treated as incompetent, then it is more likely that they will be able to relate to another woman who has experienced a similar situation. Further, even without documented shared experiences, closeness may be fostered through the self-anchoring bias, in which

people assume people with similarities have had similar experiences. For example, some women may assume that other women around them have similar family dynamics (e.g., being the primary caretaker), despite this not being true of all women. These assumptions of shared experience may also foster closeness. Overall, these gender-specific shared experiences can make people feel closer and increase identification.

Further, gender representation may lead to an increased desire for career development. Minority representation and role models can increase aspirational goals (e.g., Beaman et al., 2012). For example, women have higher leadership aspirations when they have a supportive woman leader (Fritz & van Knippenberg, 2020). Gender similarity for women may be important because it makes leadership roles appear attainable and lays a blueprint for what attributes are successful. Closeness and desire to develop are explanations of personal identification development (Ashforth et al., 2016). Shared experiences and gender representation may lead to more closeness and desire for career development, leading to more identification. This may be especially true for women as they have been a minority in leadership roles. Therefore, I hypothesize that gender similarity is positively related to leadership identification and that this relationship is stronger for women.

Hypothesis 1: Gender similarity is positively related to leadership identification.

Hypothesis 2: The relationship between gender similarity and leadership identification is stronger for women.

Age Similarity and Leader Identification

Researchers have argued that age may play out differently than other demographics when examining relational demography because it has a more complicated in- and out-group dynamic (Pelled & Xin, 2000). For instance, some individuals may identify with others based on life stage rather than chronological age. Examples of workplace relevant life stages include early career, retirement ready, and new to parenthood. Chronological age does not necessarily dictate life stage, although some trends do exist, such as the tendency for retirement-ready individuals to be chronologically older employees. For this reason, there may already be a weaker tie between chronological age similarity and identification compared to perceived relative age and identification. In addition to this, the identification process may depend on social comparisons that consider life stage and status. Therefore, I predict that perceived relative age will have a stronger relationship to leader identification than chronological age.

The highest leader identification will likely occur for followers that have leaders who are older than them. Dyads in which the follower is considered young and the leader is considered old may result in high leader identification because there is less similarity to base comparisons on. The leader may become a role model that fosters a desire to develop. For example, a young follower with an older

leader will likely not begin the comparison process because there is an unsaid expectation that the older leader has more experience due to age. In other words, the role seems congruent with the leader's age and it is reasonable for them to hold a leadership role that the follower does not yet hold. In addition to this, an older leader may serve as a role model, and the follower may begin to identify more with the leader because they would like to develop into the leader's role.

When the leader is similar in age to their follower, the follower may be more likely to engage in social comparison. There may be more envy in dyads that are similar in age due to the status differential between the follower and leader. In this case, leader identification would decrease because the follower is focused on the status differences when their age is the same. For example, if both leader and follower are in their 40s, then the follower may question why they are not also in a leadership role. Personal identification may not develop because the follower is trying to differentiate themselves from the leader to reason why someone the same age would be their leader.

Followers may be least likely to identify with their leader when the leader is younger than them. There is no substantial evidence yet that having a leader who is younger than their follower results in poor identification or leader effectiveness (Rosing & Jungmann, 2015). Research that has been conducted shows that workers tend to have negative views of managers perceived to be younger than them, such that they believe younger managers have a poor work ethic, a lack of

training/experience, and are entitled (Tonks et al., 2009). This age difference may lead to animosity towards the younger leader because the older follower is biased towards younger leaders.

Hypothesis 3: The relationship between perceived relative age and leader identification will be stronger than the relationship between leader chronological age similarity and leader identification.

Hypothesis 4: Leaders that are perceived to have an older relative age than their followers will have the highest leader identification, followed by leaders that are perceived to be similar in relative age to their followers, and leaders that are perceived to have a younger relative age than their followers will have the lowest leader identification.

Leader Identification Mediation Effects

I propose that leader identification is positively related to LMX and perceived overall leadership effectiveness. Leadership identification is related to LMX based on previous research on LMX, and leadership identification is related to perceived overall leadership effectiveness based on personal biases. Leader identification and LMX are positively related (Gu et al., 2015; Huang et al., 2014; Liao et al., 2019; Li et al., 2018; Liu et al., 2021; Wang & Shi, 2021). When there is high leader identification, the follower is more likely to make the leader's goals self-referential, positively influencing their relationship. In addition to this, the mutual trust and respect elements of LMX (Graen & Uhl-Bien, 1995) are improved

when the employee identifies with their leader. The leader's motives and characteristics are internalized by the follower, which makes for a smoother relationship. Therefore, leader identification is positively related to LMX.

Leader identification and perceived leadership effectiveness are also proposed to be positively related as people are biased towards rating people similar to them higher. Followers may rate their leaders higher if they identify with them because they associate the leadership effectiveness rating with themselves.

According to social identity theory, people have in-group bias, such that when they identify with a group of people, they have favoritism towards the members of this group (Tajfel, 1981). Therefore, there will be higher perceived leadership effectiveness when there is more identification.

In addition, leadership identification is proposed to mediate the relationship between demographic similarity and leadership effectiveness. Previously established, gender similarity is hypothesized to be positively related to leader identification, and perceived relative age is hypothesized to be positively related to leader identification. When the dyad is similar in gender, they feel closer and identify with each other more. When the follower is younger than the leader, there will be high leader identification, followed by when a leader is about the same age as the leader, while followers that are older than their leader will have the least amount of leader identification. Higher leader identification leads to higher LMX and overall perceived leadership effectiveness ratings. This hypothesis describes

the mediation of one demographic variable and leadership effectiveness. The following section explores the combined effects of demographic similarity on leadership effectiveness through leadership identification.

Hypothesis 5: The relationships between gender similarity and a) perceived overall leadership effectiveness and b) LMX are partially mediated by leader identification.

Hypothesis 6: The relationships between perceived relative age and a) perceived overall leadership effectiveness and b) LMX are partially mediated by leader identification.

Intersectionality and Identification Process

Inconsistencies exist in how singular demographic similarities predict leadership effectiveness, such as LMX (Nahrgang & Seo, 2015). Gender and age similarity have been controlled regardless of the lack of knowledge of how these variables impact leadership effectiveness (e.g., Eisenberger et al., 2014; Matta et al., 2015). In addition to this, demographic similarity is not often observed with more than one characteristic at a time (Jackson & Joshi, 2011). As a result, there is limited knowledge of how gender and age similarity impact leadership effectiveness together. Relational demography research has limited usefulness when only one demographic is examined for a relationship (Peccei & Lee, 2005). Therefore, I predict that the intersection of gender and age similarity predicts leadership effectiveness (i.e., LMX and perceived overall leadership effectiveness)

through the mediation effects of leader identification. Further, the order in which leaders will be perceived as most to least effective is as follows: 1) older leader, same gender, 2) older leader, different gender, 3) same age leader, different gender, 4) same age leader, same gender, 5) younger leader, different gender, 6) younger leader, same gender.

Leader is perceived to be older than the follower. When the leader is older than the follower, the follower will identify more with the leader. Followers will identify more with an older leader that is the same gender as opposed to a different gender. When they have the same gender, they are more likely to have more shared experiences. The leader may be able to guide the follower through shared experiences as well since they are more likely to have already experienced it. For example, a woman leader that is older than their woman follower may be able to provide advice when it comes to maternity leave for the follower who has not experienced this yet, but plans to. A woman leader that is the same age or younger than the follower may not be able to share that similar experience because their follower may be experiencing the event at the same time or already has. Therefore, for older leaders, gender similarity leads to more identification than when the leader and follower are different genders.

Leader is perceived to be the same age as the follower. Followers that are the same age as their leader are more likely to engage in social comparison than when the leader is older than the follower. When they are about the same age, the

follower may question what makes the leader more qualified, since they may have been similar work experience. Followers are more likely to engage in social comparison and have less leader identification when there is an absence of objective information. Therefore, when the follower and leader are the same gender, this provides less objective information for the follower to assess. For example, a follower that is the same age as their leader may feel as though they have similar experience and qualification, leading that follower to be less likely to identify with the leader. If the follower is the same gender as the leader, then that is one less explanation as to why the follower is not in a leadership role. If the follower was not the same gender, then they may be able to rationalize that gender differences have led to the status differential, making them more likely to identify with the leader than if the follower and leader are the same gender. For leaders that are a similar age to their follower, gender matters in the sense that gender similarity leads to less leader identification than when the leader and follower are different genders.

Leader is perceived to be younger than the follower. When the follower is older than the leader, then the follower is more likely to have negative feelings towards the leader and less likely to identify with the leader than when the follower is younger or the same age as their leader. Gender is additional objective information that impacts the level of social comparison that the follower engages in. When the follower is older than the leader and they are a different gender, then

they will be less likely to engage in social comparison because gender is a differentiator that could rationalize why the follower is not in a leadership role. Therefore, when the leader is older, there is more leader identification when the leader is a different gender than when the leader is the same gender as the follower. Overall, older leaders have the highest level of identification and therefore leadership effectiveness.

Hypothesis 7: There is a difference in leader identification by leader age and gender profile.

Attributional Processes

Gender and Idiosyncratic Fit

Social Role Theory (Eagly, 1987) suggests that a division of labor contributes to the formation of gender stereotypes and role expectations for men and women. For example, one reason why men have traditionally been associated with leadership roles is because they have always held the majority of leadership roles in general. As a result, leadership role expectations became associated with agentic stereotypes of men. In male-dominated fields, women face a lot of discrimination because of a perceived lack of fit to role expectations (Dresden et al., 2018). This has been extended to leadership roles, such that leadership roles are still more associated with men. Gender bias still persists despite women becoming more represented in roles (Begeny et al., 2020).

There is evidence that gender does come to mind when thinking of leadership. Research suggests that when people think of leaders, they think of men and male characteristics (Schein, 1973; 2001). There are also more leadership prototypes that are associated with men leaders than with women leaders (Johnson et al., 2008). Additionally, Scott and Brown (2006) found more delayed response times when agentic characteristics were paired with a woman manager than when they were paired with a man manager. Even the emotions that are associated with leaders have been found to be related to stereotypes of men rather than women (Fischbach et al., 2015). Further, not only are women not top of mind when people think of a leader, let alone an ideal leader, women are also more associated with followership than leadership (Braun et al., 2017). Overall, the characteristics of men are more strongly associated with leaders than characteristics stereotypically associated with women. Therefore, preconceived notions of leadership match stereotypes for men more than they do for women if gender does come to the top of mind. I hypothesize that men-leaders will have more idiosyncratic fit than women.

Hypothesis 8: Men leaders will have a higher idiosyncratic fit than women leaders.

Age and Idiosyncratic Fit

Age research regarding stereotypes focuses on chronological age, likely due to the legal implications of discriminating based on chronological age. Social age is important when using follower ratings of leadership effectiveness. This is because

many employees, especially older employees, conceal their age in an effort to avoid discrimination (Hymowitz, 2019). As a result, followers may not know the chronological age of their leader and instead will base their perceptions of the leader's age based on how old they seem. For example, a leader may be 30 years old but may be perceived as "young" to followers based on how they act in the workplace. Similarly, a different leader may be 30 years old but appear to followers as "old" based on how they act in the workplace. Therefore, social age will capture more variance in predicting idiosyncratic fit.

Leaders perceived to be old. Idiosyncratic fit will be lower for leaders perceived to be old based on negative stereotypes and the alignment of these stereotypes with leadership prototypes. The most direct comparison between older employee stereotypes and leader prototypes regards dedication. Workers perceived to be old are often stereotyped as having lower motivation (Posthuma & Campion, 2009; Ng & Feldman, 2012), which would not align with the dedicated leader prototype. Although there is research that suggests old employees may be more dedicated based on an increased likelihood to engage in organizational citizenship behaviors (Ng & Feldman, 2008) and have higher rates of presenteeism (Brierla et al., 2013), idiosyncratic fit perceptions would be driven based on stereotypes and not necessarily the reality of the workplace. Therefore, leaders perceived to be old may have a lower alignment with dedication based on the stereotype that old employees have lower motivation (Posthuma & Campion, 2009; Ng & Feldman,

2012). Leaders perceived to be old may also have low alignment with the dynamism prototype because there are stereotypes that older employees are weaker and ripe for retirement (Ng & Feldman, 2012; Posthuma & Campion, 2009). Therefore, leaders perceived to be old may also be perceived as low on dedication and dynamism, leading to poor idiosyncratic fit.

Leaders perceived to be old may have strong alignment with the sensitivity prototype. Carstensen (1992) researched how emotional and social relationships vary with age and postulated that older employees are more likely to strengthen close relationships than broaden their relationships because relationship motivations change as people age. In order to maintain these close relationships, they may be more forgiving. Understanding is an item that describes Epitropaki and Martin's (2004) conceptualization of sensitivity and may be needed in order to provide forgiveness. In addition to this, older people have also been stereotyped as warm (Cuddy et al., 2005), which suggests that they may be more sensitive. Furthermore, generativity (i.e., "passing knowledge and skills to the younger generation," Henry et al., 2015, p. 244) increases with age. Leaders perceived as old may also be seen as more helpful, another item conceptualizing sensitivity (Epitropaki & Martin, 2004). Therefore, leaders perceived to be old may have some idiosyncratic fit from the follower perspective based on sensitivity.

Older leader alignment with an intelligent prototype is complex. Stereotypes of older employees include perspectives that older employees are wise

(Petery et al., 2020) but are also stereotyped as “incompetent”, which captures intelligence (Cuddy et al., 2005, p.267). Therefore, there may only be partial alignment with this prototype. Overall, leaders perceived to be old are not congruent with dedication and dynamism prototypes, are consistent with the prototype on sensitivity, and are partially aligned with the intelligent prototype. As a result, leaders perceived to be old will have the lowest idiosyncratic fit with the ideal leader.

Leaders perceived to be middle-aged. There is a lack of research on stereotypes for middle-aged employees and leaders. Research tends to lump middle-aged and older-aged together, making it difficult to tell what stereotypes occur towards middle-aged employees. Idiosyncratic fit will be highest for leaders perceived to be middle-aged based on rates of discrimination. Research on discrimination experiences suggests that middle-aged employees (25-44 years old) experience less age discrimination than old employees (45 years old and older) and younger employees (19-24 years old; Duncan & Loretto, 2004). Based on this information, I believe fewer negative stereotypes are associated with leaders perceived as middle-aged because they experience less age-related discrimination than younger and older leaders. As a result of less negative stereotypes, leaders perceived to be middle-aged will have the most idiosyncratic fit.

Leaders perceived to be young. The idiosyncratic fit will be low for leaders perceived to be young based on discrimination rates and stereotype content.

"Youngism" is a term coined by Francioli and North (2021) that reflects that young people also experience ageism and discrimination. Statistically, this is backed up as research has found that young employees and older employees experience more age-related discrimination than middle-aged employees (Duncan & Loretto, 2004). In addition to this, recent quantitative survey research found that 54% of young employees aged 18-34 years old have witnessed or experienced ageism compared to 39% of employees 55 years and older (Glassdoor, 2019). Therefore, although discrimination against young people is not legally considered ageism, it is clear that leaders perceived to be young may still experience age discrimination.

In terms of stereotype content, some elements of existing stereotypes align with ILTs, while others do not. Leaders perceived to be young may be congruent with the dedication prototype, as young people are stereotyped as motivated, ambitious, and driven (Franciloli & North, 2021). These stereotypes are aligned with the dimensions (i.e., motivated and hardworking) used in Epitropaki and Martin's (2004) paper. Although some individuals may think young people are not as dedicated, because they are believed to be more likely to job hop (e.g., may be less loyal to an organization), young leaders have become more established in their role and may be less likely to test out other careers. Further, from the follower's perspective, a leader's dedication is likely measured in terms of their commitment to doing their job well and treating followers well and not in terms of commitment to an organization. Therefore, despite assumptions that young people are less

dedicated because of job hopping, I believe that young leader stereotypes are associated with dedication.

Dynamism is not as directly comparable to young people's stereotypes. Dynamism concerns being bold, strong, and energetic (Epitropaki & Martin, 2004). One stereotype of young people includes being radically progressive (Francioli & North, 2021). Radically progressive can be viewed in negative and positive lights, depending on political orientation. Regardless of the positive or negative association, radically progressive individuals may still be seen as bold, strong, and energetic. Therefore, this stereotype is aligned with the dynamism prototype. Another stereotype of young people includes being disrespectful (Francioli & North, 2021). The characteristic of being disrespectful tends to be negatively associated with being ungrateful (Francioli & North, 2021). Again, regardless of the negative connotation, disrespectful individuals are still considered to be bold and strong. Therefore, this stereotype may also align with the dynamic stereotype. Charismatic is a wildcard dimension of dynamism though that may not be aligned with young leader stereotypes, because radically progressive and disrespectful are not associated with dynamism. Overall, I believe that young leader stereotypes align with dynamism, although this alignment may not be as strong as other prototypes.

When it comes to sensitivity, the stereotypes are not favorable towards idiosyncratic fit. Sensitivity within ILT research is captured by measuring items on

traits such as understanding, sincerity, and helpfulness (Epitropaki & Martin, 2004). There is no direct comparison to the sensitivity leader prototype in the recent Francioli & North (2021) article on young people's stereotype content. The closest concepts include the coddled stereotype (e.g., entitled, pampered, and spoiled) and the disrespectful stereotype (e. g., condescending, argumentative, and snobbish). Leaders perceived to be young stereotyped in this way would be less likely to be viewed as understanding and compassionate and, in turn, less congruence with the sensitive leader prototype.

Intelligence is a complex leader prototype to match young adult stereotypes because young adults are stereotyped as both smart and rookies (Francioli & North, 2021). Smart as a young adult stereotype is conceptualized as bright, intelligent, and sharp, while rookie is conceptualized as inexperienced and unseasoned (Francioli & North, 2021). Intelligence as a leader prototype is conceptualized as clever, knowledgeable, educated, and intelligent (Epitropaki & Martin, 2004). When directly looking at the definitions, Epitropaki and Martin (2004) do not consider experienced as a factor of intelligence. In addition to this, the rookie stereotype is for young people, but not young leaders who would presumably have more experienced as they have been promoted to a leadership role. Therefore, young leader stereotypes match with the intelligent leader prototype. Overall, young leader stereotypes are congruent with ILTs in that they are seen as dedicated, likely seen as dynamic, and seen as intelligent. Young leader stereotypes do not

directly align with sensitivity prototype, which can decrease a follower's perception of a young leader's idiosyncratic fit. Therefore, leaders perceived to be young will have lower idiosyncratic fit than middle-aged leaders, but higher idiosyncratic fit than old leaders.

Hypothesis 9: Leader social age has a stronger relationship to idiosyncratic fit than leader chronological age.

Hypothesis 10: An inverted-U shape characterizes the relationship between perceived leader age and idiosyncratic fit, such that idiosyncratic fit is highest for leaders perceived to be middle-aged, next highest for leaders perceived to be young, and lowest for leaders perceived to be old.

Idiosyncratic Fit Mediation Effects

I propose that idiosyncratic fit positively predicts LMX and perceived overall leadership effectiveness. Evidence shows that the degree to which a leader matches what a follower considers an ideal leader positively predicts LMX (Van Quaquebeke et al., 2014). Recent research has found that ideal leader behavior moderates the relationship between actual leader behavior and LMX (Kaluza et al., 2021). This suggests that when leaders are aligned with followers' expectations, they have a higher quality relationship. Another explanation of this relationship may be that leaders that meet follower expectations result in followers that are more susceptible to leadership influence (Junker & Van Dick, 2014). Therefore, the idiosyncratic fit will positively predict LMX.

Idiosyncratic fit is also proposed to be positively related to perceived overall leadership effectiveness. Prototype-based biases influence leadership appraisals, such that there is a favorable bias towards leaders that match the observer's leadership prototype (Nye & Forsyth, 1991). Researchers suggest the relationships found were due to inconsistent matches with follower prototypes and stereotypes (Nye & Forsyth, 1991). More recently, Van Quaquebeke and colleagues (2011) also found that the degree followers believe their leader matches their ideal leader prototype is positively related to respect for leaders and perceptions of overall leadership effectiveness. Therefore, the idiosyncratic fit will positively predict perceived overall leadership effectiveness.

Lastly, I propose that idiosyncratic fit mediates the relationship between leader demographics and leadership effectiveness (i.e., LMX and perceived overall leadership effectiveness). When the leader's gender or age fits with the follower's perception of an ideal leader, there will be more fit and increased leadership effectiveness. There will be decreased leadership effectiveness when there is a low fit due to the leader's demographics. This hypothesis is in regard to the mediation between a single leader demographic and leadership effectiveness. The following section will examine the combined effects of leader demographics on idiosyncratic fit's mediation of leadership effectiveness.

Hypothesis 11: The relationships between leader gender and a) perceived overall leadership effectiveness and b) LMX are partially mediated by idiosyncratic fit.

Hypothesis 12: The relationships between social age and a) perceived overall leadership effectiveness and b) LMX are partially mediated by idiosyncratic fit.

Intersectionality and Attribution Process

Gendered ageism impacts people of all ages and gender identities (Jyrkinen, 2014). Employees are doubly threatened by age and gender stereotypes, which impact performance, feelings of authenticity, and organization identification (Manzi et al., 2021). There have been calls to make comparisons between stereotypes to understand better where adverse effects can be mitigated, but there is still limited research looking at more than one demographic stereotype (Posthuma & Campion, 2009). The following section will parse the impact of gender and age on leadership effectiveness through idiosyncratic fit. The order of hypothesized leadership effectiveness is shown in Table 6.

Women leaders perceived to be young. Young women, in particular, may experience a double bind in overcoming age- and gender-based stereotypes. The stereotype that young people are neurotic (Truxillo et al., 2012) may be exacerbated by also being a woman because women are expected to express emotions (e.g., smiling and crying) more often than men (Hess et al., 2000). In addition, young

women face discrimination based on expectations that they could leave for childbearing and may have more absences for child-rearing (Young Women's Trust, 2021). A recent study found that fertility perceptions play a role in hiring, such that women who are perceived to be more fertile (i.e., married women without children and women with young children) get fewer callbacks when applying to jobs (Becker et al., 2019). Young women are more likely to be perceived as fertile because the median age of U.S. women getting married for the first time in 2021 was 28.6 years old (U.S. Census Bureau, 2021), and the median age of mothers in 2019 that gave birth in 2019 was 30 years (Morse, 2022). As a result of perceived fertility, woman leaders perceived to be young may not be assigned stretch work in fear that they may leave work at any given moment to expand their family with children or need to leave to take care of children. The missed opportunities to develop themselves further may result in poorer perceived performance. Therefore, women leaders perceived to be young will have the lowest idiosyncratic fit and, as a result, lower scores for LMX and overall perceived leadership effectiveness.

Men leaders perceived to be old. Much research has focused on the agency penalty against women, in which if they demonstrate assertive behavior, they are perceived as less effective. Recently research has suggested that this agency penalty also applies to men, specifically older men. Older men tend to face more backlash for acting agentic than older women because there are more substantial expectations that older men should step aside, expunge resources, and

allow for succession (Martin et al., 2019). In other words, older men are expected to be less agentic, and when they display agency, they receive a high penalty in terms of being less liked, less respected, less likely to be hired, and less likely to be promoted (Martin et al., 2019).

Men leaders perceived to be old may be seen as more effective than women leaders perceived to be young because meta-analyzed descriptive stereotypes suggest that older men (over 65 years old) are seen as more intelligent than women, young adults (18-30 years old), and middle-aged adults (30-50 years old; Koenig, 2018). Older men have idiosyncratic fit with intelligence, one of the most common leader prototypes. Leaders that are older men are seen as intelligent but experience a penalty if they do not act according to agentic leadership norms. Therefore, men leaders that are perceived as older may be perceived as more effective than women leaders perceived to be young.

Women leaders perceived to be old. Women leaders perceived to be old may fall into the middle of perceived effectiveness as they experience an intersectional escape when engaging in agentic, power-related behaviors (Martin et al., 2019). Older women escape the agentic penalty on women because there is no specific prescription for how older women should behave (Martin et al., 2019). Stereotypic prescriptions are developed for more visible groups, and therefore, there is no agency prescription for older women to violate. There are fewer expectations for how they should behave as leaders regarding how older women

should present themselves, which means more minor violations of stereotypes.

Therefore, performance is not drastically impacted.

This aligns with the intersectional invisibility hypothesis; there is “the general failure to fully recognize people with intersecting identities as members of their constituent groups” for those with multiple subordinate group identities (Purdie-Vaughns & Einbach, 2008, p. 381). Women leaders perceived to be old may not be expected to behave according to women stereotypes or older individual stereotypes because of intersectional invisibility. As a result, they are not compared to an ideal and may not have the lowest idiosyncratic fit. In other words, women leaders perceived to be old may have higher idiosyncratic fit than men perceived to be old and women perceived to be young.

They may not experience the highest effectiveness because intersectional invisibility means evading identity stereotypes and evading access to resources (Purdie-Vaughns & Einbach, 2008). Women leaders perceived to be old may not have the lowest idiosyncratic fit but may not receive stretch assignments as well. In addition to this, when older women are noticed, negative performance stereotypes tend to be stronger for older women than middle-aged women (DeArmond et al., 2006). Overall, women leader perceived to be old do not have as many behavioral norm expectations as older men, but also, when they are noticed, are seen as less effective than middle-aged women. Therefore, women leaders perceived to be old

have more idiosyncratic fit than men leaders perceived to be old but have less idiosyncratic fit than women leaders perceived to be middle-aged.

Women leaders perceived to be middle-aged. Young women experience the "girling" phenomenon, in which, despite being an adult, they are referred to as a girl (Jyrkinen, 2014; Martin, 2006). Unfortunately, this experience continues into middle age, with women continually referred to as girls (Jyrkinen & McKie, 2012). In addition to age discrimination, there are stereotypes associated with family responsibilities for middle-aged women. Women managers older than 30 years old are often stereotyped as anxious and bound by family matters (Liu & Wilson, 2001). During this time period, middle-aged adults are a part of the "sandwich generation", in which they are raising children and supporting aging parents, a burden that typically falls on women (Parker & Patten, 2013). These familial commitments may result in employees viewing this manager as less dedicated to work and therefore having less idiosyncratic fit.

Although age discrimination continues, middle-aged women are the least discriminated age group of women, albeit still discriminated against more than men (Harnois, 2015). Women have reported in qualitative research that the optimal time to be a woman manager is a short period of time, between the ages of 40 and 50 (Jyrkinen & McKie, 2012). This is because when they were younger, they were seen as inexperienced, and when they reached about 50 years of age, they were perceived as approaching retirement (Jyrkinen & McKie, 2012). Overall, I propose

that women leaders perceived to be middle-aged will be perceived as more effective than women leaders perceived to be young and old. Women leaders perceived to be middle-aged will be seen as less effective than men leaders perceived to be middle-aged.

Men leaders perceived to be young. Men leaders perceived to be young may have an age disadvantage, but there are fewer assumptions made about family compared to young women. There are no assumptions that young men will take an extended period of time off when he becomes a parent because, medically, he does not need time to heal and, as a result, is not a financial burden to the organization that would otherwise pay for maternity leave. If a young man becomes a parent, there will be little change in his work experience. Suppose a young man does become a parent. In that case, he may experience the fatherhood advantage, in which father stereotypes align more with manager prototypes than mothers, men in general, and women in general (Morgenroth et al., 2021). One explanation for this is that fatherhood comes with several stereotypes reflective of communality, and motherhood comes with several more agentic stereotypes (Morgenroth et al., 2021). Young men experience fewer negative stereotypes regardless of whether they become a parent, while young women experience negative stereotypes regardless of whether they become a parent.

In addition, young men are stereotypically described as rebellious and noisy (Koenig, 2018). Although these traits are not prototypical of a leader, these traits

may result in young men receiving more attention and resources in the workplace. Young women, in comparison, are stereotyped as polite and naive (Koenig, 2018). Therefore, the young men may receive more opportunities than young women leaders who are seen as more agreeable. Agreeableness is the only big five personality trait with meta-analytic evidence that it does not predict leadership emergence (Judge et al., 2002). Men leaders perceived to be young may be granted more leadership development opportunities while women leaders perceived to be young fall behind because of the stereotypes associated with their age and gender. Overall, men leaders perceived to be young will be seen as having more idiosyncratic fit than women leaders perceived to be young but will be seen as having less idiosyncratic fit than men leaders perceived to be middle-aged.

Men leaders perceived to be middle-aged. Perceptions of middle-aged men as effective leaders go back to the era of the great man theory, in which the stories told were focused on what would be considered middle-aged at the time. Middle-aged men also have a slew of positive descriptive stereotypes that align with leadership prototypes. Meta-analytic evidence on middle-aged men's descriptive stereotypes suggests men are more active, agentic, dominant, and independent than women, younger men, and older men (Koenig, 2018). These stereotypes align with dynamic and dedicated leader prototypes. Epitropaki and Martin (2004) use energetic, strong, and dynamic traits to characterize dynamism and dedicated, motivated, and hard-working traits to characterize dedication.

Koenig (2018) characterizes active as “active, energetic, athletic” and independent as “independent, self-reliant, ambitious” (p.5). Therefore, middle-aged men have traits associated with them that are characteristic of an effective leader, such as dedication, dynamism, and agency. Men leaders perceived to be middle-aged have the most positive stereotypes that align with leadership prototypes, suggesting that men leaders perceived to be middle-aged will have the most idiosyncratic fit and, therefore, highest perceptions of leadership effectiveness.

Based on the evidence I have provided, I hypothesize that there will be no main effects since the order of effectiveness is not the same for men and women or consistent within age breakdowns.

Hypothesis 13: There is a difference in idiosyncratic fit by leader age and gender profile.

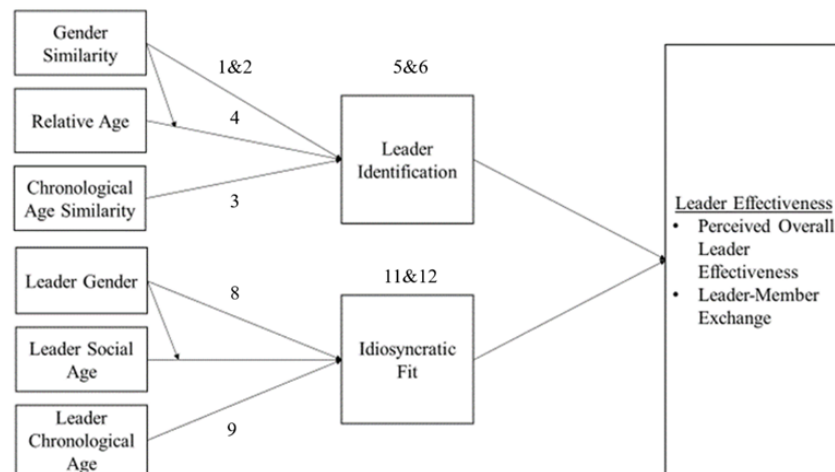


Figure 3: Dissertation Model

Chapter 4

Methods

Participants completed a 42-question online survey (follower survey; see Appendix A) through the Qualtrics Platform. At the end of the survey, participants were provided a randomly-generated code and another survey (leader survey; see Appendix B) to send their leader. Survey 2 was nine questions regarding the leader's demographics. The randomly-generated code was used to link the responses between the follower and leader surveys.

Participants were incentivized by the opportunity to win a drawing for one of five \$50 Amazon.com gift cards. In order to win the gift card, participants will be sent to a google form at the end of their survey to provide their email addresses and maintain the anonymity of their survey responses. Recruitment messages were posted on social media sites, such as LinkedIn and Facebook. Individuals who came across the post were asked to participate and/or share the study with their network.

Participants

The cleaned follower survey dataset had responses from 275 participants. Follower demographic descriptions can be found in Table 4. The participants in the follower survey mostly identified as women (65.8%), followed by men (32.4%), and then non-binary/third gender and transgender individuals (1.8%). The majority

of participants identified themselves as White/Caucasian (73.1%), followed by Hispanic/Latinx (7.6%), Asian (5.5%), and Black/African (5.1%). About 36.7% of participants had completed a Bachelor's degree and 25.1% had completed a Master's degree. The industries that participants worked in varied, but the majority worked in business and financial operations occupations (24.7%) followed by education, training, and library occupations (12.7%). These industries are further depicted in Table 5. Participant ages ranged from 19-73 years old ($M = 35.23$; $SD = 11.72$).

Follower survey participants also reported perceptions of their leader's demographics. Perceived leader demographics can be found in Table 6. The management level of leaders was varied across the sample with 17.8% supervisor/team leads, 29.8% managers, 33.5% senior manager/directors, and 18.9% executive level. The leaders rated in the survey were perceived to be mostly women (52%) and men (47.3%). About 60.4% of the sample reported they were the same gender as their leader. The range for reported perceived leader age was between 25 and 74 years old ($M = 44.19$; $SD = 9.87$). Followers were also asked to report their perceived relative age. Most followers identified their perceived relative age as being a lot younger than their leader (38.2%) or a little younger than their leader (33.8%), followed by being about the same age as their leader (10.9%), a little older than their leader (10.2%), and a lot older than their leader (6.9%). The social age of leaders was mainly perceived to be middle-aged (62.9%), followed by

young (29.8%), and old (7.3%). Taking into consideration of perceived leader gender and social age, most of the leaders were middle-aged women (32.7%) and men (29.5), followed by young women (16.7%) and men (13.1%), and old men (4.7%) and women (2.5%).

Measures

Follower Survey

Follower and Perceived Leader Demographics. Follower gender, chronological age, year of birth, and education were measured. Year of birth was measured in an effort to help with data cleaning based on whether or not someone with the reported chronological age could have been born in the year of birth reported. Perceived leader gender was measured and used in conjunction with follower gender to create a dichotomous gender similarity variable, in which 1 reflected the follower and leader being the same gender and 0 reflected the follower and leader being different genders. Several conceptualizations were used to measure leader age, including perceived leader age (in years), perceived relative age, and social age. Perceived leader age was measured by asking the follower “How old (in years) do you think your manager is”? Perceived leader age and reported follower chronological age were used to create an age similarity variable, in which the absolute value of the difference between perceived leader age and follower chronological age was taken. In addition to this, a measure of rating confidence was asked. Participants were asked, "On a scale of 1-5 (1=not confident

at all, 5=very confident), how confident are you that the age provided for your manager is correct". Perceived relative age (Cleveland et al., 1997) was measured with one item, "Compared to my manager, I am," with response options of "a lot older than them," "a little older than them", "about the same age", "a little younger than them, and "a lot younger,". Social age was measured with one item by asking followers to categorize their leader as "old", "middle-aged", or "young". Means and standard deviations of these variables can be found in Table 7.

Leader Identification Measures. Leader identification was measured with a 10-item 7-point Likert-type scale measuring agreement (1 = strongly disagree; 7 = strongly agree) with items regarding how much the follower identifies with their leader (Kark et al., 2003). Sample items include are "When someone criticizes my manager, it feels like a personal insult" and "I highly identify with my manager". This scale had a Chronbach's alpha of .91, demonstrating good reliability (see Table 8).

Idiosyncratic Fit. Idiosyncratic fit is typically measured with one of two methods: calculating difference scores or using a visual representation of fit. The first method requires researchers to administer a scale (typically the GLOBE instrument) to participants twice. Participants first-rate the culture-specific items out of the 112 attributes (e.g., in Germany, 27 of the attributes are often seen as ideal/counter-ideal; van Quaquebeke & Brodbeck, 2008) of the GLOBE instrument on how characteristic they are of an ideal leader, followed by rating the same

attributes on how characteristic they are of their current leader. The second method uses one item (see Figure 4) that depicts varying Venn diagram overlaps between the follower's current leader and ideal leader (van Quaquebeke & Brodbeck, 2008). The second method was used in the current study because this scale can reduce item fatigue, avoid the need for polynomial regression, which would be necessary to study difference scores, and reduce some common item variance (van Quaquebeke et al., 2011). Furthermore, the Venn diagram has been proposed as one of the most optimal solutions for measuring idiosyncratic fit (Tavares et al., 2018). Means and standard deviations can be found in Table 7.

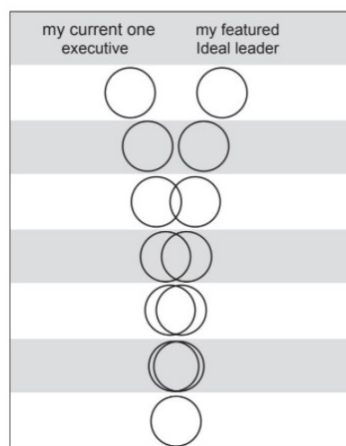


Figure 4: van Quaquebeke & Brodbeck (2008) Idiosyncratic Fit Measure

Perceived Overall Leadership Effectiveness. Perceived overall leadership effectiveness was measured with a 6-item 7-point Likert-type scale (van Knippenberg & van Knippenberg, 2005). Items were rated on agreement (1 = strongly disagree; 7 = strongly agree). Sample items include "This manager is a

good leader," "This manager is very effective," and "I like working together with this manager." This scale had a Chronbach's alpha of .94, demonstrating good reliability (see Table 8).

LMX. Leader member exchange (LMX) will be measured using a 7-item 5-point Likert scale. The original scale was measured by asking leaders and followers slightly different questions (Uhl-Bien & Graen, 1995). However, the most popular version of this scale uses the same stems of items for both leaders and followers (Northouse, 2012). The scale used in the current study is based on the one presented in Northouse. An example item from this scale includes "How would you characterize your working relationship with your leader"? The response options for the items are different throughout the seven items. For example, the item "How well does your leader understand your job problems and needs" has a response of "not a bit" to "a great deal." In contrast, the item "I have enough confidence in my leader that I would defend and justify his or her decision if he or she were not present to do so" has response options ranging from strongly disagree to strongly agree. The measure is scored by averaging the responses. A higher score reflects higher quality LMX. This scale had a Chronbach's alpha of .89, demonstrating good reliability (see Table 8).

Controls. Multiple studies have found that tenure can be a confounding variable (e.g., Ng & Feldman, 2010; Ng & Feldman, 2012); therefore, tenure was used as a control variable.

Open-Ended Questions. Followers were also asked two open-ended questions to help screen-out bots when data cleaning. Participants were asked “What characteristics of your manager are close to your idea of an ideal leader? If you would like to skip this question, please type N/A.” and “What characteristics of your manager are far to your idea of an ideal leader? If you would like to skip this question, please type N/A.”

Leader Survey

The leader survey included eight demographic survey questions on leader gender, leader sex, chronological leader age, race, education, industry, level of management and tenure. There was also an open-ended question to assist with data cleaning. The open-ended question requested leaders to “Please describe any gender and/or age discrimination that you may have faced. If you have not experienced this or would rather not answer, then please respond with N/A”.

Chapter 5

Analysis & Results

Follower Survey Data Cleaning

A drawback of collecting data through a snowball method on social media is that the survey can be prone to data quality issues (Roman et al., 2022; Storozuk et al., 2020). These data quality issues may come in the form of insufficient effort responding and responses from bots (Zhang et al., 2022). Insufficient effort responding includes random responding and careless responding, and intentionally speeding through a survey (Huang et al., 2015). Bots are “a type of software application that can perform automated tasks over the Internet at a much quicker pace than individuals can” (Teitcher et al., 2015, p. 4). Both of these responses can lead to Type I and Type II errors (Huang et al., 2015; Marjanovic et al., 2014; Storozuk et al., 2020).

The awareness and infiltration of bot responses is a relatively new phenomenon, spurring attention in the past seven years (Roman et al., 2022; Storozuk et al., 2020). In 2021, a little less than half of global internet traffic was generated by bots at 42.3% (Imperva, 2022). Bad bots, “software applications that run automated tasks with malicious intent”, made up 27.7% of global internet activity in 2021 (Imperva, 2022, p.4). These bad bots engage in tasks such as account takeovers, credit card fraud, and scalping (Imperva, 2022). These bad bots

are not only becoming more invasive, they are becoming more advanced and online surveys are not immune to bad bot activity (Storozuk et al., 2020; Teitcher et al., 2015; Zhang et al., 2022).

Inattentive error responding and bot responses will be referred to as “fraudulent responses” for the remainder of this paper unless a technique was used specifically to prevent or identify a bot, because fraudulent responses encapsulate both of these data quality issues (Zhang et al., 2022). Fraudulent responses warrant the need for anti-fraud techniques in survey research. Zhang and colleagues (2022) classify anti-fraud techniques into two categories: up-front methods and post-hoc methods. Up-front methods “aim to differentiate automated bots from human beings and prevent bots from submitting responses” (Zhang et al., 2022; p. 699). Post-hoc methods “inspect collected responses and filter out redundant responses submitted from the same participants and low-quality responses from inattentive or ineligible participants” (Zhang et al., 2022, p. 699). In other words, up-front techniques are used to prevent fraudulent responses and post-hoc techniques are used to detect fraudulent responses. The following sections on up-front prevention and post-hoc detection detail the techniques used to clean the data in the current study. A graphic image of the steps taken to clean the data can be found in figure 4.

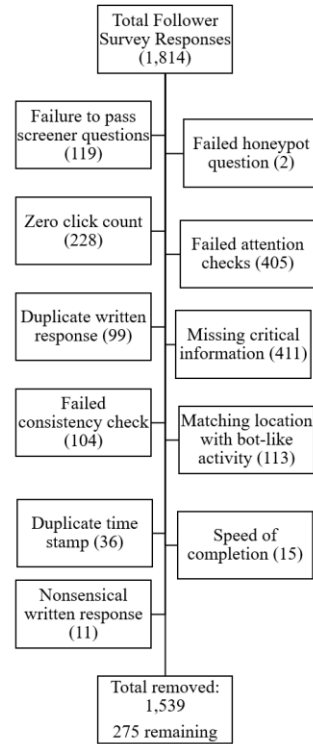


Figure 5: Data Removal Process

Up-Front Prevention

Incentive and Recruitment. Compensation is one reason online surveys are susceptible to bots (Teitcher et al., 2015). A guarantee of financial compensation upon completion of a survey may elicit more bot responses (Griffin et al., 2022; Teitcher et al., 2015), because the bots can be trained to take the survey and be compensated each time. Although raffle incentives still elicit bot responses, a recent study showed that their bot responses reduced to 23 from 633 responses when they changed their incentive from guaranteed compensation to a raffle drawing (Griffin et al., 2022). Further, Griffin and colleagues (2022) left the

financial amount of the gift card out of their recruitment message to prevent bots from identifying their survey as a highly incentivized one. A drawback from using a raffle incentive versus guaranteed compensation as well as not mentioning the financial compensation amount in recruitment may lower the rate of human responses (Teitcher et al., 2015).

In the current study, the language used in the recruitment message for the was carefully crafted to incentivize human participants and de-incentivize bots (see Appendix C). A raffle incentive was used and the gift card amount was left out of the recruitment message. Participants became aware of the gift card raffle amount when reading the informed consent. This technique alone was not successful because bots did still complete the survey. This may have occurred because some bots take surveys even if there is no incentive information provided (e.g., Salinas et al, 2022). There is not a definite way to tell how many humans and bots this technique deterred.

CAPTCHA. Completely Automated Public Turing test to tell Computers and Humans Apart (CAPTCHA) requires a user to respond to a perform a task that is difficult for bots to complete in order to gain access to content (Ling-Zi & Yi-Chun, 2012). CAPTCHAs have traditionally been a very effective method to deter bots, but a new generation of bots that have been programmed with machine learning allow more sophisticated bots to successfully complete CAPTCHAs (Teitcher et al., 2015; Zhang et al., 2022). Machine learning is not the only reason

why bots are able to complete CAPTCHAs. For example, CAPTCHA solving farms employ “a large group of people who answer CAPTCHA tests for the benefit of some paying party” (Serrao et al., 2013, p.2). A drawback of using a CAPTCHA is user experience, especially for individuals with disabilities, such as dyslexia (Gafni & Nagar, 2016) and visual impairments (Fanelle et al., 2020). Ultimately, I followed a recommendation by Storozuk and colleagues (2020) to use a CAPTCHA to prevent less sophisticated bots from gaining access to the survey. I am not sure how effective this technique was, because Qualtrics does not report how many participants were caught in a cycle of attempting the CAPTCHA.

Screening. Another anti-fraud technique is to include screening questions at the beginning of the survey (Yarrish, 2019). The screener questions asked participants to report if they work more than 20+ hours a week, report to a direct manager, and their age. If individuals responded with working less than 20 hours a week, not reporting to a direct manager, or being under the age of 18 years old, then the survey was terminated. This prevents fraudulent responses by removing people who do not qualify from the survey. By using this technique, 119 participants were removed from the data.

Post-Hoc Detection

Honeypot Questions. Honeypot questions are “decoy questions embedded in a survey that are programmed to engage and deceive bot respondents” (Storozuk et al., 2020). These questions are hidden from humans, but may be answered by

bots. Two honeypot questions were included in the follower survey. The first honeypot question asked “Are you a human” and had only one response option of “yes”. The second honeypot question asked “Select the number 2” and had response options of “1”, “2”, and “3”. If there was any answer to either of these, then response likely came from a bot. I received only two responses to the first question. This means that most bots did get past the honeypot question and no bots failed both honeypot questions. Storozuk and colleagues (2020) also found similar results, in which no bots responded to their honeypot question. Storozuk and colleagues (2020) suggest that bots have become more advanced and can now avoid being trapped by honeypot questions. I am grateful that I included these honeypot questions, because the two bots that responded to them would have passed all other preventative and detection techniques. These questions do not impact human user experience and even if it does not catch many, it may still catch a few bots.

Click Count. Another participant behavior that was considered during data cleaning included assessing the click count for participants. Researchers can include a click count assessment by adding a timing question at the end of each page. The click count reports the number of times the participant clicks on a page. The minimum click count on a page should correspond with the number of responses given on that page (Buchanan & Scofield. 2018). For example, if there were five responses provided on a page, then the click count should be at least five.

When the click counts are less than the number of responses given on a particular page, Buchanan and Scofield (2018) recommend removing this data as it was likely provided using an automated form filler. In the follow-up survey, 228 participants were removed because their responses had a click count of zero. When examining these responses further, they typically had the same responses as each other for the Likert-style items and then began to vary when demographic questions were asked. This is further evidence that the responses removed based on click count were fraudulent.

Attention Checks. Attention checks help identify fraudulent responses, because careless responders may not read the question and some bots may not be trained to read the question (Storozuk et al., 2020; Yarrish, 2019; Zhang et al., 2022). Therefore, two attention checks were used in this study. The first attention check stated “To ensure you are paying attention, please select Strongly agree”. The second attention check stated “To ensure you are paying attention, please select Strongly disagree”. 158 participants missed both attention checks. 247 participants missed one of the two attention checks. A decision was made to remove all participants that missed one or two attention checks to minimize inattentive responses.

Duplicate Open-Ended Responses. Two open-ended questions were used to detect fraudulent responses. Open-ended questions can be useful in determining if a response is from a bot (Griffin et al., 2022; Storozuk et al., 2020). Participants

were asked “What characteristics of your manager are close to your idea of an ideal leader? If you would like to skip this question, please type N/A.” and “What characteristics of your manager are far to your idea of an ideal leader? If you would like to skip this question, please type N/A”. Griffin and colleagues (2022) recommend removing participants with duplicate responses to open-ended questions. Therefore, responses were removed if there was an exact duplicate response in either of the two open-ended questions. A benefit of having two open-ended responses was that I could find duplicated responses in either. For example, “empathy” was a response for the first question, but based on this one word there is no indication that it is a fraudulent response, because it is reasonable that another participant could respond the same way. For this participant, they had a response to the second question that matched to another participant’s first question. The response was “He is responsible and reliable”. I found that looking for a duplicate response within just one question was not as effective as looking for a duplicate response in both questions. The only responses that were not removed for being an exact duplicate were responses that had a version of “N/A”, because that was the requested response in the event that the individual wanted to skip the question. Through this process, 99 participants were removed for having an exact duplicate response to another participant.

Lack of Critical Information. Individuals that did not provide information necessary to perform consistency checks and hypothesis testing were removed.

Most of these responses were removed because they were incomplete (less than a 50% completion rate). Although some followers answered most of the questions, if they did not report their leader's perceived age, perceived relative age, or their own chronological age, then they were removed. These items are critical, not only for hypothesis testing, but also for the consistency checks incorporated into data cleaning. These critical questions were asked at the end of the survey to minimize response bias that could result from providing leader gender and perceived age before rating their leader on other variables, such as LMX and perceived overall leadership effectiveness. Ultimately, 360 participants only responded to 50% of the survey and did not get to these critical questions and 51 participants responded to most of the survey but voluntarily opted out of responding to one or more of these critical questions.

Consistency Checks. Consistency checks are another useful anti-fraud technique aimed at asked one question in two similar ways at different parts of the survey (Salinas et al., 2022; Simone, 2019; Teitcher et al., 2015; Zhang et al., 2022). Fraudulent responders may not engage in sensemaking when it comes to responding to the question in a logical manner and therefore provide inconsistent responses. Two consistency checks were used in the current study. At the beginning of the survey, participants were asked to report their chronological age as a screener question and at the end of the survey, participants were asked to report their birth year. Fraudulent responses reported a chronological age that could not

have been born in the birth year reported. For example, one response that was removed reported that they were 38 years old and were born in 1987. Individuals that responded with a nonsensical response to the perceived relative age question were also examined. A response was considered fraudulent if the reported follower chronological age and leader perceived age did not correspond to the reported perceived relative age that they leader is younger, older, or about the same age as the leader. For example, one response that was removed reported their chronological age as 33, they perceived their leader to be 39 years old, and that they were older than their leader. There were 69 participants were removed for reporting a nonsensical birth year and 35 participants were removed for reporting a nonsensical relative age. Overall, 104 participants were removed based on consistency checks.

Duplicate Location. One recommended anti-fraud technique used by researchers is preventing multiple IP addresses from taking a survey (Storozuk et al., 2020; Teitcher et al., 2015). I chose not to employ this technique because multiple participants from one workplace would potentially have the same IP address (Teitcher et al., 2015). Therefore, I did not remove participants based on IP address. Instead, I examined the location of participants (based on longitude and latitude) for duplicates and flagged them when cleaning the data. Participants with the same location as responses already identified as fraudulent (e.g. based on click count and duplicate written responses) were removed. For example, one participant

had the same location as five other participants that were already removed because they had a zero click count. Participants were not removed for having the same location alone. There were 113 responses with the duplicate location, but they passed all other checks of fraudulent activity and were kept in the dataset. There were 108 participants removed, because their location corresponded with that of fraudulent responses.

Duplicate Time Stamps. Storozuk and colleagues (2020) found that one of the most effective strategies for identifying fraudulent activity was assessing the time of day that a survey was taken. Although this technique is not a hard indicator, it can serve as a red flag for suspicious activity (Storozuk et al., 2020). According to Storozuk and colleagues' (2020) recommendations, surveys taken between 12:00 am and 6:00 am were marked as suspicious. I found that these most of these responses were already removed through the processes of removing participants based on failing attention checks, failing consistency checks, and having duplicate written responses. While examining the time stamps for suspicious timeframes, I observed that there were time stamps with the exact same start and end time. A majority of these responses were marked suspicious for being taken within the timeframe identified by Storozuk and colleagues (2020). Previous research has removed participants based on duplicate time stamps (e.g. Bell et al., 2020; Salinas et al., 2022). Therefore, I removed 36 responses for having a duplicate time stamp with at least one other survey. I noticed that many of these duplicate time stamps

were taken the same time as a previously identified fraudulent responses. This provides further evidence that removing participants based on a duplicate time stamp is reasonable.

Speed of Completion. Inspecting the speed of survey completion is another technique that can be used to identify fraudulent responses (Storozuk et al., 2020; Teitcher et al., 2015). Curran (2016) recommends creating a cut score based on two seconds per item. By this guideline the cut-score for this survey is just over one minute, which I deemed to be too liberal of an estimate. Another method of creating a cut-score is based on two standard deviations above or below the mean (Teitcher et al., 2015). This technique can be ineffective though, because bots have been trained to stall on pages so that there is a more reasonable survey time duration (Storozuk et al., 2020). Because bots have been trained to slow down their speed of survey completion, an assessment of time outliers would be impacted. I made the decision to remove participants that spent less than three minutes taking the survey, because I believe these responses are from inattentive participants or less sophisticated bots. There were 15 participants removed for spending less than three minutes completing the survey.

Irrelevant/Nonsensical Open-Ended Responses. The removal of irrelevant/nonsensical open-ended responses can be subjective and therefore was used a last line of defense when cleaning the data to remove fraudulent responses. There were several irrelevant/nonsensical responses that were removed prior to this

step through the other steps taken during data cleaning. In the dataset, I identified 11 irrelevant/nonsensical responses that had remained after the previous data cleaning steps. An example of a response removed based on this criterion includes the response of “Also good, most are to listen to the leader's arrangement” to the second open-ended question asking about the traits of their leader that are far from their idea of an ideal leader. Further evidence that these responses may be fraudulent was that most of these responses had already been marked as suspicious for being taken in the early morning hours.

RelevantID and reCAPTCHA. Another computer piece of computer information that I received data on was participant RelevantID and reCAPTCHA scores. These scores have been identified by Qualtrics as metrics to detect fraud (Qualtrics, n.d.). RelevantID is used to determine if one user is taking a survey multiple times (Qualtrics, n.d). The reCAPTCHA scores are generated using technology from Google that generated a score on the likelihood that the response is from a human or bot (Qualtrics, n.d). When cleaning the data, I noticed that many of the previously identified bots were not flagged as fraudulent according to these scores. In addition to this, there were false positives reported. I have knowledge directly from a few participants as to when they took the survey and based on their demographics, I can confirm that the participant is a human, but they were flagged as fraudulent. There were 12 participants identified as fraud by RelevantID and reCAPTCHA after passing all other data cleaning steps. I

contacted Qualtrics support on September 8th, 2022 and October 1st, 2022 to inquire about why this may be occurring. Both agents confirmed that the scores can be inaccurate. Furthermore, there have been reports of false positives from both RelevantID and reCAPTCHA (e.g., Zhang et al., 2022). I completed preliminary analyses with and without these participants and found no significant difference between the datasets. Therefore, I did not remove participants based on either score.

Follower Data Cleaning Summary. Overall, 1,814 participants took the survey and 1,539 responses (approximately 85%) were removed from the dataset. Participants were first removed based on failure to pass the screener questions that determined eligibility. Then, participants were removed if they failed the honeypot question. Participants that failed the attention checks and then, participants that failed the consistency checks were removed. Following this, participants were removed based on their click count. Written responses then used as removal criteria based on whether or not they were duplicated. Participants that left out critical information in order to perform consistency checks and hypothesis testing were removed. Following this, participants were removed based on their location matching participants that exhibited bot-like activity (i.e., duplicate written responses, zero click count, and early morning survey time). The most subjective criteria were left for the end. This included participants being removed based on

low survey duration of less than three minutes and irrelevant/nonsensical open-ended responses. At the end, there were 275 participants in the dataset.

Leader Survey Data Cleaning

The leader survey had 137 responses in the dataset before data cleaning. There appeared to still be an infiltration of bots in this survey, although there was no incentive provided for completion. Therefore, I cleaned the follower survey and then identified which codes matched to the leader survey. In doing so, there were 28 leader responses that corresponded to the final follower dataset. This dataset would not have enough power to analyze the predictive nature of leader chronological age and therefore Hypotheses 3 and 9 were not tested.

Preliminary Analyses

Correlations

Correlation results can be found in Table 9. Idiosyncratic fit was positively related to leader identification ($r = .63, p < .01$), perceived overall leadership effectiveness ($r = .72, p < .01$), and LMX ($r = .66, p < .01$). Leader identification was positively related to perceived overall leadership effectiveness ($r = .84, p < .01$) and LMX ($r = .75, p < .01$). Perceived overall leadership effectiveness was also positively related to LMX ($r = .77, p < .01$).

Tenure, a proposed control variable, was positively related to follower age ($r = .30, p < .01$), leader gender ($r_{pb} = .13, p < .05$), perceived leader age ($r = .16, p < .01$), and perceived leader age confidence ($r = .18, p < .01$). Perceived leader age confidence was not a proposed control variable, but was positively related to follower age ($r = .20, p < .01$), leader identification ($r = .18, p < .01$) and LMX ($r = .22, p < .01$). Individuals that were more confident in the perceived leader age they reported identified more with their leaders and had a higher quality relationship with their leader. This likely means that the more the follower felt like they knew their leader, the more likely they were confident in the age they perceived their leader to be. Perceived leader age confidence was therefore used as a control variable in the following testing.

Hypothesis Testing

Hypothesis 1. Hypothesis 1 states that gender similarity is positively related to leader identification. To test this hypothesis, I conducted a linear regression and controlled for tenure and perceived leader age confidence. Analysis results can be found in Table 11. Gender similarity did not significantly predict leader identification ($\beta = .08, p = .17$) and therefore, Hypothesis 1 was not supported.

Hypothesis 2. Hypothesis 2 states that the relationship between gender similarity and leadership identification is stronger for women. A one-way ANCOVA was used to test this hypothesis. Analysis results can be found in Table 12. Controlling for tenure and perceived leader age confidence, there was not a

significant effect of gender on leadership identification ($F(1, 264) = .11, p = .95$).

Therefore, Hypothesis 2 was not supported.

Hypothesis 3. Hypothesis 3 states that the relationship between perceived relative age and leader identification will be stronger than the relationship between chronological age similarity and leader identification. There was not sufficient data from the leader survey to test chronological age similarity. Therefore, Hypothesis 3 was not tested. Perceived age difference (absolute difference between follower chronological age and perceived leader age) was used to test this hypothesis in exploratory analyses.

Hypothesis 4. Hypothesis 4 states that followers that perceive they are younger than their leaders will have the highest leader identification, followed by followers that perceive that they are similar in age to their leaders, and followers that perceive they are older than their leaders will have the lowest leader identification. A one-way ANCOVA was used to test this hypothesis, controlling for tenure and perceived leader age confidence. Homogeneity of variances was violated according to Levene's test for equality of variances ($p < .01$). A Kruskal-Wallis test, a nonparametric test, was used to test this hypothesis. A Kruskal-Wallis test showed that there was a statistically significant difference in leader identification between the different perceived relative age groups, $\chi^2(4) = 12.93, p = .01$, with a mean rank leader identification score of 159.31 for followers that are a little older than their leader, 146.77 for followers that are a lot younger than their

leader, 132.29 for followers that are the same age as their leader, 129.96 for followers that are a lot older than their leader, and 119.80 for followers that are a little younger than their leader. A series of Mann-Whitney tests, a nonparametric test, were conducted to assess the differences between the groups. Only two groups were statistically different from each other. Leader identification was significantly higher for followers that were a little older than their leader than followers that were a little younger than their leader ($U = 3456, p = .00$). An ANOVA was also conducted for three levels of perceived relative age (younger, same age, older) and this was not significant. Therefore, Hypothesis 4 was not supported.

Hypothesis 5. Hypothesis 5 states that the relationships between gender similarity and a) perceived overall leadership effectiveness and b) LMX are partially mediated by leader identification. This hypothesis was tested using Hayes (2018) PROCESS macro for SPSS. Analysis results can be found in Table 13. Follower tenure and perceived leader age confidence were included as control variables. The indirect effects of gender similarity on perceived overall leadership effectiveness ($\beta = .21, [-.08, .50]$) and LMX ($\beta = .10, [-.04, .24]$) through leader identification were not significant. Therefore, Hypothesis 5 was not supported.

Hypothesis 6. Hypothesis 6 states that the relationships between perceived relative age and a) perceived overall leadership effectiveness and b) LMX are partially mediated by leader identification. This hypothesis was tested using Hayes (2018) PROCESS macro for SPSS. Analysis results can be found in Table 13.

Follower tenure and perceived leader age confidence were included as control variables. The indirect effect of perceived relative age on perceived overall leadership effectiveness for followers that perceived they were a little younger ($\beta = .25, [-.17, .71]$), a lot younger ($\beta = -.29, [-.74, .19]$), a little older ($\beta = -.31, [-.94, .35]$), and a lot older ($\beta = -.23, [-.97, .51]$) were not significant. The indirect effect of perceived relative age on LMX for followers that perceived they were a little younger ($\beta = .12, [-.08, .34]$), a lot younger ($\beta = -.14, [-.37, .09]$), a little older ($\beta = -.15, [-.46, .16]$), and a lot older ($\beta = -.11, [-.46, .25]$) were not significant. Therefore, Hypothesis 6 was not supported. Perceived age difference (absolute difference between follower chronological age and perceived leader age) was used to test this hypothesis in exploratory analyses.

Hypothesis 7. Hypothesis 7 states that there is a difference in leadership identification by age and gender profile. The leader age and gender profiles included: young, women; young men; middle-aged women; middle-aged men; old women; and old men. See Table 6 for how many leaders were perceived to be a part of each profile. A one-way ANCOVA was used to test this hypothesis, controlling for tenure and perceived leader age confidence. Homogeneity of variances was violated according to Levene's test for equality of variances ($p < .05$). A Kruskal-Wallis test, a nonparametric test, was used to test this hypothesis. A Kruskal-Wallis test showed that there was not a statistically significant difference in leader identification by leader age and gender profile, $\chi^2(5) = 6.64, p$

= .25. Therefore, Hypothesis 7 was not supported. This hypothesis was further investigated in exploratory analyses with a different social age conceptualization contributing to the profile.

Hypothesis 8. Hypothesis 8 states that men leaders will have a higher idiosyncratic fit than women leaders. A one-way ANCOVA was used to test this hypothesis, controlling for tenure, perceived leader age confidence, and management level. Homogeneity of variances was violated according to Levene's test for equality of variances ($p < .05$). A Kruskal-Wallis test, a nonparametric test, was used to test this hypothesis. A Kruskal-Wallis test showed that there was not a statistically significant difference in idiosyncratic fit by leader gender, $\chi^2(2) = .65$, $p = .72$. Therefore, Hypothesis 8 was not supported.

Hypothesis 9. Hypothesis 9 states that leader social age has a stronger relationship to idiosyncratic fit than leader chronological age. There was not sufficient data from the leader survey to test chronological age. Therefore, Hypothesis 9 was not tested. Perceived leader age was used to test this hypothesis in exploratory analyses.

Hypothesis 10: Hypothesis 10 states an inverted-U shape characterizes the relationship between perceived leader age and idiosyncratic fit, such that idiosyncratic fit is increases with perceived leader age, but peaks and then declines with perceived leader age. An initial assessment of the linearity of this relationship was examined through a scatterplot. The scatterplot revealed a negative, linear

relationship. The overall linear regression was statistically significant ($R^2 = .03$, $F(1, 267) = 3.11$, $p < .05$). Perceived leader age significantly predicted idiosyncratic fit ($\beta = -.17$, $p < .001$), controlling for perceived leader age confidence and follower tenure. Further, the quadratic regression was not significant and perceived leader age squared did not predict above and beyond perceived leader age ($\beta = -.50$, $p = .30$). Therefore, Hypothesis 10 was not supported.

Hypothesis 11: Hypothesis 11 states that the relationships between leader gender and a) perceived overall leadership effectiveness and b) LMX are partially mediated by idiosyncratic fit. This hypothesis was tested using Hayes (2018) PROCESS macro for SPSS. Analysis results can be found in Table 14. Follower tenure and perceived leader age confidence were included as control variables. The indirect effect of leader gender on perceived overall leadership effectiveness ($\beta = -.07$, $[-.25, .10]$) and LMX ($\beta = -.05$, $[-.18, .07]$) through leader identification were not significant. Therefore, Hypothesis 11 was not supported.

Hypothesis 12: Hypothesis 12 states that the relationships between social age and a) perceived overall leadership effectiveness and b) LMX are partially mediated by idiosyncratic fit. This hypothesis was tested using Hayes (2018) PROCESS macro for SPSS. Analysis results can be found in Table 15. Follower tenure and perceived leader age confidence were included as control variables. Mediation analyses provided support for a mediation occurring for social group comparisons. There was a significant indirect effect for leaders perceived to be

young versus leaders perceived to be old on perceived leadership effectiveness ($\beta = -.29, [-1.25, -.21]$) and LMX ($\beta = -.37, [-.63, -.12]$) through idiosyncratic fit.

Therefore, Hypothesis 12 was partially supported. This hypothesis was further investigated in exploratory analyses with a different social age conceptualization.

Hypothesis 13: Hypothesis 13 states there is a difference in idiosyncratic fit by leader age and gender profile. A one-way ANCOVA was used to test this hypothesis, controlling for tenure and perceived leader age confidence. Levene's test was not violated so the ANCOVA results were interpreted. Analysis results can be found in Table 17. There was a significant effect of profile on idiosyncratic fit ($R^2 = .05, F(5, 262) = 2.25, p = .05$). LSD post-hoc tests revealed that old women leaders ($M = 2.71, SD = 1.60$) have significantly lower idiosyncratic fit than young women leaders ($M = 4.57, SD = 1.49$), young men leaders ($M = 4.42, SD = 1.40$), and middle-aged women leaders ($M = 4.16, SD = 1.8$). An LSD post-hoc test also revealed that the difference between young women and middle-aged men was approaching significance ($p = .06$). However, this should be interpreted with caution. Although the homogeneity of variances assumption was not violated for this test, there are unequal group sizes. There were 46 young women, 36 young men, 90 middle-aged women, 81 middle-aged men, 7 old women, and 13 old men in the dataset used for this test.

To investigate this further, a Mann-Whitney test was conducted to test the difference in idiosyncratic fit by profile. Old women leaders had significantly lower

idiosyncratic fit than young women leaders ($U = 62.50, p < .01$), young men leaders ($U = 56.50, p < .05$), and middle-aged women leaders ($U = 178.50, p = .05$). Young women had significantly higher fit than middle-aged men ($U = 1426.50, p < .05$). Therefore, Hypothesis 13 was supported. This hypothesis was further investigated in exploratory analyses with a different social age conceptualization contributing to the profile.

Exploratory Analyses

Perceived Age Difference. Perceived age difference was a variable calculated by taking the absolute value difference between perceived leader age and follower chronological age. This variable was examined because chronological age difference was not able to be calculated due to a low leader sample size.

There was a negative correlation between perceived age difference (lower scores mean less difference) and idiosyncratic fit ($r = -.15, p < .05$), leader identification ($r = -.16, p < .01$), LMX ($r = -.13, p < .05$), and perceived leader age confidence ($r = -.19, p < .01$). In other words, as the gap between follower chronological age and perceived leader age widened, the leader was seen as less ideal, followers identified less with the leader, followers reported lower LMX, and followers were less confident in how old they perceived their leader to be.

In addition to this, Hypothesis 3 was tested with perceived age difference in replacement of chronological age similarity. Perceived age difference did not predict leader identification above and beyond relative age, holding follower tenure

and perceived age confidence constant ($\beta = -.09, p = .19$). Hypothesis 6 was re-tested with perceived age difference as the predictor. Using Hayes (2018) PROCESS macro for SPSS and controlling for follower tenure and perceived leader age confidence, I tested the relationship between perceived age difference and a) perceived overall leadership effectiveness ($\beta = -.02, [-.03, .00]$) and b) LMX ($\beta = -.01, [-.02, .00]$) through leader identification. Analysis results can be found in Table 18. The indirect effect of perceived age difference on perceived overall leadership effectiveness and LMX through leader identification were not significant. Therefore, the re-tested Hypothesis 6 with perceived age difference was not significant.

Perceived Leader Age. The variables that predict perceived leader age were also explored. I performed a linear regression with follower chronological age and perceived age difference as predictors. The overall regression was statistically significant ($R^2 = .50, F(4, 266) = 65.31, p < .001$), controlling for follower tenure and perceived leader age confidence. It was found that follower chronological age ($\beta = .38, p < .001$) and perceived age difference ($\beta = .66, p < .001$) were significant predictors of perceived leader age. In other words, leaders were perceived as older as follower chronological age and perceived age difference increased. In addition to this, Hypothesis 9 was tested with perceived leader age as a replacement for leader chronological age. Perceived leader age did not predict idiosyncratic fit above and

beyond social age, holding follower tenure and perceived age confidence constant ($\beta = -.09, p = .28$).

Leader Social Age. Leader social age was reported by the follower when they were responded to the question asking which term best describes their manager (“young”, “middle-aged”, or “old”). Leader social age may not have found significant results because all the participants may have a different idea in mind of who is young, middle-aged, and old. Further investigation was conducted into what participants thought young, middle-aged, and old meant according to the age they perceived their leader to be.

Descriptive statistics revealed that there was overlap between what people perceived to be young, middle-aged, and old. Young leaders were perceived to be within a range of 25 and 48 years old with a median age of 35 ($M = 35.11, SD = 5.35$). Middle-aged leaders were perceived to be within a range of 30 and 65 years old with a median age of 45 ($M = 46.62, SD = 7.76$). Old leaders were perceived to be within a range of 45 and 74 years old with a median age of 60 ($M = 60.6, SD = 6.64$). This reveals inconsistency in what age participants perceived to be young, middle-aged, and old.

A discriminant function analysis was performed to assess the variables impacting how leader social age was grouped. Overall, 77.4% of original grouped cases were correctly classified, which is superior to random assignment based on prior group membership probability (about 50%; Tabachnik & Fidell, 2001). The

goodness of fit of function 1 was significant ($\chi^2 (8) = 220.33, p < 0.001$) and this function accounted for 95.3% of the between-group variance. The most significant predictor was perceived leader age in function 1. According to function 1, leaders perceived to be old have the highest perceived leader age, followed by leaders perceived to be middle-aged and young, respectively. It was expected that perceived leader age would be the variable that would influence the discrimination between social age groups the most.

$$\begin{aligned} \text{Function 1 Discriminant Score} = & -.06(\text{Perceived Leader Age Confidence}) - \\ & .41(\text{Follower Chronological Age}) - .04(\text{Perceived Age Difference}) + \\ & 1.10(\text{Perceived Leader Age}) \end{aligned}$$

The goodness of fit of function 2 was significant ($\chi^2 (3) = 14.64, p < .001$) and this function accounted for 4.7% of the between-group variance. The most significant predictor was perceived age difference in function 2. According to function 2, leaders perceived to be old had the most perceived age difference, followed by leaders perceived to be young and middle-aged, respectively. It is surprising that perceived age difference influences how leaders were grouped into leader social age. Although it is less surprising that if perceived age difference did impact leader social age, that it would discriminant the leaders in the old group and young group the most, as these are on the tail ends of the perceived leader age spectrum.

$$\begin{aligned} \text{Function 2 Discriminant Score} = & -.07(\text{Perceived Leader Age Confidence}) + \\ & .24(\text{Follower Chronological Age}) + 1.15(\text{Perceived Age Difference}) - \\ & .63(\text{Perceived Leader Age}) \end{aligned}$$

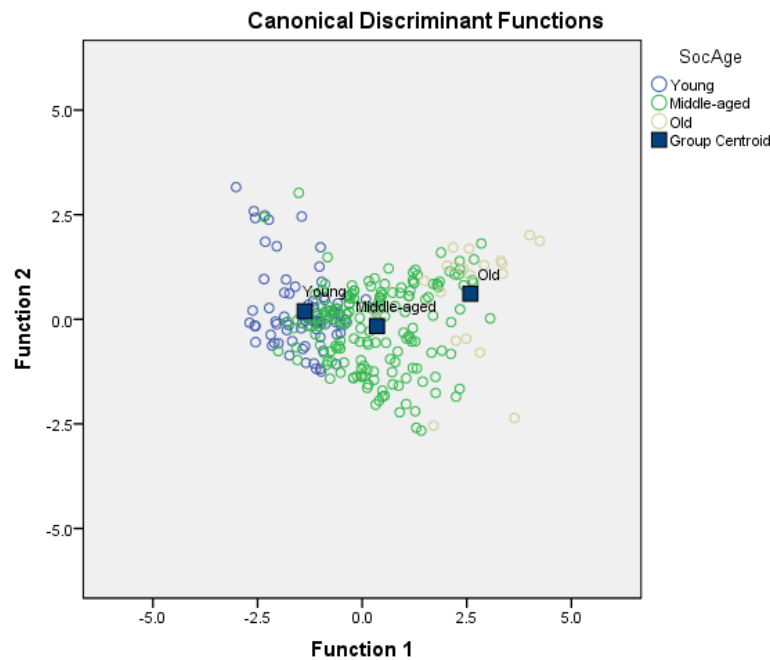


Figure 6: Discriminant Function Analysis of Perceived Leader Social Age

To investigate social age further, I constructed “young”, “middle-aged”, and “old” categories based on previously established conceptualizations. It is important to note that there is not consensus on what characterizes these terms so therefore, I examined the new categories with different conceptualizations. The Bureau of Labor Statistics (BLS) breaks down manager demographics into the following age categories: 20-24 years old, 25-34 years old, 35-44 years old, 45-54 years old, 55-64 years old, and 65 or older (2022). To simplify these categories into three groups,

I used 20-34 years old, 35-54 years old, and over 55 years old to represent young, middle-aged, and old, respectively. This conceptualization was then used to perform another discriminant function analysis test as well as re-test Hypotheses 7, 12, and 13 with the newly reconfigured profiles that use the BLS conceptualization of age categories.

A discriminant function analysis was performed to assess the variables impacting how leader social age (as categorized by BLS) was grouped. Overall, 95.3% of original grouped cases were correctly classified. There was only one significant discriminant function found. The goodness of fit of function 1 was significant ($\chi^2 (8) = 368.18, p < .001$) and this function accounted for 99.3% of the between-group variance. The most significant predictor was perceived leader age in function 1. According to this function, leaders perceived to be old have the highest perceived leader age, followed by leaders perceived to be middle-aged and young, respectively. Using the BLS categorization, it appears that social age is less influenced by factors outside of perceived leader age.

$$\begin{aligned} \text{Function 1 Discriminant Score} = & .02(\text{Perceived Leader Age Confidence}) - \\ & .17(\text{Follower Chronological Age}) + .04(\text{Perceived Age Difference}) + \\ & 1.02(\text{Perceived Leader Age}) \end{aligned}$$

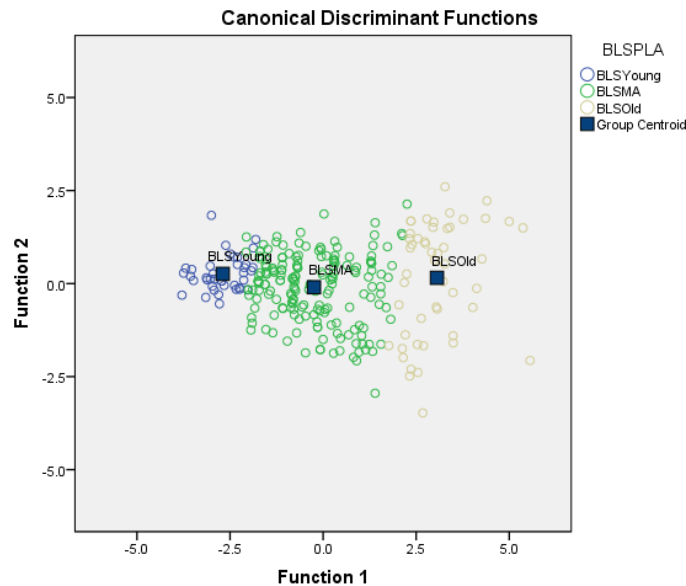


Figure 7: Discriminant Function Analysis for BLS Social Age

Hypothesis 7 states that there is a difference in leadership identification by age and gender profile. A one-way ANCOVA was used to re-test this hypothesis using the BLS social age categorization, controlling for tenure and perceived leader age confidence. Homogeneity of variances was violated according to Levene's test for equality of variances ($p < .05$). A Kruskal-Wallis test, a nonparametric test, was then used to test this hypothesis. A Kruskal-Wallis test showed that there was not a statistically significant difference in leader identification by BLS age categorization and gender profile, $\chi^2(5) = 1.93, p = .86$. Therefore, the re-tested Hypothesis 7 using the BLS social age categorization was not supported.

Hypothesis 12 states that the relationships between social age and a) perceived overall leadership effectiveness and b) LMX are partially mediated by

idiosyncratic fit. This hypothesis was re-tested based on the BLS social age categorization using Hayes (2018) PROCESS macro for SPSS. Analysis results can be found in Table 19. Follower tenure and perceived leader age confidence were included as control variables. Mediation analyses provided support for a mediation occurring for social group comparisons. There was a significant indirect effect for leaders perceived to be young versus leaders perceived to be old on perceived leadership effectiveness ($\beta = -.63, [-1.06, -.22]$) and LMX ($\beta = -.42, [-.67, -.16]$), through idiosyncratic fit. Therefore, the re-tested Hypothesis 12 was partially supported with the BLS age conceptualization.

Hypothesis 13 states there is a difference in idiosyncratic fit by leader age and gender profile. A one-way ANCOVA was used to re-test this hypothesis using the BLS social age categorization, controlling for tenure and perceived leader age confidence. Homogeneity of variances was violated according to Levene's test for equality of variances ($p < .01$). A Kruskal-Wallis test, a nonparametric test, was then used to test this hypothesis. A Kruskal-Wallis test showed that there was not a statistically significant difference in idiosyncratic fit by BLS age categorization and gender profile, $\chi^2(5) = 7.79, p = .17$. Therefore, the re-tested Hypothesis 13 with a different social age categorization was not supported.

Chapter 6

Discussion

This study intended to provide insight on a number of topics. As the demographics of the workforce change, research on leadership perceptions needs to be updated. Previous research has found an inconclusive relationship between leader demographics and follower perceptions of leadership effectiveness, but this may be due to a lack of intersectional research with careful consideration of demographic variable conceptualization. Further, this study included the mediational processes that were untested in DeRue's (2011) meta-analytic framework of factors that influence leadership effectiveness. Although all of the hypotheses were not supported, this study met its goal of demonstrating the importance of a more whole person approach to studying leader demographics with careful consideration as to how the variables are conceptualized as well as providing evidence of what colors a follower's perceptive of leadership effectiveness.

Identification Processes

The results of the present study suggest that overall relational demography is not related to leader identification. Relational demography was assessed through gender similarity and perceived relative age. Additionally, exploratory analyses examined perceived age difference. All of these variables independently did not

predict leader identification. This suggests that demographic similarity may not matter when it comes to identifying with a leader.

Previous research has found that value congruence predicts organizational identification (e.g., Edwards & Cable, 2009; Charbonnier-Voirin et al., 2017; Saks & Ashforth, 1997). This finding has been replicated for leader identification, in which leader-follower value congruence was positively related to leader identification (Marstand et al., 2018). The affinity identification argument (Pratt, 1998) states that individuals are more likely to identify with an organization when they share similar values and beliefs. Through the affinity path of identification, values do not change for an individual to find the organization's values self-referential. This is comparable to the similarity-attraction paradigm (Bryne, 1971) in that existing similarities result in individuals liking each other more. The emulation path described by Pratt (1998) suggests that there may be times when identification becomes stronger because an individual begins to identify more with the organization. This is akin to social identity theory (Tajfel, 1982) in which individuals begin to identify more with others because of their group membership.

Relational demography does not necessarily reflect value congruence though. Self-anchoring bias suggests that some people may assume that someone else has similar values based on demographic similarities, but with time, this may reveal to be untrue. This has been reflected in the effects of surface and deep-level diversity in work teams. Research has found that surface-level characteristics (e.g.

demographics) have a impact at the beginning of work relationships, but this is diminished by the effects of deep-level diversity (e.g., values) as time goes on (Harrison et al., 2002). Therefore, effects of relational demography on leader identification may primarily be seen at the beginning of a leader-follower relationship.

Although relational demography is not related to leader identification, leader identification does influence leadership effectiveness outcomes. Leader identification is positively related to perceived overall leadership effectiveness and LMX. In other words, the more a follower identifies with their leader, the more effective that leader appears and they have a high-quality relationship in the follower's eyes.

Attribution Processes

Perceived leader age negatively predicted idiosyncratic fit. In other words, the older a leader is perceived to be, the less they fit individual schemas of an ideal leader. An inversed-U shaped relationship was originally proposed under the assumption that leaders perceived to be middle-aged would have the highest idiosyncratic fit due to a lack of established stereotypes for middle-aged employees. The findings from the present study suggest that the lack of explicit middle-aged stereotypes does not mean that leaders perceived to be middle-aged fit the schema of an ideal leader better than leaders perceived to be young.

There were no effects of gender found on idiosyncratic fit. This may be explained by the effects of more representation of women in leadership roles. There has been a slight increase in the percent of women managers over the past decades with current estimates being between 40 and 42% of the managerial workforce (e.g., McKinsey & Company, 2022; Torpey, 2017; U.S. Government Accountability Office, 2022). Gender representation has been found to decrease negative stereotypes and discrimination (Paola et al., 2010). In addition to this, industry did not have enough data to test as a moderator. Industry has been found to significantly moderate the relationship between gender and leadership effectiveness (Paustian-Underdahl et al., 2014).

Although gender alone did not have an impact, the combined effects of gender and social age did when social age was perceived by the follower. Results revealed that idiosyncratic fit significantly differed by leader gender and social age profile as perceived by the follower. Old women managers had significantly lower idiosyncratic fit compared to young women, young men, and middle-aged women. In addition to this, with more statistical power, young women may have more idiosyncratic fit than middle-aged men. Therefore, gender may play a role when leaders are young and old. Interestingly, these effects disappeared when social age was re-defined with BLS age categorizations instead of social age as perceived by followers. Idiosyncratic fit was also a significant mediator between the relationship of social age as perceived by the follower and both perceived overall leadership

effectiveness and LMX. Therefore, the idea of an ideal leader is influenced by the age category followers perceive their leader to be in, which influences leadership effectiveness. This suggests that assessing “young”, “middle-aged”, and “old” leaders through the idiosyncratic perceptions of the follower has more predictive power than using pre-established categories of age when predicting perceptual outcomes.

Theoretical and Methodological Implications

The current study explored an untested identification and attributional processes of DeRue and colleagues’ (2011) framework of leadership effectiveness. In doing so, the current study provides information on the implications of identification and attribution processes on leadership effectiveness. Leader identification and idiosyncratic fit both positively influence leadership effectiveness outcomes, such as perceived overall leadership effectiveness and LMX. The variables that influence leader identification and idiosyncratic fit are less clear. When measuring leader identification, researchers should consider the relationship length when surface and deep level diversity characteristics are measured.

Further, the current research breaks down the silos of demographic research in leadership. Often only one demographic (e.g., gender or age) is the focus of a study, but the current study examined the intersectionality of both. Examining the

intersections of gender and age revealed a combined influence on idiosyncratic fit, while gender alone was not significant. Therefore, researchers should consider including more intersectional research, especially when measuring demographics.

In addition to this, the current study incorporates multiple perspectives on age to investigate the future path research should take when examining the impact of age on perceptions of leadership effectiveness. Previously, there was little thought into age conceptualization, and chronological age has been the default in leadership research. The current study was not able to examine chronological age, but it did find that perceived leader age significantly impacted idiosyncratic fit. This means that researchers may want to consider including perceived leader age when assessing follower preferences. Social age was also assessed in multiple ways. I examined social age using perceived leader age, which yielded significant results as well as social age using BLS chronological age categories, which did not yield any significant results. When researchers are examining follower perceptions, perceptions of demographics such as age should be considered instead of defaulting to arbitrary age categorizations. The current study adds to a previous framework, expands demographic research, and introduces more novel conceptualizations of age to leadership research.

Practical Implications

Interventions aimed at increasing leader identification should be considered, because it positively influences perceived overall leadership effectiveness and LMX. One factor influencing the development of leader identification is closeness. Strategies should be implemented to foster closeness, such as leader training on relationship building and increased time spent outside of only a task-focused relationship. A benefit of increasing closeness between followers and leaders is the ability to handle interpersonal conflict increases (Shah et al., 2006). In addition, followers are more likely to exhibit the positive behaviors of their leaders, such as being ethical, when they identify with their leader (Wang et al., 2021) and when followers do not identify with their leader, they are more likely to exhibit negative behaviors of leadership, such as being authoritarian (Li & Sun, 2015). Leader identification development through building close relationships increases leadership effectiveness and relationships.

Interventions aimed at changing idiosyncratic fit perceptions should be also considered, because idiosyncratic fit positively influences perceived overall leadership effectiveness and LMX. The two overarching strategies to addressing lack of fit to an ideal, such as idiosyncratic fit, recommended by Heilman and Caleo (2018) are to reduce the stereotypes associated with that individual (e.g., gender and age) and reduce the stereotypes associated with the leader role that contribute to the lack of fit. Heilman and Caleo (2018) suggest that lack of fit

perceptions can be reduced with interventions such as increasing the number of the stereotyped group in roles (e.g., more women in leadership), avoiding tokenism (e.g., increasing the number of old employees, but only having one old employee in work groups), challenging social roles (e.g., offer similar family support to men and women to promote the idea that both are equal caregivers), and demasculinizing culture (e.g., address high reliance on agency, which may be incongruent with women stereotypes). In order to prevent the use of stereotypes in leadership evaluations, organizations should eliminate ambiguity in their evaluations as ambiguity encourages people to rely on prototypes and increase the frequency of evaluations as a long time between evaluations causes people to rely on prototypes in memory rather than actual behaviors and require accountability by asking for justification of ratings (Heilman & Caleo, 2018).

Further, organizations should also examine their pipeline in terms of age and gender. Investigations into promotions and turnover should consider the intersections of age and gender. There is evidence that women have a more difficult time progressing up the corporate ladder, but for those who do, they tend to be younger than their counterparts that are men in CEO positions by about two years (Withisuphakorn & Jiraporn, 2017). This may be because women are recognized for the challenges they push through and advance faster than young men. Organizations should examine their pipeline to avoid the broken rung of promotions and examine their pipeline to ensure they are not contributing to

pushing older women out of organizations at a faster rate than men. The practical value of the current study directs organizations to consider how to promote leader identification and shift follower perceptions of the ideal leader to ensure less discrimination.

Study Limitations

The current study is not without limitations. The data collection method was cross-sectional in design, which may lead to concerns over the temporal relationship between variables. In addition to this, the idiosyncratic fit measure does not allow for further investigation into impacted prototypes. Further, data collection of leader demographics proved challenging and results in two hypotheses being untested. These limitations are discussed in the following sections.

Since the current study concerns stable demographics as the predictor, there is reason to believe that relationships between the demographics and mediators can still be examined in a cross-sectional study. For example, it is unlikely that reverse causality could be at play, such that leader identification would lead to changes in age or gender. Rather, the demographics would be influencing leader identification and idiosyncratic fit. Further, researchers have suggested that cross-sectional studies are reasonable to examine demographics, such as age, when the study is examining perceived relative levels of between-person outcomes rather than absolute levels of within-person change (Ng & Feldman, 2012).

When it comes to the relationships between the mediator and outcomes, the limitations of a cross-sectional study come more to light. It is difficult to establish the temporal nature of these relationships in a cross-sectional design. For example, leadership effectiveness may result in follower's feeling that they identify more with their leader, because if the follower sees the leader as someone who is successful then they might have an increased desire to develop, which is one way that leader identification is fostered. When looking at the relationship from the mediation standpoint, there is limited evidence that gender and age directly impact leadership effectiveness, instead there is an explanatory variable. Therefore, it would be less likely to see that gender similarity and leader identification is mediated by leader effectiveness. Therefore, leader identification is more likely to be the mediating variable. Regarding idiosyncratic fit, there may be similar concerns with the cross-sectional design. Readers may assume that perceived leadership effectiveness may influence idiosyncratic fit, such that experience in identifying leadership effectiveness changes follower's ideas of effective leaders. Although past experiences with leaders can influence prototypes (Offerman et al., 1994), the argument used for leader identification stands. There is limited evidence that gender and age directly impact leadership effectiveness and as a result, it would be more likely to see an idiosyncratic fit as a mediator than leadership effectiveness. Ultimately, for the purpose of the current study and the relationships examined, a cross-sectional design was appropriate.

Another limitation of this study was the measure used to examine idiosyncratic fit. The main drawback of the van Quaquebeke and Brodbeck (2008) measure is the inability to understand what prototypes are being impacted by leader gender and age. The explanations included for why leaders perceived to be young may have slightly higher idiosyncratic fit than leaders perceived to be old surround the stereotypes associated with leader prototypes. By using the van Quaquebeke and Brodbeck (2008) measure, I cannot confirm that those stereotypes were the reason why there is more or less idiosyncratic fit. The measure provides the necessary information on whether idiosyncratic fit is affected by leader gender and age, but it does not provide information on the prototypes that were impacted to lead to the level of idiosyncratic fit. For the current study, the brevity of the measure outweighed the benefits of a more comprehensive measure that would provide information on prototypes.

Ultimately, two hypotheses were untested in this study due to a lack of leader participation in the second survey. There was hesitancy expressed by follower survey participants to send the survey to their leader. Participants reported to me that they did not believe their manager would take the survey or that their manager would have access to their survey answers. The request to send a survey to their manager prevented several individuals from participating in the first place and only after I reassured them that they can still contribute anonymously, enter the raffle, and opt out of sending a survey to their manager were people more

comfortable participating. I considered having managers fill out the leader survey first, but ultimately, I decided against this for two reasons. First, I expected that the first survey would get the most responses and if the leader survey was sent out first, then I potentially would only have enough data to test two hypotheses. In addition to this, requesting leaders to send the survey to their followers could result in biased answers from followers. Managers may only send the survey to people they have a good relationship with and followers may feel pressure to answer in a more positive manner. In order to receive the most responses for a majority of the hypotheses and get more honest responses, I designed the study to have the follower survey sent out first with a request that they send a brief survey to their manager.

Future Research Directions

This study revealed multiple areas ripe for future research. More intersectional research should be done on age conceptualizations and factors that influence leadership identification. First, support was found for a difference in results based on the age ranges that made up social age. This study found more interesting results when social age was conceptualized from the follower's perspective on who falls into young, middle-aged, and old age categories, and results also suggest that the ages perceived to fall into those categories differ quite widely between individuals. Most research conducted examines differences by age with a priori conceptualizations of social age that are arbitrary. More research

should be done to find if the impact of how social age is conceptualized impacts leadership perceptions. Further, the factors that contribute to one's perception of who is young, middle-aged, and old should be conducted. This study found overlap in the age ranges that people assigned a social age category to. This means that people have a different idea of who is young, middle-aged, and old. Factors that may influence this include the lifestyle of the leader (e.g., if the leader has children). These is important to understand for any research using social age as a predictor of other perceptual variables.

In addition to this, relational demography was not found to be related to leadership effectiveness. A control of how long the individuals have worked together would be beneficial to understand if surface-level demographic similarities are influencing perceptions. Future research should also look at whether the effects of the effect that demographic similarity has on perceptions is overshadowed by deep-level similarity, such as value congruence as the relationship progresses.

Overall, this study sought to examine the relationship between intersectional demographics and leadership effectiveness through identification and attributional processes. Gender did not impact identification and attributional processes, but follower's perception of age did. This impact of age also changed based on how age categories, such as young, middle-aged, and old, were conceptualized. This study adds to intersectional leadership research and provides

practical recommendations on interventions that can be used to effect identification and attributional process to improve perceived leadership effectiveness.

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Tables

Table 1: Leadership Effectiveness Approaches

Approach	Definition	Most Popular Scale
Early Trait	Effective leaders were not a focus yet. Instead, the focus during this time was simply leader versus non-leader.	No consistency; lack of empirical research
Early Behavioral	Effective leaders use a combination of task and relationship-oriented behaviors.	Leadership Behavior Description (Stogdill & Coons, 1957)
Contingency/ Situational	Effective leaders are adaptable to changes in situations.	Least Preferred Coworker Scale (Fielder, 1967)
Dyad/ Follower-Centric	Effective leaders match prototypes of effective leaders and have high quality relationships.	Leader-Member Exchange 7 Questionnaire (Graen & Uhl-Bien, 1995)
Modern Trait	Effective leaders possess traits that are different from unsuccessful leaders.	Typical outcome used is overall leadership effectiveness, which has no predominant scale
Modern Behavioral	Effective leaders use certain leadership styles.	Multifactor Leadership Questionnaire (Bass & Avolio, 1995)

Table 2: Leader Prototypes and Survey Items Adapted from Epitropaki and Martin (2004)

Leader Prototypes	Survey Items
Sensitivity	Understanding, Helpful, Sincere
Intelligence	Intelligent, Knowledgeable, Clever, Educated
Dedication	Dedicated, Motivated, Hard-working
Dynamism	Energetic, Strong, Dynamic
Tyranny (anti-prototypical)	Domineering, Pushy, Manipulative, Loud, Selfish
Masculinity (anti-prototypical)	Masculine, Male

Table 3: Prototype Levels

ILT Level	Aspect	Examples
Superordinate level	Ideal leader versus non-ideal leader	Do they have ideal leader characteristics?
Basic level	Leaders with different single characteristics	female leader, middle-aged leader
Subordinate level	Further differentiation of characteristics	middle-aged, female leader

Table 4: Follower Demographics

Characteristic	Full Sample (<i>n</i> =275)	
	<i>n</i>	%
Gender		
Woman	181	65.8%
Man	89	32.4%
Transgender	3	1.1%
Non-binary/third gender	2	.7%
Race		
White/Caucasian	201	73.1%
Hispanic/Latinx	21	7.6%
Asian	15	5.5%
Black/African	14	5.1%
Multiracial	10	3.8%
Native American/American	8	2.9%
Indian		
Native Hawaiian	4	1.5%
Pacific Islander	1	.4%
Prefer not to say	1	.4%
Education		
Bachelor's degree	101	36.7%
Master's degree	69	25.1%
Some college credit, no degree	30	10.9%
Associate's degree	25	9.1%
Doctorate degree	23	8.4%
High school diploma or	12	4.4%
equivalent		
Trade/Technical training	10	3.6%
Professional degree	5	1.8%

Table 5: Follower Occupations

Occupation	Full Sample (<i>n</i> =275)	
	<i>n</i>	%
Business and financial operations	68	24.7%
Education, training, and library	35	12.7%
Other	27	10.4%
Healthcare practitioners and technical	18	6.5%
Office and administrative support	17	6.2
Computer and mathematical	14	5.1%
Sales operations	14	5.1%
Healthcare support	11	4.0%
Life, physical, and social science	10	3.6%
Community and social service	8	2.9%
Food preparation and serving	8	2.9%
Architecture and engineering	7	2.5%
Arts, design, entertainment, sports, and media	7	2.5%
Legal	6	2.2%
Production	5	1.8%
Building and grounds cleaning and maintenance	3	1.1%
Construction and extraction	3	1.1%
Protective services	3	1.1%
Installation, maintenance, and repair	2	.7%
Military	2	.7%
Consulting	1	.4%
Farming, fishing, and forestry	1	.4%
Marketing and advertising	1	.4%
Personal care and service	1	.4%
Transportation and material moving	1	.4%

Table 6: Perceived Leader Demographics

Characteristic	Full Sample (<i>n</i> =275)	
	<i>N</i>	%
Gender		
Woman	143	52.0%
Man	130	47.3%
Gender identity not listed	1	.4%
Non-binary/third gender	1	.4%
Management Level		
Senior Manager/Director	92	33.5%
Manager	82	29.8%
Executive	52	18.9%
Supervisor/Team Lead	49	17.8%
Perceived Relative Age		
A lot younger than them	105	38.2%
A little younger than them	93	33.8%
About the same age as them	30	10.9%
A little older than them	28	10.2%
A lot older than them	19	6.9%
Social Age		
Middle-aged	173	62.9%
Young	82	29.8%
Old	20	7.3%
Leader Age and Gender Profile		
Middle-aged woman	90	32.7%
Middle-aged man	81	29.5%
Young woman	46	16.7%
Young man	36	13.1%
Old man	13	4.7%
Old woman	7	2.5%

Table 7: Means and Standard Deviations

Variable	Full Sample (<i>n</i> =275)	
	<i>M</i>	<i>SD</i>
Follower Chronological Age	35.23	11.72
Follower Tenure	2.91	3.03
Perceived Leader Age	44.19	9.87
Perceived Leader Age Confidence	3.48	1.12
Perceived Age Difference	13.04	9.11
Idiosyncratic Fit	4.13	1.64
Leader Identification	4.69	1.27
Perceived Overall Leadership Effectiveness	5.22	1.41
Leader-Member Exchange (LMX)	3.69	.80

Table 8: Scale Reliabilities

Scale	Number of Items	A
Leader Identification	10	.92
Perceived Overall Leadership Effectiveness	6	.94
Leader-Member Exchange (LMX)	7	.89

Table 9: Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Gender Similarity (1= Same Gender)											
2. Follower Gender (1= Man)	.05										
3. Leader Gender (1= Man)	-.32**	.24**									
4. Follower Chronological Age	-.05	-.17**	-.02								
5. Perceived Leader Age	-.05	-.13*	.07	-.28**							
6. Perceived Age Difference	.03	.00	.02	-.22**	.56**						
7. Perceived Leader Age Confidence	-.05	-.08	.12*	.20**	.02	-.19**					
8. Follower Tenure	-.08	-.05	.13*	.30**	.16**	-.09	.18**				
9. Idiosyncratic Fit	.10	.03	-.05	-.03	-.17*	-.15*	.07	.00			
10. Leader Identification	.07	.02	.01	-.02	-.09	-.16**	.18**	.06	.63**		
11. Perceived Overall Leader Effectiveness	.03	.07	.03	-.07	-.14*	-.12	.08	.01	.72**	.84**	
12: Leader-Member Exchange (LMX)	.08	-.03	-.04	.03	-.06	-.13*	.22**	.04	.66**	.75**	.77**

* $p < .05$; ** $p < .01$

Table 10: Summary of Hypotheses and Results

<i>Hypothesis 1:</i> Gender similarity is positively related to leader identification	Not supported
<i>Hypothesis 2:</i> The relationship between gender similarity and leadership identification is stronger for women.	Not supported
<i>Hypothesis 3:</i> The relationship between perceived relative age and leader identification will be stronger than the relationship between chronological age similarity and leader identification.	Not tested
<i>Hypothesis 4:</i> Followers that perceive they are younger than their leaders will have the highest leader identification, followed by followers that perceive that they are similar in age to their leaders, and followers that perceive they are older than their leaders will have the lowest leader identification.	Not supported
<i>Hypothesis 5:</i> The relationships between gender similarity and a) perceived overall leadership effectiveness and b) LMX are partially mediated by leader identification.	Not supported
<i>Hypothesis 6:</i> The relationships between perceived relative age and a) perceived overall leadership effectiveness and b) LMX are partially mediated by leader identification.	Not supported
<i>Hypothesis 7:</i> There is a difference in leadership identification by age and gender profile.	Not supported
<i>Hypothesis 8:</i> Men leaders will have a higher idiosyncratic fit than women leaders.	Not supported
<i>Hypothesis 9:</i> Leader social age has a stronger relationship to idiosyncratic fit than leader chronological age.	Not tested
<i>Hypothesis 10:</i> An inverted-U shape characterizes the relationship between perceived leader age and idiosyncratic fit, such that idiosyncratic fit is increases with perceived leader age, but peaks and then declines with perceived leader age.	Not supported
<i>Hypothesis 11:</i> The relationships between leader gender and a) perceived overall leadership effectiveness and b) LMX are partially mediated by idiosyncratic fit.	Not supported
<i>Hypothesis 12:</i> The relationships between social age and a) perceived overall leadership effectiveness and b) LMX are partially mediated by idiosyncratic fit.	Partially supported
<i>Hypothesis 13:</i> There is a difference in idiosyncratic fit by leader age and gender profile.	Supported

Table 11: Hierarchical multiple regression results for effect of gender similarity on leader identification (Hypothesis 1)

Model	Leader Identification (Overall)				
	R^2	ΔR^2	B	SE	β
Step 1	.03**				
Perceived Leader Age Confidence			.16	.05	.18*
Follower Tenure			.03	.06	.03
Step 2		.01			
Perceived Leader Age Confidence			.16	.05	.18**
Follower Tenure			.04	.06	.04
Gender Similarity			.17	.12	.08

* $p < .05$, ** $p < .001$

Table 12: ANCOVA Summary Table for Leader Identification by Gender

Similarity and Follower Gender (Hypothesis 2)

Source	SS	<i>df</i>	MS	<i>F</i>	<i>p</i>	η^2
Follower Tenure	.92	1	.92	.91	.34	.00
Gender Similarity	1.44	1	1.44	1.42	.23	.01
Follower Gender	.03	1	.03	.02	.88	.00
Gender Similarity*Follower Gender	.16	1	.16	.15	.70	.00
Error	265.48	262	1.01			
Total	267.89	267				

Table 13: Mediation Analyses (Hypothesis 5a and 5b)

IV	M	DV	Total effect of IV on DV (<i>c</i>)			Effects of IV on mediator (<i>a</i>)			Effect of M on DV (<i>b</i>)			Direct effects (<i>c'</i>)			Indirect effect (<i>axb</i>)	95% CI	
			<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>		Lower	Upper
Gen Sim	Leader ident	POLE	.11	.08	.18	.22	.17	.16	.96*	.86*	.04	-.09	-.07	.09	.21	-.08	.50
Gen Sim	Leader ident	LMX	.15	.19	.10	.22	.17	.16	.46*	.73*	.03	.06	.07	.07	.10	-.04	.24

Gen Sim= Gender Similarity; Leader Ident = Leader Identification, POLE = Perceived Leadership Effectiveness

* $p < .01$

Table 14: Mediation Analyses (Hypothesis 6a and 6b)

IV	M	DV	Total effect of IV on DV (<i>c</i>)			Effects of IV on mediator (<i>a</i>)			Effect of M on DV (<i>b</i>)			Direct effects (<i>c'</i>)			Indirect effect (<i>axb</i>)	95% CI	
			<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>		Lower	Upper
X ₁	Leader ident	POLE	.17	.12	.29	.27	.21	.26	.95*	.86*	.04	-.08	-.06	.16	.25	-.17	.71
X ₂	Leader ident	POLE	-.39	-.28	.30	-.30	-.24	.26	.95*	.86*	.04	-.10	-.07	.16	-.29	-.74	.19
X ₃	Leader ident	POLE	-.43	-.30	.37	-.33	-.26	.33	.95*	.86*	.04	-.11	-.08	.20	-.31	-.94	.35
X ₄	Leader ident	POLE	-.27	-.19	.41	-.24	-.19	.36	.95*	.86*	.04	-.04	-.03	.22	-.23	-.97	.51
X ₁	Leader ident	LMX	.07	.08	.16	.27	.21	.26	.46*	.73*	.03	-.06	-.07	.11	.12	-.08	.34
X ₂	Leader ident	LMX	-.12	-.15	.17	-.30	.24	.26	.46*	.73*	.03	.02	.03	.11	-.14	-.37	.09
X ₃	Leader ident	LMX	-.13	-.16	.21	-.33	-.26	.33	.46*	.73*	.03	.02	.03	.14	-.15	-.46	.16
X ₄	Leader ident	LMX	-.02	-.02	.23	-.24	-.19	.36	.46*	.73*	.03	.10	.12	.16	-.11	-.46	.25

X₁ = a little younger; X₂ = a lot younger; X₃ = a little older; X₄ = a lot older; Leader ident = Leader Identification, POLE = Perceived Overall Leadership Effectiveness, **p* < .01

Table 15: Mediation Analyses (Hypothesis 11a and 11b)

IV	M	DV	Total effect of IV on DV (<i>c</i>)			Effects of IV on mediator (<i>a</i>)			Effect of M on DV (<i>b</i>)			Direct effects (<i>c'</i>)			Indirect effect (<i>axb</i>)	95% CI	
			<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>		Lower	Upper
L gen	Idio fit	POLE	.04	.03	.17	-.17	-.10	.20	.31*	.65*	.02	.14	.10	.12	-.07	-.25	.10
L gen	Idio fit	LMX	-.11	-.13	.10	-.17	-.10	.20	.61*	.71*	.04	-.05	-.07	.07	-.05	-.18	.07

L gen= Leader gender; Idio fit= Idiosyncratic Fit; POLE = Perceived Overall Leadership Effectiveness, * $p < .01$

Table 16: Mediation Analyses (Hypotheses 12a and 12b)

IV	M	DV	Total effect of IV on DV (c)			Effects of IV on mediator (a)			Effect of M on DV (b)			Direct effects (c')			Indirect effect (axb)	95% CI	
			B	β	SE	B	B	SE	B	β	SE	B	β	SE		Lower	Upper
X ₁	Idio Fit	POLE	-.35	-.25	.19	-.43*	-.26*	.22	.61**	.71*	.04	-.09	-.06	.14	-.26	-.51	.00
X ₂	Idio Fit	POLE	-.72*	-.51*	.35	-1.17**	-.72**	.41	.61**	.71*	.04	.00	.00	.25	-.29	-1.25	-.21
X ₁	Idio Fit	LMX	-.05	-.06	.11	-.43*	-.26*	.22	.31**	.65**	.02	.08	.11	.08	-.14	-.26	-.01
X ₂	Idio Fit	LMX	-.42*	-.53*	.19	-1.17**	-.72**	.41	.31**	.65**	.02	-.05	-.06	.15	-.37	-.63	-.12

X₁ = Middle-aged; X₂ = Old; Idio Fit = Idiosyncratic Fit; POLE = Perceived Overall Leadership Effectiveness; * $p < .05$; ** $p < .01$

Table 17: ANCOVA Summary Table (Hypothesis 13)

Source	SS	<i>df</i>	MS	<i>F</i>	<i>p</i>	η^2
Perceived Leader Age Confidence	.69	1	.69	.71	.40	.00
Follower Tenure	.01	1	.01	.01	.91	.01
Leader Age and Gender Profile	10.97	5	2.19	2.25	.05	.04
Error	256.10	262	1.01			
Total	268.11	270				

Table 18: Exploratory Mediation Analyses (Re-Tests of Hypotheses 6a and 6b)

IV	M	DV	Total effect of IV on DV (<i>c</i>)			Effects of IV on mediator (<i>a</i>)			Effect of M on DV (<i>b</i>)			Direct effects (<i>c'</i>)			Indirect effect (<i>axb</i>)	95% CI	
			<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>		Lower	Upper
Age Diff	Leader ident	POLE	-.02	-.10	.01	-.02*	-.13*	.01	.95*	.86*	.04	.00	.01	.01	-.02	-.03	.00
Age Diff	Leader ident	LMX	-.01	-.08	.01	-.02*	-.13*	.01	.46*	.73*	.00	.01	.00	.07	-.01	-.02	.00

Age Diff = Perceived Age Difference; Leader ident = Leader Identification; POLE = Perceived Overall Leadership Effectiveness; * $p < .01$

Table 19: Exploratory Analyses (Re-Tests of Hypotheses 12a and 12b)

IV	M	DV	Total effect of IV on DV (<i>c</i>)			Effects of IV on mediator (<i>a</i>)			Effect of M on DV (<i>b</i>)			Direct effects (<i>c'</i>)			Indirect effect (<i>axb</i>)	95% CI	
			<i>B</i>	β	<i>SE</i>	<i>B</i>	<i>B</i>	<i>SE</i>	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>		Lower	Upper
X ₁	Idio Fit	POLE	-.45	-.32	.25	-.47	-.28	.29	.61**	.71*	.04	-.16	-.11	.17	-.29	-.58	.00
X ₂	Idio Fit	POLE	-.78**	-.55**	.30	-1.04**	-.63**	.35	.61**	.71*	.04	-.15	-.10	.22	-.63	-1.06	-.22
X ₁	Idio Fit	LMX	-.17	-.21	.14	-.47	-.28	.29	.32**	.66**	.02	-.02	-.02	.10	-.19	-.37	.00
X ₂	Idio Fit	LMX	-.24	-.31	.17	-1.04**	-.63**	.35	.32**	.66**	.02	.09	.11	.13	-.42	-.67	-.16

X₁ = Middle-aged; X₂ = Old; Idio Fit = Idiosyncratic Fit; POLE = Perceived Overall Leadership Effectiveness; **p* < .05; ***p* < .01

Appendix A

Informed Consent

Please read this consent document carefully before you decide to participate in this study.

IRB # XXXX

Study Title: Leadership Perceptions

Purpose of the Study: The purpose of this study is to examine leadership from the perspective of employees. You have been asked to participate in this research because you are a manager with direct reports or directly report to a manager. If you decide to participate, your participation in this study will require you to read and answer survey questions.

Procedures: In this study, you will be asked to answer a variety of questions regarding your experiences. The survey will take anywhere from 5-10 minutes to complete.

Potential Risks of Participating: There are no foreseeable risks to participating in this study.

Potential Benefits of Participating: While you will not directly benefit from your participation in this research, your data will help describe the experience of employees and their managers. The purpose of this research is to inform more efficient and effective processes for leadership effectiveness.

Compensation: You will be entered into a drawing for the opportunity to win one of five \$50 Amazon.com gift cards.

Confidentiality: This survey is completely anonymous. No personally-identifying information will be asked. The data you provide will be stored on a secure server only accessible by the researchers. Your individual responses will not be shared with your organization. Any information gathered from the current study will be reported in aggregate form. This research does require manager and employee surveys be linked. This will be done anonymously through a computer-generated code.

Voluntary Participation: Your participation in this study is completely voluntary. There is no penalty for not participating.

Right to withdraw from the study: You have the right to withdraw from the study at any time without consequence.

Whom to contact if you have questions about the study: Kayla Bigerton, kbigerton@pscu.com Whom to contact about your rights as a research participant in the study: Dr. Jignya Patel, Institutional Review Board Chairperson Florida Institute of Technology 150 West University Blvd. Melbourne, FL 32901 Email: FIT_IRB@fit.edu Phone: 321.674.7347

Agreement: I have read the informed consent. I would like to voluntarily participate in this study.

☐ Yes

☐ No

Instructions















You will be asked to answer a few survey questions about your current direct manager.

After answering the survey questions, you will be asked to send your current direct manager a message requesting them to fill out a brief 5-question demographic survey (script provided for you to copy).

After sending the message to your manager, you will have the option to go to a google form that will collect your information for the \$50 Amazon.com gift card raffle. By using the google form, you will keep your responses separate and anonymous on this survey.

If you have any questions, please contact Kayla Bigerton, kbigerton@pscu.com

Which of the following graphics represents how close you see your current leader to an ideal leader?

	My Current Leader	My Ideal Leader
1		
2		
3		
4		
5		
6		
7		

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

☐ 6

☐ 7

Please indicate your agreement with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
When someone criticizes my manager, it feels like a personal insult	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am very interested in what others think about my manager	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I view the success of my manager as my own success	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am proud to tell others about my manager	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I praise my manager, when speaking with friends, as someone who is good to work for	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate your agreement with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I highly identify with my manager	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important for me to see myself as an employee of this company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My manager is a role model for me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The values of my manager are similar to my values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I consider my manager as a symbol of success and achievement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate your level of agreement with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
This manager is a good leader	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This manager is very effective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This manager leads the team in a way which motivates the team members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like working together with this manager	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This manager is successful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This manager will be successful with future tasks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you know where you stand with your leader...do you usually know how satisfied your leader is with what you do?

- ☐ Rarely
 - ☐ Occasionally
 - ☐ Sometimes
 - ☐ Fairly often
 - ☐ Very often
-

How well does your leader understand your job problems and needs?

- ☐ Not a bit
 - ☐ A little
 - ☐ A fair amount
 - ☐ Quite a bit
 - ☐ A great deal
-

How well does your leader recognize your potential?

- ☐ Not at all
 - ☐ A little
 - ☐ Moderately
 - ☐ Mostly
 - ☐ Fully
-

Regardless of how much formal authority your leader has built into their position, what are the chances that your leader would use their power to help you solve problems in your work?

- ☐ None
 - ☐ Small
 - ☐ Moderate
 - ☐ High
 - ☐ Very high
-

Again, regardless of the amount of formal authority your leader has, what are the chances that they would “bail you out” at their expense?

- ☐ None
 - ☐ Small
 - ☐ Moderate
 - ☐ High
 - ☐ Very high
-

I have enough confidence in my leader that I would defend and justify their decision if they were not present to do so.

- ☐ Strongly disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly agree
-

How would you characterize your working relationship with your leader?

- ☐ Extremely ineffective
- ☐ Worse than average
- ☐ Average
- ☐ Better than average
- ☐ Extremely effective

My gender identity is:

- ☐ Man
- ☐ Woman
- ☐ Non-binary/third gender
- ☐ Transgender
- ☐ Prefer to self-describe:

- ☐ Prefer not to say

My sex assigned at birth was:

☐ Male

☐ Female

☐ Intersex

☐ Prefer to self-describe:

☐ Prefer not to say

What is your age in years?

I identify my race as (check all that apply):

☐

Asian

☐

Black/African

☐

Caucasian

☐

Hispanic/Latinx

☐

Native American/American Indian

☐

Native Hawaiian

☐

Pacific Islander

☐

Prefer to self-describe:

☐

Prefer not to say

What is your highest level of education?

- ☐ Some high school, no diploma
- ☐ High school graduate, diploma or the equivalent (for example: GED)
- ☐ Some college credit, no degree
- ☐ Trade/technical/vocational training
- ☐ Associate degree
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Professional degree
- ☐ Doctorate degree

How old (in years) do you think your manager is?

On a scale of 1-5 (1=not confident at all, 5=very confident), how confident are you that the age you provided for your manager is correct?

- ☐ 1 = Not confident at all
 - ☐ 2
 - ☐ 3 = Confident
 - ☐ 4
 - ☐ 5 = Very confident
-

Which of the following would you consider your manager?

- ☐ Old
 - ☐ Middle-aged
 - ☐ Young
-

Compared to my manager, I am:

- ☐ A lot older than them
 - ☐ A little older than them
 - ☐ About the same age as them
 - ☐ A little younger than them
 - ☐ A lot younger than them
-

How long have you worked at PSCU (in years)?

At this time, we request that you send the following quoted message to your current direct manager. Following this, you will have access to the google form raffle.

"Hello,

I recently participated in a survey about leadership perceptions to assist PSCU employee, Kayla Bigerton, on research to complete her degree. At the end of the survey, I was requested to send this message to you asking for your participation in a 5 question demographic survey.

To participate, you will need to enter a randomized code (provided below) on the survey (provided below).

Randomized Code: [RANDOM ID WILL BE PROVIDED UNIQUELY](#)

Survey Link: https://fit.co1.qualtrics.com/jfe/form/SV_1KPZ6xc2HIvdIzQ

If you have any questions, please contact Kayla Bigerton at kbigerton@pscu.com

Thank you!"

Have you sent the above message to your manager?

☐ Yes

☐ No

Thank you for taking the time to complete this survey. I appreciate your contribution to this research.

If you would like the opportunity to win one of five \$50 Amazon.com gift cards, then please go to the following link to enter your contact information.

Raffle entry link:

https://docs.google.com/forms/d/e/1FAIpQLScBSmQPI7TvtZTZq3kdYn1Nvlxwq255aGRdN7ouw_ZhdM-Wxg/viewform?usp=sf_link

If you have any questions, then please contact me.

Thank you!

Kayla Bigerton

Associate, OD Business Partner

kbigerton@pscu.com

Appendix B

Informed Consent

Please read this consent document carefully before you decide to participate in this study.

IRB # XXXX

Study Title: Leadership Perceptions

Purpose of the Study: The purpose of this study is to examine leadership from the perspective of employees. You have been asked to participate in this research because you are a manager with direct reports or directly report to a manager. If you decide to participate, your participation in this study will require you to read and answer survey questions.

Procedures: In this study, you will be asked to answer a few demographic questions. The survey will take less than 5 minutes to complete.

Potential Risks of Participating: There are no foreseeable risks to participating in this study.

Potential Benefits of Participating: While you will not directly benefit from your participation in this research, your data will help describe the experience of employees and their managers. The purpose of this research is to inform more efficient and effective processes for leadership effectiveness.

Compensation: There is no compensation for managers reporting their demographic information on this specific survey.

Confidentiality: This survey is completely anonymous. No personally-identifying information will be asked. The data you provide will be stored on a secure server only accessible by the researchers. Your individual responses will not be shared with your organization. Any information gathered from the current study will be reported in aggregate form. This research does require manager and employee surveys be linked. This will be done anonymously through a computer-generated code.

Voluntary Participation: Your participation in this study is completely voluntary. There is no penalty for not participating.

Right to withdraw from the study: You have the right to withdraw from the study at any time without consequence.

Whom to contact if you have questions about the study: Kayla Bigerton, kbigerton@pscu.com

Whom to contact about your rights as a research participant in the study: Dr. Jignya Patel, Institutional Review Board Chairperson Florida Institute of Technology 150 West University Blvd. Melbourne, FL 32901 Email: FIT_IRB@fit.edu Phone: 321.674.7347

Agreement: I have read the informed consent. I would like to voluntarily participate in this study.

☐ Yes

☐ No

Instructions

You have been asked by one of your direct reports to complete this 5-question demographic survey. Please paste the code provided to you by the employee in the space below. This will allow the researcher to anonymously connect the responses.

This survey should be taken each time a direct report provides you a link and new code. Paste a new code for each direct report that provides one and take the survey again.

If you have any questions, please email Kayla Bigerton, kbigerton@pscu.com

Paste the employee provided code in the space below.

What is your age in years?

My gender identity is:

☐ Male

☐ Female

☐ Non-binary

☐ Prefer to self-describe:

My sex assigned at birth was:

☐ Male

☐ Female

☐ Intersex

☐ Prefer to self-describe:

How long have you been employed at PSCU (in years)?

What is your highest level of education?

- ☐ Some high school, no diploma
- ☐ High school graduate, diploma or the equivalent (for example: GED)
- ☐ Some college credit, no degree
- ☐ Trade/technical/vocational training
- ☐ Associate degree
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Professional degree
- ☐ Doctorate degree

Appendix C

I am collecting data for my doctoral dissertation study on leadership perceptions from direct reports, and I'm reaching out to recruit participants.

The study consists of a survey that will take approximately 5-10 minutes to complete and includes a request at the end to forward a brief 10-question survey to your manager (if possible - you can select "no" if you do not want to). These surveys are connected via an anonymous code and neither party will be privy to each other's responses.

The survey is open to anyone who is employed at least 20 hours per week, reports directly to a manager, speaks English, and is at least 18 years of age. Responses will be kept anonymous, and no individual or employer names will be collected. All participants have the option to enter a drawing (not connected to survey responses) to win one of five Amazon gift cards.

If you are able to assist, please follow the link below to participate in the survey. Please share the survey with your network to further help me collect data.

Please contact me at khoelzel2016@my.fit.edu if you have any questions, and thank you in advance for your help with my doctoral research!