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Moderation of Emotional Intelligence on Leader-Member Exchange and Resistance to Change

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Walden University
2018

Abstract

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Change

by

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MBA, Columbia Southern University, 2013

BS, Columbia Southern University, 2010

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Management

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Abstract

Approximately 70% of change initiatives fail to achieve the anticipated outcomes, and resistance to change is continuously cited in the literature as 1 of the most common reasons for change failure. Researchers know that emotions play a role in change but do not know how emotional intelligence affects the relationship between leader–member exchange and reactions to change. Grounded in Oreg's multidimensional resistance-to-change model, leader–member exchange theory, and emotional intelligence theory, the purpose of this study was to narrow the gap in knowledge of how emotional intelligence influences the relationship between leader–member exchange and resistance to change. A correlational, cross-sectional design was employed with a nonpurposeful sample of 349 research administrators, and data analysis was completed through hierarchical multiple regression and the Hayes PROCESS macro. Significant negative correlations were found between (a) leader–member exchange and resistance to change and (b) emotional intelligence and resistance to change. Emotional intelligence was not found to have an expected moderating effect on the relationship between leader–member exchange and resistance to change. The findings indicated that employees are less likely to resist change when they perceive a higher quality relationship with their supervisor and have a higher level of emotional intelligence. The results of this study can be used to inform organizational leaders of the need to incorporate training on building high-quality relationships and emotional intelligence in change management programs, thereby increasing the likelihood of achieving the organizational goals intended by the change.

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Dedication

I dedicate this dissertation to my husband, Darrell, and our son, Peyton. Without their unwavering support, this achievement would not have been possible. I also dedicate this dissertation to my parents, Bernice and Diane Hinnant, who have exemplified integrity, hard work, and perseverance. Although my father is no longer here to share in this accomplishment, I know he would be extremely proud of his "pumpkin." I also dedicate this dissertation to my sisters, Beverly, Debbie, and Sharon, who remained flexible during holidays and family gatherings to accommodate my schedule. Finally, I dedicate this dissertation to my sweet, diva dog, Ava Marie, who was my faithful study partner during my all-nighters and working sessions that sometimes began at 3:00 in the morning.

Acknowledgments

I want to express my deepest appreciation to my dissertation committee chair, Dr. Robert "Bob" Haussmann, for his patience, humbleness, flexibility, wisdom, and guidance. Dr. Bob was especially supportive of my ambitious drive and continuously inspired me in my times of discouragement. I would also like to thank my committee member, Dr. Kenneth Levitt, and my URR, Dr. Danielle Wright-Babb, for their advice and dedication in making my dissertation a quality product. I am eternally grateful for the encouragement provided by my Walden colleagues, who I now consider some of my greatest friends. I give special thanks to my parents, who always demonstrated diligence and commitment. To my sisters, I thank you for always being supportive. To my son, Peyton, thank you for teaching me about emotional intelligence before I even learned the term exists. You inspire me daily to view the world through a non-biased lens. To my dearest husband, Darrell, no words can express my appreciation for your endurance and support of all my educational and professional endeavors during the past 21 years. You gave up so many of your aspirations so that I could fulfill mine. This achievement is a testament of your faithfulness and humbleness. Finally, to my Heavenly Father, you have continuously shown that your grace is sufficient for me!

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Chapter 1: Introduction to the Study

Introduction

Organizational leaders are continuously challenged with internal and external opportunities and threats to the organization, which fosters the need for continuous change (Schmitt & Klarner, 2015). Researchers studying organizational change have argued that an institution's success depends on its ability to adapt to a competitive landscape (O'Reilly & Tushman, 2013). Stevens (2013) espoused individuals' reactions to change directly influence the level of success for organizational change initiatives, and Shin, Taylor, and Seo (2012) found that about two thirds of change initiatives fail. Researchers have identified the need for studies designed to discover processes that address the high failure rate of change initiatives (Grady & Grady, 2013; Heckmann, Steger, & Dowling, 2016).

Although researchers have identified a correlation between leader–member exchange and resistance to change (Georgalis, Samaratunge, & Kimberley, 2015), emotional intelligence and resistance to change (Gelaidan, Al-Swidi, & Mabkhot, 2016), and leader–member exchange and emotional intelligence (Ordun & Acar, 2014), a gap in the literature exists concerning the simultaneous influence of dyadic relationships and emotional intelligence on resistance to change. Emotions arise during organizational change and researchers have determined that these emotions play a role in reactions to change (Saruhan, 2013; Steigenberger, 2015). The purpose of this study was to determine how emotional intelligence influences the relationship between leader–member exchange and reactions to change.

Effective change implementation occurs when predetermined objectives, such as project deliverables and stakeholder satisfaction, are met (Al-Haddad & Kotnour, 2015). Employee attitudes toward change are considered one of the most critical factors predicting the success of change initiatives (Nging & Yazdanifard, 2015). The results of this study contribute to positive social change for organizations because leaders may use the findings to adopt change management processes that positively influence change attitudes and change implementation outcomes. In the remainder of this chapter, I will provide a background of the study, discuss the research problem and study purpose, offer the research questions, and describe the theoretical framework of the study. I will then define the nature of this study; define key terms and variables; and discuss the assumptions, scope, and limitations of the study.

Background of the Study

Organizational leaders are pressured to adapt to a rapidly changing, global environment, and managers are primarily accountable for leading change initiatives (Burnes, 2015). Notwithstanding the requirement for successful change implementation, 70% of change initiatives fail to achieve the anticipated outcomes (Hossan, 2015). Numerous factors contribute to the success of change implementation, but Kelly, Hegarty, Horgan, Dyer, and Barry (2017) suggested the failure of change initiatives is most often due to the lack of preparation. Planning for change initiatives includes the appropriate assessment of organizational (contextual) and employee (individual) readiness for change to minimize resistant attitudes (Oreg, 2006). Resistance to change is a major challenge faced by managers when implementing change and one of the most

common reasons for change failure (Mdletye, Coetzee, & Ukpere, 2014; Michel, By, & Burnes, 2013; Rafferty, Jimmieson, & Armenakis, 2013). Some potential negative outcomes of failed change implementation include decreased job satisfaction (Grama & Todericiu, 2016), poor employee performance (Cullen, Edwards, Casper, & Gue, 2014), negative attitudes (McKay, Kuntz, & Näswall, 2013), turnover intentions (van den Heuvel, Schalk, & van Assen, 2015), negative financial consequences (Mellert, Scherbaum, Oliveira, & Wilke, 2015), and loss of organizational efficiency and effectiveness (Smits & Bowden, 2015).

The common views of resistance to change include the contextual and individual paradigms. Oreg's (2006) multidimensional resistance-to-change model is a third perspective, which is a combination of these two views and a more holistic representation of change attitudes. Researchers have evaluated the relationship between resistance to change and numerous contextual factors, including employee engagement (Appelbaum, Karelis, Henaff, & McLaughlin, 2017b), participation (Garcia-Cabrera & Hernandez, 2014), communication (Belias & Koustelios, 2014; McKay et al., 2013), change history (Bordia, Restubog, Jimmieson, & Irmer, 2011), leadership style (Hon, Bloom, & Crant, 2014; Nging & Yazdanifard, 2015), perceived organizational support (Turgut, Michel, Rothenhöfer, & Sonntag, 2016), and leader–member exchange (Hwang, Al-Arabiat, Rouibah, & Chung, 2016; Peterson & Aikens, 2017; Xerri, Nelson, & Brunetto, 2015). Empirical research has indicated that social factors, such as dyadic relationships (leader–member exchange), contribute to change attitudes, and research in this area has

developed exponentially over the past decade (e.g., Hwang et al., 2016; Peterson & Aikens, 2017; Xerri et al., 2015).

In contrast to support for the contextual paradigm, some researchers have argued that the focus on change reactions at the organizational level neglects the importance of examining resistance at the individual level (Di Fabio, Bernaud, & Loarer, 2014; Saruhan, 2013). Individuals are the primary element in the outcome of change initiatives, which elevates the importance of addressing employee attitudes and behaviors before change implementation (Gelaidan et al., 2016). The change management literature showed that viewpoints, experiences, and attitudes correlate with organizational change outcomes, and individual differences, such as personality and emotional intelligence, contribute to a change recipient's reaction to change (Vakola, Tsaousis, & Nikolaou, 2004).

Change can elicit anxiety and fear from individuals, which contribute to resistance to change (Dasborough, Lamb, & Suseno, 2015; Saruhan, 2013; Steigenberger, 2015). The literature on change management indicated that individuals with lower levels of emotional intelligence have a higher probability of resisting change (Asnawi, Yunus, & Razak, 2014; Charoensukmongkol, 2017), yet employees who have higher levels of emotional intelligence are more accepting of change (Asnawi et al., 2014). Individuals can enhance emotional intelligence through training (Dhingra & Punia, 2016), and Di Fabio et al. (2014) emphasized the importance of evaluating variables associated with resistance to change that individuals can develop easily. Although the literature on change management supported the influence of emotions on change, emotional

intelligence and reactions to change have been underresearched (Mehta, 2016; Smollan, 2014).

Problem Statement

The general problem was that 70% of change implementations fail, and resistance to change is the most commonly cited reason for this failure (Michel et al., 2013). Andersson (2015) wrote that change provokes opposition and confusion and most organizations experience undesirable results from implementing change instead of the anticipated improvements. Some potential negative outcomes of failed change implementation include decreased job satisfaction (Grama & Todericiu, 2016), poor employee performance (Cullen et al., 2014), negative attitudes (McKay et al., 2013), turnover intentions (van den Heuvel et al., 2015), negative financial consequences (Mellert et al., 2015), and loss of organizational efficiency and effectiveness (Smits & Bowden, 2015). Organizational leaders are pressured to adapt to a rapidly changing global environment, and managers are primarily accountable for leading change initiatives (Burnes, 2015). Resistance to change is a prevalent challenge that managers face when implementing change and one of the primary reasons for the failure of change implementation (Rafferty et al., 2013).

Resistance to change is the use of attitudes or behaviors to impede change implementation (Abdel-Ghany, 2014), and Candido and Santos (2015) indicated change implementation failure is the lack of following through on a planned strategy implementation or the implementation of a strategy with a negative outcome. The specific problem was that researchers know that emotions play a role in change (Dhingra

& Punia, 2016; Mehta, 2016) but do not know how emotional intelligence affects the relationship between leader–member exchange and reactions to change. Although researchers have identified a correlation between leader–member exchange and resistance to change (Georgalis et al., 2015), emotional intelligence and resistance to change (Gelaidan et al., 2016), and leader–member exchange and emotional intelligence (Ordun & Acar, 2014), a gap in the literature exists concerning the simultaneous influence of dyadic relationships and emotional intelligence on resistance to change.

Purpose of the Study

The purpose of this quantitative, correlational research was to determine how emotional intelligence influences the relationship between leader–member exchange and reactions to change. For this study, I used a quantitative paradigm with a descriptive, cross-sectional, survey design. The predictor variable, leader–member exchange, was defined as the quality of the relationship between leader and follower (see Radzi & Othman, 2016) as identified by a participant's score on the LMX-7 (see Graen, Novak, & Sommerkamp, 1982). The criterion variable, resistance to change, was defined as the use of attitudes or behaviors to impede change implementation (see Abdel-Ghany, 2014) as identified by a participant's score on Oreg's (2003) Resistance to Change Scale. The moderating variable, emotional intelligence, was defined as the ability to perceive, utilize, understand, and regulate emotions (see Hogeveen, Salvi, & Grafman, 2016) as identified by a participant's score on Schutte et al.'s (1998) Assessing Emotions Scale.

Dyadic relationships between employees and managers contribute significantly to the change implementation process (Hwang et al., 2016). Previous study findings showed

individuals with a lower leader–member exchange quality are more likely to resist change (Cetin, 2016; Georgalis et al., 2015; Radzi & Othman, 2016). Mdletye et al. (2014) noted resistance to change is the primary reason for the failure of change implementation.

Organizational leaders need a greater understanding of factors that increase resistance to change to determine additional components that managers may need to include in training programs before change implementation. Researchers have separately correlated resistance to change to both leader–member exchange (Arif, Zahid, Kashif, & Sindhu, 2017; Mehta, 2016; Xerri et al., 2015) and emotional intelligence (Gelaidan et al., 2016). In this study, I evaluated the simultaneous effect of leader–member exchange and emotional intelligence on resistance to change. Leaders may use the findings of this study to develop training aimed at addressing employee attitudes and behaviors before change implementation to increase the likelihood of successful organizational change.

Research Questions and Hypotheses

RQ1: What is the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale)?

$H_0 1$: There is no relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale).

$H_a 1$: There is a relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale).

RQ2: What is the relationship between emotional intelligence (as measured by the Assessing Emotions Scale) and resistance to change (as measured by the Resistance to Change Scale)?

$H_0$2: There is no relationship between emotional intelligence (as measured by the Assessing Emotions Scale) and resistance to change (as measured by the Resistance to Change Scale).

H_a2: There is a relationship between emotional intelligence (as measured by the Assessing Emotions Scale) and resistance to change (as measured by the Resistance to Change Scale).

RQ3: What is the relationship between leader–member exchange (as measured by the LMX-7) and emotional intelligence (as measured by the Assessing Emotions Scale)?

$H_0$3: There is no relationship between leader–member exchange (as measured by the LMX-7) and emotional intelligence (as measured by the Assessing Emotions Scale).

H_a3: There is a relationship between leader–member exchange (as measured by the LMX-7) and emotional intelligence (as measured by the Assessing Emotions Scale).

RQ4: What is the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale), controlling for demographic variables?

$H_0$4: There is no relationship between leader–member exchange (as

measured by the LMX-7) and resistance to change (as measured by the

Resistance to Change Scale), controlling for demographic variables.

H_a4: There is a relationship between leader–member exchange (as

measured by the LMX-7) and resistance to change (as measured by the

Resistance to Change Scale), controlling for demographic variables.

RQ5: What is the moderating effect of emotional intelligence (as measured by the

Assessing Emotions Scale) on the relationship between leader–member exchange

(as measured by the LMX-7) and resistance to change (as measured by the

Resistance to Change Scale)?

$H_0$5: There is no moderating effect of emotional intelligence (as measured

by the Assessing Emotions Scale) on the relationship between leader–

member exchange (as measured by the LMX-7) and resistance to change

(as measured by the Resistance to Change Scale).

H_a5: Emotional intelligence (as measured by the Assessing Emotions

Scale) has a moderating effect on the relationship between leader–member

exchange (as measured by the LMX-7) and resistance to change (as

measured by the Resistance to Change Scale).

Theoretical Foundation

Quantitative research is the use of deductive reasoning to establish hypotheses

based on theories and the testing of these hypotheses through the collection of

quantitative data (Yilmaz, 2013). Oreg's (2006) multidimensional resistance-to-change

model, leader–member exchange theory (Graen, Novak, & Sommerkamp, 1982), and emotional intelligence theory (Salovey & Mayer, 1990) provided the theoretical foundation used to address the research questions and hypotheses for this study. I used Oreg's multidimensional resistance-to-change model to show how both contextual and individual factors influence change attitudes. Leader–member exchange theory indicated the importance of high-quality dyadic relationships during the change implementation process. My use of emotional intelligence theory showed how an individual's ability to perceive, utilize, understand, and regulate emotions contributes to their responses to change. I will provide a more detailed explanation of these theories in Chapter 2.

This study was an extension of the work by Georgalis et al. (2015) whose study findings indicated informational justice mediates the relationship between leader–member exchange and resistance to change. Georgalis et al. recommended further research to consider additional variables that may interact with the relationship between leader–member exchange and resistance to change. I considered this recommendation for this study by exploring the moderating effect of emotional intelligence (as measured by the Assessing Emotions Scale) on the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale).

Oreg's Multidimensional Resistance-to-Change Model

Dispositional resistance-to-change theory indicates how individuals differ on the extent in which they tend to resist change (Oreg, 2003). Oreg (2003) deemed the four components of dispositional resistance to change as routine seeking, emotional reaction,

short-term focus, and cognitive rigidity. Oreg (2006) found that most empirical research on resistance to change has shown contextual variables as the primary contributing factor to resistance, but few researchers have emphasized individual differences and even fewer proposed a combined focus on individual and contextual aspects. Oreg (2006) incorporated the dispositional resistance theory into a multidimensional resistance-to-change model that included both individual and contextual factors as influences of resistance.

Leader-Member Exchange Theory

Leader–member exchange theory originated as the vertical dyad linkage theory, which Dansereau, Graen, and Haga et al. (1975) deemed as an alternative to average leadership style. Average leadership style was used in the early 1970s as a method to evaluate leadership based on how leaders behaved most of the time or on average (Dansereau et al., 1975). Vertical dyad linkage theory indicated that employees vary in how they perceive and describe their manager's behavior (Graen & Uhl-Bien, 1995). The primary concept of vertical dyad linkage was that time constraints and limited resources forced leaders to invest in only a limited number of followers, creating differentiated dyads between leaders and followers (Dansereau et al., 1975). Graen, Novak, and Sommerkamp (1982) further explored the differentiated relationships discovered through vertical dyad linkage theory and transitioned the name to leader–member exchange theory. Whereas the focus of vertical dyad linkage was describing the differentiated relationships between employees and the leader, the focus of leader–member exchange theory was how these relationships evolve and the implications of the relationship quality

level (Graen & Uhl-Bien, 1995). Graen and Uhl-Bien (1995) stated that the central

position of leader–member exchange is that leader-follower relationships develop based

on employee and manager traits and behaviors, and higher quality leader–member

exchange relationships produce better outcomes at the micro and macro levels within an

organization.

Emotional Intelligence Theory

Salovey and Mayer (1990) introduced emotional intelligence theory as the ability

of an individual to evaluate their own emotions and those of others, and the use of

emotions to enhance cognitive thought and problem-solving. Salovey and Mayer

operationalized the theory through a three-branch emotional intelligence model

comprised of appraising emotions, regulating emotions, and utilizing emotions. Mayer

and Salovey (1997) later expanded the three-branch model into four branches comprised

of managing emotions, understanding emotions, facilitating thought, and perceiving

emotions. Mayer and Salovey's four-branch ability-based model indicates specified

abilities as the facilitator for managing emotions.

Ability, trait, and mixed emotional intelligence are the three recognized concepts

of emotional intelligence theory (Joseph, Jin, Newman, & O'Boyle, 2015). Ability

emotional intelligence is based on the cognitive ability to perceive, express, and manage

emotions (Cabello, Fernández-Pinto, Sorrel, Extremera, & Fernández-Berrocal, 2016)

and is the intersection of emotions and cognition (Lopes, 2016). Trait emotional

intelligence is a blend of the self-perceived capacity of managing emotions with

individual dispositions, such as happiness (Herpetz, Hock, Schuetz, & Nizielski, 2016).

The mixed model of emotional intelligence is a combination of cognitive abilities, personality attributes, and individual dispositions (Joseph et al., 2015). I based this study on Mayer and Salovey's (1997) ability-based model because it is the most widely accepted model and definition for the emotional intelligence concept (see McCleskey, 2014).

Nature of the Study

The nature of this study was a quantitative research method in which I used a descriptive, correlational design to evaluate the moderating effect of emotional intelligence (moderating variable measured by the Assessing Emotions Scale) on the relationship between leader–member exchange (predictor variable measured by the LMX-7) and resistance to change (criterion variable measured by the Resistance to Change Scale). I used the demographic variables of age, gender, tenure, supervisory role, and education as control variables because past researchers have studied the relationship between the chosen demographic variables and resistance to change (Hon et al., 2014; Kunze, Boehm, & Bruch, 2013; Turgut et al., 2016; Xu, Payne, Horner, & Alexander, 2016). The goal of quantitative research is for researchers to create and test hypotheses, develop models and theories that clarify behavior, and generalize the results across a greater population through the measurement of statistics (Hoy & Adams, 2015). The quantitative approach was appropriate for this study because it allowed for the collection of empirical, quantifiable data to address the problem statement, purpose, research questions, and hypotheses of the study.

Surveys are the most commonly used study type for nonexperimental, descriptive research, and a questionnaire is the method generally used for collecting information in a survey study (Orcher, 2016). The primary source of data for this study was scores from a questionnaire, which included a combination of questions from the Resistance to Change Scale, the LMX-7 scale, and the Assessing Emotions Scale. The three instruments have shown validity and reliability in previous research studies (see Graen, Novak, & Sommerkamp, 1982; Oreg, 2003; Schutte et al., 1998), and permission to use these instruments can be found in Appendices A, B, and C. I calculated the target sample size using G*Power software (Version 3.1.9.2; Faul, 2014; Faul, Erdfelder, Buchner, & Lang, 2009) and will discuss this process in Chapter 3. In this study, I used a nonprobability, convenience sample of participants who were members of a research administration listserv. An invitation to participate in the study was e-mailed to the listserv, along with a link to complete the survey.

SurveyMonkey was the managing platform for the online survey. I downloaded the raw data from SurveyMonkey into an Excel file for cleaning and analysis and then uploaded the Excel file into the IBM Statistical Package for the Social Sciences (SPSS) for Windows (Version 24) software for further coding and analysis. Confirmatory factor analysis (CFA) was performed in Amos software (Version 25; Arbuckle, 2017) to verify the validity of the study instruments. Hypotheses 1 through 4 were analyzed using hierarchical multiple linear regression. I tested the moderating effect of emotional intelligence (as measured by the Assessing Emotions Scale) on the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as

measured by the Resistance to Change Scale) using the Hayes PROCESS macro (Version 3.0; Hayes, 2017) for SPSS. Chapter 3 will include a detailed discussion of the methodology and statistical analyses used for this study.

Definitions

I used the following operational definitions for this study:

Dyadic relationship: The relationship between a supervisor (leader) and subordinate (follower or member) representative of the most fundamental work unit in a work context (Loi, Chan, & Lam, 2014).

Emotional intelligence: The ability to perceive, utilize, understand, and regulate emotions (Hogeveen et al., 2016) as identified by the Assessing Emotions Scale.

Follower: A supervisor's direct report and the subordinate unit of a dyadic relationship (Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016). This term has a shared meaning in this study with the term *member*.

Leader: An employee's direct supervisor and the superior unit in a dyadic relationship (Tse, Lawrence, Lam, & Huang, 2013).

Leader–member exchange: The quality of the working relationship between a supervisor and direct report (Radzi & Othman, 2016) as identified by the LMX-7.

Member: A supervisor's direct report and the subordinate unit of a dyadic relationship (Jha & Jha, 2013). This term has a shared meaning in this study with the term *follower*.

Resistance to change: The use of attitudes or behaviors to impede change implementation (Abdel-Ghany, 2014) as identified by the Resistance to Change Scale.

Assumptions

I held several assumptions for this study due to the chosen research design. I assumed that participants in this study understood the survey questions and, if not, would contact me to clarify any survey items. I also assumed participants would answer the survey questions truthfully because of my multiple reiterations in the recruitment e-mail and online survey that the survey would be completely anonymous. Another assumption was that the instruments used in this study had the same level of reliability and validity reported in previous studies. In data analysis, I assumed that the data were normally distributed and that the predictor and covariate variables had a linear relationship. Finally, I assumed I would be able to obtain the necessary sample size of participants (as defined in Chapter 3) that would provide adequate power to achieve statistical significance among the hypotheses.

Scope and Delimitations

The primary purpose of this study was to investigate the effects of emotional intelligence and dyadic relationships on attitudes toward change. To make this analysis feasible, this study had several delimitations. I limited participants to members of a research administration listserv. Although change attitudes may be similar in other professions, data may not be generalizable outside of the research administration profession. I limited the exploration of emotional intelligence and leader–member exchange to the member level of the dyadic relationship. This limited scope of the study to the member level of the dyad may limit the usefulness in applying the study results to the supervisor level of the dyadic relationship. This limitation is parallel with previous

studies on emotional intelligence and leader–member exchange in which researchers

tended to evaluate either the member or supervisor level of the dyadic relationship (e.g.

Peterson & Aikens, 2017; Xerri et al., 2015).

This study was also limited to perceptions of change in general and not a specific

change. In a longitudinal study, the perceptions and attitudes of employees could be

analyzed before and after a specific change. To minimize the typical time constraints of a

longitudinal design, I limited this study to a cross-sectional analysis. The availability of

numerous emotional intelligence instruments contributed to the exclusionary delimitation

associated with the use of the Assessing Emotions Scale. I selected the Assessing

Emotions Scale over other self-report instruments because it aligns with the theoretical

criteria of ability emotional intelligence.

Limitations

This study had several limitations. My use of a correlational design limited this

study. Although a multiple regression analysis can determine if relationships and

interactions exist between the study variables, the fact that a correlational study cannot

signify a causational relationship was a limitation. My use of the quantitative method did

not allow me to assess the underlying details on responses. I did not choose a qualitative

approach because this method would not have shown whether there is a correlation

between the study variables.

Another limitation of this study was the use of convenience sampling, which may

have prevented an equal distribution of participant demographics. Random sampling

could have provided a better representation of the sample population; however, I chose

convenience sampling because the sample was accessible and feasible regarding time and cost. Because participants were limited to members of a research administration listserv, attitudes toward change may represent the cultural norms of the research administration profession. How much the vocational culture of the research administration profession affects the attitudes and perceptions of participants and if those influences are representative of attitudes and perceptions of employees in other professions is not knowable. Using a convenience sample of research administration listserv members may have introduced self-selection bias because the responses of those who chose to participate may differ from those who did not choose to participate.

The use of self-report instruments was also a limitation of this study and may have contributed to response bias. Although all the instruments used in this study have shown validity and reliability, bias could be minimized but not eliminated. Because I am a member of the listserv used to recruit participants, another limitation was the potential that participants answered questions based on what they perceived as the socially desirable answer rather than answering straightforward. To minimize this limitation, I encouraged participants to respond based on their true feelings and reiterated that all responses were completely anonymous. There was also a risk that participants varied in their understanding of the concepts presented in the questionnaire and their interpretation of the questions. Even though I offered the survey through an online format, some participants may have encountered time constrictions and may not have had adequate time to fully or accurately complete the survey. The instruments used in this study are

much briefer than other available scales, reducing the required time to complete the survey.

The use of a self-report emotional intelligence instrument was also a limitation because it measures a person's perceived emotional intelligence, whereas performance-based instruments measure an actual ability. Although self-report emotional intelligence instruments have a greater risk to response bias than performance-based measures, the use of the Assessing Emotions Scale was in line with other studies similar to this study (e.g. Clarke & Mahadi, 2017; Sasikala & Anthonyaj, 2015; Thomas, Cassady, & Heller, 2017). Additionally, the Assessing Emotions Scale does not require a researcher to be certified to use the instrument and is available to use at no cost for research purposes. Researchers have validated the Assessing Emotions Scale for use across multiple geographical locations and cultures (Arunachalam & Palanichamy, 2017; Craparo, Magnano, & Faraci, 2015; Naeem & Muijtjens, 2015).

Significance of the Study

Significance to Theory

The findings of this study are theoretically significant because they contribute to the body of knowledge on leader–member exchange, emotional intelligence, and resistance to change. My examination of these variables simultaneously showed an alternative way to consider the roles of dyadic relationships and emotional intelligence during change implementation. The results of this study enhance existing theory based on the findings that varying levels of emotional intelligence augment the effects of resistance to change. The findings of this study further contribute to the validation of Oreg's

multidimensional resistance-to-change model because they support that both contextual and individual factors contribute to reactions to change.

Significance to Practice

Organizational leaders continuously face internal and external opportunities and threats, which foster an environment of continuous change (Schmitt & Klarner, 2015). Researchers studying organizational change have argued that an institution's success depends on its ability to adapt to a competitive landscape (O'Reilly & Tushman, 2013). Stevens (2013) espoused individuals' reactions to change directly influence the level of success for organizational change implementation, and Shin et al. (2012) found that about two thirds of change initiatives fail. Researchers have identified the need for studies designed to discover processes that address the high failure rate of change initiatives (Grady & Grady, 2013; Heckmann et al., 2016). The findings of this research have practical significance and support professional practice because employees, managers, and organizational leaders may gain a broader and more accurate understanding of the role of leader–member exchange quality and emotional intelligence levels in change recipients' reactions to change. The results of this study indicated specific measures organizational leaders can take to increase the likelihood that change initiatives will accomplish their intended objectives.

Significance to Social Change

Organizational change is pervasive, and because organizational operations impact individuals, organizations, and communities, researchers have provided justifications to focus on approaches that will increase the likelihood of successful change initiatives. The

findings of this study contribute significantly to positive social change at the organizational level. Al-Haddad and Kotnour (2015) considered effective change implementation as meeting predetermined objectives, such as project deliverables and stakeholder satisfaction. Employee attitudes toward change are considered one of the most critical factors predicting the success of change initiatives (Nging & Yazdanifard, 2015). The results of this study contribute to positive social change for organizations because organizational leaders may use the findings to adopt change management processes that positively influence change attitudes and change implementation outcomes.

Summary and Transition

The purpose of this study was to determine how emotional intelligence influences the relationship between leader–member exchange and reactions to change. The findings of this study support the need for organizational leaders to adopt change management processes that positively influence change attitudes and change implementation outcomes. In this chapter, I provided a background of the study, discussed the research problem and study purpose, offered the research questions, and described the theoretical framework of the study. I then discussed the nature of this study; defined key terms and variables; and discussed the assumptions, scope, and limitations of the study. Chapter 2 will include an evaluation of related literature and provide a critical analysis of theories, models, and previous studies that support the problem statement, purpose, and research questions of this study. Chapter 3 will include a detailed discussion of the methodology

and statistical analyses used for this study. The findings of this study will be included in

Chapter 4 and the results will be discussed in detail in the concluding chapter.

Chapter 2: Literature Review

Introduction

Resistance to change is a major challenge faced by managers when implementing change (Rafferty et al., 2013). The general problem was that 70% of change implementations fail, and resistance to change is the most commonly cited reason for this failure (Michel et al., 2013). Some potential negative outcomes of failed change implementation include decreased job satisfaction (Grama & Todericiu, 2016), poor employee performance (Cullen et al., 2014), negative attitudes (McKay et al., 2013), turnover intentions (van den Heuvel et al., 2015), negative financial consequences (Mellert et al., 2015), and loss of organizational efficiency and effectiveness (Smits & Bowden, 2015). The specific problem was that researchers know that emotions play a role in change (Dhingra & Punia, 2016; Mehta, 2016) but do not know how emotional intelligence affects the relationship between leader–member exchange and reactions to change.

The purpose of this quantitative, correlational research was to determine how emotional intelligence influences the relationship between leader–member exchange and reactions to change. In the literature on change management, researchers have considered antecedents to resistance to change as either contextual or individual factors (Oreg, 2006). In this chapter, I will examine how the contextual factor, leader–member exchange, and the individual factor, emotional intelligence, contribute significantly to the change implementation process. The discussion will include the role of moderating

variables to alter the direction or strength of the relationship between the predictor and criterion variables.

Literature Search Strategy

I conducted the literature search using databases accessible through Walden University Library and Google Scholar. In the Walden Library, I accessed the ABI/INFORM Collection; Emerald Insight; SAGE Journals; and Business Source Complete (including Academic Search Complete, PsycARTICLES, and PsycINFO) databases, along with the Thoreau multidatabase search tool. I also used the ProQuest Dissertation and Theses archive to search for relevant dissertation manuscripts. The primary search terms I used were *resistance to change, change management, change failure, change implementation, organizational change, change history, reactions to change, change reactions, leader–member exchange, followership, dyadic relationships, LMX, emotional intelligence, emotional quotient, EI,* and *EQ,* along with combinations and permutations of the key terms. I also used the works cited sections of dissertations and peer-reviewed articles to evaluate additional literature I did not find through the database search.

I restricted the search parameters to peer-reviewed articles published between 2013 and present, except for seminal publications, to ensure at least 80% of the references used in this dissertation were published within the last 5 years. I began the literature search using the broadest scope of each primary search term and then used the Boolean connector *AND* in various combinations of the listed search terms. To ensure the articles were relevant to my research, I searched the key terms using the field locators *TX*

All Text, *TI Title*, and *AB Abstract*. I will provide a detailed discussion of the selected, peer-reviewed articles in the literature review section of this chapter.

Theoretical Foundation

The foundation of this study was grounded in Oreg's multidimensional resistance-to-change model, leader–member exchange theory, and emotional intelligence theory. These theories were used as the theoretical foundation to address the research questions and hypotheses for this study. I used Oreg's multidimensional resistance-to-change model to describe how both contextual and individual factors contribute to change attitudes, while leader–member exchange theory was used to elucidate the importance of high-quality dyadic relationships during the change implementation process. I also used emotional intelligence theory to explain how the ability to perceive, utilize, understand, and regulate emotions contributes to attitudes toward change.

Oreg's Multidimensional Resistance-to-Change Model

Researchers cited Lewin (1947) in the organizational change literature as the pioneer of change management. Lewin (1947) developed the three-step change model that comprised the unfreezing, changing, and refreezing phases. Lewin (1951) also established field theory, which indicated contextual factors as the main contributing factor to an individual's reactions to change. Coch and French (1948), Zander (1950), and Lawrence (1954) shared Lewin's (1951) perspective on contextual factors, but, in recent decades, researchers have also focused on individual factors that contribute to change attitudes. Oreg (2003) acknowledged Coch and French's seminal resistance to change perspective that organizational context contributes to resistance to change, but Oreg

considered the individual as the primary resistance source and organizational context as a
moderator of resistance to change

Dispositional resistance to change theory indicates individuals vary on the degree
in which they are inclined to resist change (Oreg, 2003). The four factors of dispositional
resistance to change are routine seeking, emotional reaction, short-term focus, and
cognitive rigidity (Oreg, 2003). Oreg (2003) found that most empirical research on
resistance to change has shown contextual variables as the primary contributing factor to
resistance, but few researchers have emphasized individual differences and even fewer
proposed a combined focus on individual and contextual aspects. Based on a combined
perspective, Oreg (2006) later incorporated the dispositional resistance concept into a
multidimensional resistance-to-change model that included both individual and
contextual factors as influences of resistance.

The multidimensional resistance-to-change model was appropriate for this study
because the purpose of the study was to evaluate contextual and individual factors that
contribute to change attitudes. Many researchers have used Oreg's multidimensional
model to investigate how contextual and individual factors influence resistance to change.
Michel et al. (2013) incorporated Oreg's model into a study on dispositional resistance to
change, perceived benefit of change, extent of change, and commitment to change. Radzi
and Othman (2016) employed Oreg's model to evaluate leader–member exchange
(contextual factor), role breadth self-efficacy (individual factor), and resistance to
change. Saruhan (2013) incorporated Oreg's model in a study on trust in organization
(contextual factor), psychological capital (individual factor), and organizational change.

Later in this chapter, I will provide a detailed summary of the findings of these studies

that included Oreg's multidimensional model.

Leader-Member Exchange Theory

Leader–member exchange originated as the vertical dyad linkage theory, which

Dansereau et al. (1975) deemed as an alternative to average leadership style. Average

leadership style was used in the early 1970s as a method to evaluate leadership based on

how leaders behaved most of the time or on average (Dansereau et al., 1975).

Researchers based vertical dyad linkage theory on the concept that employees have

various perspectives of what they describe as their manager's behavior (Graen & Uhl-

Bien, 1995). The core notion of vertical dyad linkage was that time constraints and

limited resources forced leaders to invest in only a limited number of followers, creating

differentiated dyads between leader and follower Graen & Uhl-Bien, 1995). Graen,

Novak, and Sommerkamp (1982) further explored the differentiated relationships

discovered in the vertical dyad linkage model and transitioned the name of the model to

leader–member exchange theory. Whereas the focus of vertical dyad linkage was

describing the differentiated relationships between employees and the leader, the focus of

leader–member exchange theory was how these relationships evolve and the implications

of the relationship quality level (Graen & Uhl-Bien, 1995).

The central position of leader–member exchange is that leader-follower

relationships develop based on employee and manager traits and behaviors, and higher

quality leader–member exchange relationships result in better outcomes at the micro and

macro levels within an organization (Graen & Uhl-Bien, 1995). Previous researchers

have examined the relationship between leader–member exchange and change implementation. Arif et al. (2017) evaluated how leader–member exchange and organizational culture interact with organizational change. Sindhu, Ahmad, and Hashmi (2017) examined the interactions of leader–member exchange, organizational justice, and organizational change. Georgalis et al. (2015) incorporated leader–member exchange theory in a study and assessed the correlation between dyadic relationships and resistance to change and how informational justice mediated the relationship. In a subsequent subsection in this literature review, I will present a detailed summary of the findings of these studies that included leader–member exchange theory.

Leader–member exchange theory was an appropriate theory for this study because the purpose of the study was to evaluate how dyadic relationships and emotional intelligence contribute to change attitudes. My study was an extension of the work by Georgalis et al. (2015) in which the authors demonstrated informational justice mediates the relationship between leader–member exchange and resistance to change. Georgalis et al. recommended that scholars further research additional variables that may interact with the relationship between leader–member exchange and resistance to change. I considered this recommendation for this study by exploring the moderating role of emotional intelligence (as measured by the Assessing Emotions Scale) on the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale).

Emotional Intelligence Theory

The distal roots of emotional intelligence began with Thorndike's (1920) concept of social intelligence, which the author referred to as the ability to understand and appropriately manage relationships. Salovey and Mayer (1990) first introduced the term emotional intelligence in 1990 as a three-branch model, which included the areas of appraising emotions, regulating emotions, and utilizing emotions. Mayer and Salovey (1997) later expanded the concept into a four-branch model comprised of managing emotions, understanding emotions, facilitating thought, and perceiving emotions. The four-branch model indicates cognitive abilities as the facilitator for emotional intelligence (Mayer & Salovey, 1997).

The three recognized concepts of emotional intelligence are ability, trait, and mixed (Joseph et al., 2015). Ability emotional intelligence is the intersection of emotions and cognition (Lopes, 2016) and is based on the cognitive ability to perceive, express, and manage emotions (Cabello et al., 2016). Trait emotional intelligence is a combination of the self-perceived capacity of managing emotions and individual dispositions, such as happiness (Herpetz et al., 2016). The mixed model of emotional intelligence is a combination of cognitive abilities, personality attributes, and individual dispositions (Joseph et al., 2015). My study was based on Mayer and Salovey's ability-based model, which is the most widely accepted model and definition for the emotional intelligence concept (see McCleskey, 2014).

Emotional intelligence theory was appropriate for this study because the purpose of the study was to evaluate how an individual's ability to perceive, utilize, understand,

and regulate emotions influences the relationship between leader–member exchange and resistance to change. Many researchers have investigated emotional intelligence and its relationship to either leader–member exchange or change implementation. Dasborough et al. (2015) used emotional intelligence theory in a study of emotions and change management. Sasikala and Anthonyraj (2015) employed emotional intelligence theory to investigate the interactions of self-efficacy, emotional intelligence, and resistance to change, while Helpap and Bekmeier-Feuerhahn (2016) incorporated emotional intelligence theory to evaluate the emotions of employees during change. I will provide a detailed summary of the findings of these studies that included emotional intelligence theory in the following section.

Literature Review

History of Resistance to Change

Researchers in organizational change cite Lewin (1947) as the pioneer of change management. Lewin developed the three-step change model that comprised the unfreezing, changing, and refreezing phases. Although some scholars argue Lewin's (1947) change model is too simplistic, others consider it the primary approach to implementing change (Cummings, Bridgman, & Brown, 2016). Lewin's (1947) change model indicates the organization as a system or force field and resistance as the reaction to the drivers of change occurring within the system (Georgalis et al., 2015). According to field theory, also established by Lewin (1951), contextual factors influence an individual's reactions to change. Lewin (1951) developed a contextual approach to

change resistance from field theory, and this approach is the foundation to the concept of resistance to change.

The first empirical studies on resistance to change included publications by Coch and French (1948), Zander (1950), and Lawrence (1954). Coch and French questioned the factors that influence an individual's level of resistance and those strategies that can minimize this resistance, which led to a series of studies at Harwood Manufacturing. In the first study, managers implemented change to a control group in the standard Harwood practice (Coch & French, 1948). Leaders informed the participants of the change and gave the participants the opportunity to ask questions; however, the employees did not participate in any of the process changes (Coch & French, 1948). Coch and French's second study included a modified change implementation in which employees were informed of the change and then nominated colleagues to represent the group in helping design new processes and establish required production rates. In the third study, all employees of the group actively participated in planning the change with management (Bartlem & Locke, 1981). The final study in the series included the control group from the first study, and the managers allowed the employees to fully participate in the change process (Coch & French, 1948). Coch and French concluded that employee participation was directly related to production, and total participation was negatively related to resistance to change. Coch and French's study findings became the foundation for the contextual perspective of resistance to change in which scholars consider situational factors, not personality factors, as the primary source of employee resistance.

Researchers transitioned the resistance-to-change perspective from a contextual focus to an individual focus shortly after Coch and French's (1948) Harwood Manufacturing research. Lewin's (1947) contextual view of resistance was the inspiration for Zander's (1950) research; however, Zander focused on resistance as an individual's effort to seek protection from change. Lawrence (1954) agreed that contextual factors influence resistance, but, like Zander, Lawrence believed that social factors are the primary source of change behaviors. Lawrence asserted that Coch and French misinterpreted their study findings and believed the employees in the Coch and French studies resisted the social aspect of the change instead of the contextual aspect. The individual perspective of resistance continued to develop five decades after Coch and French's seminal work.

In the early 1990s, some researchers began to challenge the individual perspective of resistance to change. Eisenstat, Spector, and Beer (1990) argued that many change implementations fail because of the misconception that the attitudes and behaviors of individuals must be modified before organizational change can occur. Eisenstat et al. noted that the most effective way of changing behavior is to place employees in a different organizational context, which leads to imposing new roles and relationships, thereby driving new attitudes and behaviors. After observing over 100 companies in a 10-year period, Kotter (1995) argued that contextual obstacles, not individual factors, usually prevent the successful execution of change. Kotter stated that individual resistance rarely impedes change, and organizational structure more often forces employees to choose between the organization's vision and their personal interests.

In agreement with Kotter's perspective, Dent and Goldberg (1999) argued that people do not resist change; individuals resist contextual factors, such as changes that are not feasible, fear of the unknown, and loss of status, pay, or comfort. Dent and Goldberg challenged leaders to move beyond the mental model of assuming employees are resistant and direct actions to strategies that deal with the specific contextual factors contributing to resistant behaviors. Oreg (2003) acknowledged contextual factors contribute to resistance but considered an individual's personality and disposition as the primary antecedent to resistance and context as the moderator. Oreg's multidimensional resistance-to-change model is a combination of contextual and individual perspectives, resulting in three primary resistance-to-change paradigms.

Resistance-to-Change Paradigms and Studies

The common views of resistance to change include the contextual and individual paradigms, along with a perspective that is a combination of the two views. Many researchers have argued that resistance to change is a negative behavior resulting from an individual's innate reaction to change implementation (Andersson, 2015). Authors typically present this view in textbooks on resistance or change management (Dent & Goldberg, 1999) and others have noted researchers frequently use this assumption in resistance-to-change studies (Laumer, Maier, Eckhardt, & Weitzel, 2016). Dyehouse et al. (2017) defined resistance to change as an individual's inclination to oppose or evade change, and some researchers have shared this individual perspective (Turgut et al., 2016; Xu et al., 2016). However, a review of the literature indicated the contextual paradigm was the foundation for the empirical resistance-to-change theory.

Contextual paradigm. Several researchers conceded that contextual variables influence resistance to change. Coch and French (1948) developed the contextual paradigm and considered engagement and participation as two primary situational factors. Employee engagement and participation are critical in the change implementation process because engaged employees will contribute more to completing tasks (Appelbaum et al., 2017b). Employee engagement is the process used by employees to express themselves in a physical, cognitive, and affective manner (Kahn, 1990). Although there continues to be no consensus on the concept of employee engagement, Bankar and Gankar (2013) expanded Kahn's definition of engagement to include an employee's exuded energy, interest, and effectiveness. Researchers have offered specific strategies for implementing change, but varying strategies share the common theme that successful change implementation requires a contextual focus on employee engagement.

Participation is another contextual factor that influences resistance to change. Employees are less likely to resist change when provided opportunities to participate in change implementation (Bordia et al., 2011). The absence of employee involvement in change implementation leads to ambiguity, low performance, and increased stress, which elevates the potential for resistance (Asnawi et al., 2014). Georgalis et al. (2015) charged leaders to provide sufficient information and opportunities for employees to participate, thereby reducing the potential for resistance. Increasing employee support is important in the change process, and Radzi and Othman (2016) offered that managers can obtain employee support by allowing employee participation during the planning of change.

Communication is a situational element shown to influence reactions to change. Akan, Er Ulker, and Unsar (2016) surveyed 406 employees in the banking sector of Turkey and found a significant positive correlation between communication and resistance to change ($r = .344$, $p < .01$). Parallel to Akan et al.'s findings, Georgalis et al. (2015) evaluated data from 100 employees in an Australian financial services office and concluded the perception of appropriate information during change is negatively correlated to resistance to change ($\beta = -.43$, $p < .01$). Effective communication from leaders increases an employee's ability to make meaning of change and determines the positive consequences of change initiatives (van den Heuvel et al., 2015). In return, communication during the change process assists in the management of anxiety and ambiguity, but Hwang et al. (2016) cautioned that communications on organizational performance and cost reduction should be minimal because they are antithetical to employee concerns. Although leaders tend to relate resistance to change to individual behaviors (Andersson, 2015), Belias and Koustelios (2014) stated the lack of communication by leaders is an antecedent to negative behaviors during organizational change. Effective communication by leaders during change provides employees the necessary information to reconcile the reason for the change and establish trust in the manager.

An employee's trust in management and the quality of the leader-subordinate relationship influence reactions to change. A manager can demonstrate support for an employee during the change process by establishing trust (Appelbaum, Karelis, Le Henaff, & McLaughlin, 2017a). In a review of the literature on resistance to change, Oreg

(2006) concluded trust was among the antecedents most frequently mentioned as having a

potential relationship with resistance. Oreg tested the relationship between resistance to

change and trust with 177 employees in an organization that recently underwent a

merger. Trust had a significant correlation with all three resistance to change attitudes:

affective (β = -.19, p < .01), behavioral (β = -.27, p < .001), and cognitive (β = -.42, p <

.001; Oreg, 2006). Lundqvist (2011) conceded mutual trust between a manager and

subordinate could lead employees to feel comfortable in participating in the change

process. Trust is one of the three dimensions used to measure the quality of dyadic

relationships (Peterson & Aikens, 2017).

The quality of dyadic relationships influences change attitudes. Arif et al. (2017)

interviewed 185 employees and found a significant positive relationship between the

quality of dyadic relationships (leader–member exchange) and change management (r =

.194, p = .01). In Arif et al.'s study, leader–member exchange accounted for 16.2% of the

variance (p = .027) in change management outcomes. Other researchers have established

that the quality of leader–member exchange between a supervisor and employee

influences how employees perceive and accept change (Hwang et al., 2016). These

studies support that gaining trust from employees and building high-quality dyadic

relationships can minimize resistance to change.

Individual paradigm. Researchers deem it important to evaluate individual traits

that influence responses to change. Some have argued that the focus on change reactions

at the organizational context neglects the importance of examining resistance at the

individual level (Di Fabio et al., 2014; Saruhan, 2013). Individuals are the primary

element in the outcome of change initiatives, which elevates the importance of developing employee attitudes and behaviors before change implementation (Gelaidan et al., 2016). The change management literature showed that viewpoints, experiences, and attitudes correlate with successful organizational change, and individual differences, such as personality and emotional intelligence, contribute to a change recipient's reaction to change (Vakola et al., 2004). Bareil (2013) considered the two conflicting views of resistance at the individual level as a traditional (negative) perspective in which managers view resistance as an adversary and a modern (positive) perspective in which managers perceive resistance as a mechanism to evaluate the appropriateness of the proposed change.

A one-sided perspective of resistance as either negative or positive oversimplifies reactions to change (Piderit, 2000). As an alternative, Piderit (2000) offered a tripartite perspective of resistance based on affective, cognitive, and behavioral responses to change. The affective component of responses to change addresses the emotions and feelings individuals experience during change (Malik & Masood, 2015). Di Fabio et al. (2014) stated the cognitive dimension indicates the viewpoints an individual has on the change, and Piderit asserted that the behavioral dimension indicates the attitudes individuals display in response to change. The tripartite model of resistance to change is recognized as the modern approach to evaluating resistance (Georgalis et al., 2015) and is the foundation for Oreg's multidimensional resistance-to-change model. Oreg's multidimensional model is a combination of the contextual and individual paradigms and shows a comprehensive approach to evaluating resistance.

Oreg's multidimensional resistance-to-change model. The dispositional

resistance-to-change theory and the multidimensional resistance-to-change model were

introduced by Oreg (2003). Oreg (2003) hypothesized that individuals have varying

tendencies to avoid change generally and dispositional resistance would encompass

behavioral, cognitive, and affective resistance attitudes. Although previous researchers

assessed change reactions with instruments designed for other purposes (Judge, Thoresen,

Pucik, & Welbourne, 1999; Wanberg & Banas, 2000), Oreg's series of seven empirical

studies resulted in the Resistance to Change Scale, which specifically measures

dispositional resistance to change. After performing a CFA and establishing convergent

and discriminant validity, Oreg considered the four factors of dispositional resistance to

change as routine seeking, emotional reaction, short-term focus, and cognitive rigidity.

The routine seeking factor indicates the behavioral dimension and an individual's

tendency to adopt routines, whereas the cognitive rigidity factor indicates the cognitive

dimension and a person's willingness and ability to adjust to new situations (Di Fabio et

al., 2014). Both the emotional reaction and short-term focus factors indicate the affective

dimension of dispositional resistance, which includes the ability to manage stress and

concentrate on the long-term benefits of change (Oreg, 2003).

The multidimensional model of resistance to change is an expansion of Oreg's

(2003, 2006) dispositional resistance concept and comprises both individual and

contextual factors to evaluate resistance to change. Oreg (2006) found that most

empirical research on resistance to change has shown contextual variables as the primary

contributing factor to resistance, but few researchers have emphasized individual

differences and even fewer proposed a combined focus on individual and contextual aspects. Oreg (2006) surmised individual (dispositional) and contextual (processes and anticipated changes in outcomes) factors influence behavioral, cognitive, and affective resistance attitudes, and these change attitudes influence work-related outcomes.

In a study on the multidimensional model of resistance to change, Oreg (2006) found a relationship between dispositional resistance and affective (β = .38, p < .001) and behavioral (β = .14, p < .05) resistance attitudes but no correlation between dispositional resistance and cognitive attitudes (Oreg, 2006). Oreg's findings indicate that some individuals have a greater dispositional inclination to undergo adverse emotions and react negatively toward change. For antecedent variables related to perceived outcomes due to changes, Oreg's study showed a relationship between prestige and cognitive resistance (β = -.28, p < .001), intrinsic rewards and cognitive resistance (β = -.23, p < .01), intrinsic rewards and affective resistance (β = -.23, p < .05), and job security and affective resistance (β = -.13, p < .05).

No relationship was found between the perceived outcome variables of prestige, job security, and intrinsic rewards and behavioral resistance (Oreg, 2006). Oreg (2006) stated the insignificant relationship between perceived outcomes and behavioral resistance was expected because processes are more likely to influence behavioral attitudes than perceived outcomes. For the change process variables, trust in management was negatively correlated with affective (β = -.19, p < .01), behavioral (β = -.27, p < .001), and cognitive resistance attitudes (β = -.42, p < .001), but social influence correlated only with affective (β = .27, p < .001) and behavioral resistance (β = .24, p <

.001). These findings indicated that a lack of confidence in leadership was strongly

correlated with increased anxiety and negative perceptions of the value of change.

Other findings in Oreg's (2006) series of studies indicated a positive relationship

between information and behavioral ($\beta = .15$, $p < .05$) and cognitive ($\beta = .15$, $p < .05$)

resistance attitudes suggesting that the increase of information during the change process

escalates resistance. Oreg's findings on the informational-resistance relationship were

opposite than anticipated, indicating that less information about the change influenced

less behavioral and cognitive resistance. Oreg concluded this opposite result for

information indicated the importance of the content of communication, meaning that if

employees perceive the change as negative, an increase in information regarding the

change will increase the likelihood of acting negatively toward the change. The final

study in Oreg's study series showed significant correlations between the various change

attitudes and work-related outcome variables: affective resistance and job satisfaction (β

$= -.17$, $p < .05$), behavioral resistance and intention to quit ($\beta = .20$, $p < .05$), and

cognitive resistance and continuance commitment ($\beta = -16$, $p < .05$). Oreg's findings

showed that employees who were stressed and worried about the change conveyed less

job satisfaction. Those who acted negatively toward the change reported a stronger desire

to leave the organization, and those with negative thoughts of the change were less

inclined to remain with the organization.

Researchers have evaluated the combination of individual (dispositional) and

contextual variables in relation to change responses. Michel et al. (2013) assessed the

moderating role of dispositional resistance on the relationship between contextual

variables and commitment to change through a series of four studies. Although three of the studies showed contextual variables had a greater influence on change reactions than dispositional resistance, one of the studies supported Oreg's multidimensional model and indicated dispositional resistance (individual factor) moderated the negative relationship between perceived benefit of change (contextual factor) and commitment to change (β = -.137, $p < .01$).

In concurrence with evaluating the contextual variable of employee engagement, Malik and Masood (2015) considered it necessary to also evaluate individual variables, such as traits and behaviors, to gain a more holistic understanding of resistance to change. Malik and Masood found that an individual's level of emotional intelligence (individual factor) has a negative relationship with resistance to change ($r = -.215$, $p < .01$), supporting Oreg's (2006) combination perspective of resistance to change. Agote, Aramburu, and Lines (2015) assessed the relationship between the contextual variables of perceived authentic leadership and trust with the individual variable of emotions during organizational change. Agote et al.'s study showed a positive relationship between perceived authentic leadership and positive change emotions (β = .499, $p < .001$) and a negative relationship between trust and negative change emotions (β = -.428, $p < .001$), reinforcing how both individual and contextual factors influence resistance. The multidimensional approach to resistance to change indicates how a combination of factors contributes to change attitudes (Di Fabio et al., 2014; Radzi & Othman, 2016). In this study, I adopted Oreg's multidimensional model, which includes both individual (dispositional) and contextual factors as antecedents to resistance to change.

Measuring Resistance to Change

Although previous researchers have assessed change reactions with instruments designed for other purposes, the Resistance to Change Scale is the only instrument that measures dispositional resistance to change. Oreg (2003) sought to develop the concept of dispositional resistance to change, along with a valid measuring instrument, through a series of seven studies. Oreg began by reviewing the literature on resistance to change and identified a list of sources of resistance that seemed to develop from an individual's personality. Oreg narrowed the list down to six variables and in the first study generated a list of 44 items formatted on a 6-point Likert scale. After examining the interitem correlation matrix and performing an exploratory factor analysis, Oreg reduced the scale from six to four factors. The four factors pertained to an individual's preference of routine, emotional reactions to imposed change, short-term focus when adopting change, and the frequency and comfort with which individuals change their mind (Oreg, 2003). These factors accounted for approximately 57% of the variance in resistance to change and the Cronbach's alpha for the scale's reliability was .92 (Oreg, 2003).

From the analysis of the data from the first study, Oreg (2003) produced a 16-item scale with the four factors of routine seeking, emotional reaction to imposed change, short-term focus, and cognitive rigidity. These factors indicate the behavioral (routine seeking), affective (emotional reaction to imposed change), and cognitive (short-term focus and cognitive rigidity) aspects of change established in Piderit's (2000) tripartite model of attitudes toward change. The second study included an additional item each for the cognitive rigidity and short-term thinking scales because the two subscales originally

yielded marginally acceptable reliability in Study 1. One of the scale's 18 items did not

load significantly on the expected factor and it was deleted from the scale, reducing the

scale's total items to 17 (Oreg, 2003). The results of the second study showed the scale's

structure had validity and the alpha coefficient for the full scale was .87 (Oreg, 2003).

The alpha coefficients for the routine seeking, emotional reaction, short-term thinking,

and cognitive subscales were .75, .71, .71, and .69 respectively (Oreg, 2003).

Study 3 was performed to reconfirm the Resistance to Change Scale's structure

and to determine the correlation of personality (including the Big Five) with the scale

(Oreg, 2003). Resistance to change correlated with the personality traits of sensation

seeking ($r = -.48$, $p < .01$), risk aversion ($r = .47$, $p < .01$), and tolerance for ambiguity ($r

= -.42$, $p < .01$), but all correlations were considerably lower than the scale's reliability,

which supported the scale's discriminant validity (Oreg, 2003). Oreg (2003) used the

fourth study to test the correlation between the Resistance to Change Scale and cognitive

ability and no correlation was found between the two, further supporting the scale's

discriminant validity.

Studies 5, 6, and 7 in Oreg's (2003) study series supported the scale's predictive

validity for voluntary change ($\beta = -.42$, $p < .01$), acceptance of innovation ($\beta = -.31$, $p <

.05$), and reactions to imposed change ($\beta = .45$, $p < .01$). Oreg et al. (2008) later tested the

Resistance to Change Scale in 17 countries to determine if the concept of dispositional

resistance has a shared meaning across various cultures. Oreg et al. evaluated the

correlation between the Resistance to Change Scale and Openness to Change values and

Conservation values, which are two individual differences already established as sharing

a cross-cultural meaning. Oreg et al.'s study showed a negative correlation with Openness to Change for all countries (with *r* ranging from -.27 to -.57, *p* < .01) and a positive correlation with Conservation (with *r* ranging from .23 to .58; *p* < .01) for all countries.

Because the Resistance to Change Scale significantly correlated with two related instruments previously validated as cross-cultural, Oreg's study findings indicated that the Resistance to Change Scale also has an equivalent meaning cross-culturally and is reliable and valid for use in the 17 countries evaluated in the study. The Resistance to Change Scale has been extensively used and acknowledged as an appropriate instrument to measure dispositional resistance to change (Dunican & Keaster, 2015). For this reason, I used the Resistance to Change Scale to evaluate the study participants' probability of resisting change in general.

Development of Leader-Member Exchange Theory

The relationship between a superior and member affects several work outcomes and may also contribute to an organization's competitive advantage in relation to human capital. Leader–member exchange theory is a relationship-based approach to evaluating leadership and is used to explain the relationship-building process between a superior and follower. Unlike other traditional leadership theories, leader–member exchange indicates leadership as a process instead of a trait (Maslyn & Uhl-Bien, 2001). The theory is based on the reciprocity between a leader and member and indicates the individual contributions to the relationship and the relationship's quality (Vu, 2014).

Leader–member exchange is underpinned by role-making theory and social exchange theory (Sindhu et al., 2017). Role-making theory indicates that each position or role within an organization is defined by a specific set of activities (van Dyne, Kamdar, & Joireman, 2008) and individuals assume various roles, such as supervisor, leader, or employee, based on contextual circumstances (Katz & Kahn, 1978; Lynch, 2007). Blau's (1964) social exchange theory emphasizes reciprocal behaviors between a superior and follower, which lead to trust and social relationships (Gooty & Yammarino, 2016). The quality of the social relationship depends on the anticipated reciprocal benefits, and an assumption of the theory is that the positive behavior of one member in the relationship will be reciprocated by the other member (Cropanzano & Mitchell, 2005).

The continuous evolution of leader–member exchange has resulted in various constructs, subdimensions, and measurements presenting the need for clear definitions and measurements of leader–member exchange concepts (van Breukelen & Schyns, 2006). The various concepts of leader–member exchange can be traced back to four stages of evolution. Stage 1 was the introduction of vertical dyad linkage theory in which researchers discovered relationships are differentiated between a leader and member (Jha & Jha, 2013). The second stage included the evaluation of the characteristics of the differentiated relationships and the implications for the organization (Hwang et al., 2016). The third stage was based on dyadic partnership building, and the fourth and current stage of leader–member exchange is an aggregate of dyadic relationships to the group and network levels (Olutade, Liefooghe, & Olakunle, 2015).

Stage 1: Vertical dyad linkage. Earlier researchers focused on leadership effectiveness to evaluate the necessary behaviors for a leader to be perceived as a contributor to organizational success (Dinh et al., 2014). This method used by earlier researchers was rooted in trait theory. Although researchers used this method to evaluate the attitudes and traits of superiors, the method was not feasible for researchers to assess the influential power of a follower's personal traits (Goertzen & Fritz, 2004). Trait leadership theory inferred an average leadership style, which culminated from studies at Ohio State and Michigan universities (Graen, Rowold, & Heinitz, 2010). The average leadership style approach indicated superiors share homogeneous relationships with each subordinate and subordinates perceive their superior in the same manner (Henderson, Liden, Glibkowski, & Chaudhry, 2009). Study findings during this first stage of leader–member exchange contradicted the Ohio State and Michigan studies by showing that a superior establishes differentiated (individualized) relationships with each follower to work toward organizational goals (Graen & Uhl-Bien, 1995).

Stage 1 of leader–member exchange was the era in which researchers discovered differentiated dyads based on research regarding the perceptions employees have about their same supervisor. Researchers used the Ohio State and Michigan studies to support the assumption that managers behave in the same manner toward all subordinates and members of a team have the same perception of their supervisor (Henderson et al., 2009). Dansereau et al. (1975) disagreed with the Ohio State and Michigan studies and sought to test the theory of average leadership style through a longitudinal study. The authors assessed the relationships of 60 manager-subordinate dyads by evaluating supervisor and

follower contributions to the dyad exchange. Dansereau et al.'s study findings indicated
85% of the units surveyed contained a combination of in-group (those with high-quality
exchanges/relationships) and out-group (those with low-quality exchanges/relationships)
members. This composition of both in- and out-groups confirmed that managers develop
unique relationships with each direct report. Employees with high-quality exchanges
perceived a higher level of mutual trust, respect, and obligation and experienced a higher
level of job satisfaction than those in lower quality exchanges, resulting in lower turnover
(34% versus 55%; Graen & Uhl-Bien, 1995). Followers in high-quality relationships
functioned beyond their job descriptions, and those in low-quality relationships
performed only the requirements listed in their job description (Zalesny & Graen, 1987).
Dansereau et al. considered the relationship between the superior and follower as vertical
dyad linkage.

Researchers used vertical dyad linkage to establish the supervision and leadership
techniques. The supervision technique indicates the formal employment agreement
between a superior and employee and requires minimal social exchange (Dansereau et al.,
1975). In this relationship style, the employee agrees to fulfill the formal contract of the
position, and, in return, the employee is provided compensation and benefits by the
organization (Dinh et al., 2014). Managers in a higher quality relationship use an
alternative, the leadership technique, to influence a member's behavior and this technique
is grounded on the interpersonal relationship between the leader and follower (Dansereau
et al., 1975). Dansereau et al.'s (1975) study indicated that a superior can establish the

supervision relationship with some members, while simultaneously establishing the leadership relationship with others.

The principle notion of vertical dyad linkage was that managers had resource constraints, which forced them to determine which direct reports were the most beneficial for investment (Graen & Uhl-Bien, 1995). Because managers had limited time and resources, researchers questioned how many high-quality relationships a manager could develop and sustain. The assumption established in the vertical dyad linkage stage was that managers are resourced to have only a few high-quality relationships (Gumusluoglu, Karakitapoglu-Aygun, & Hirst, 2013). Scholars transitioned research on dyadic relationships from vertical dyad linkage to a focus on social exchange theory and the reciprocity process occurring between managers and subordinates (van Dyne et al., 2008).

Stage 2: Leader–member exchange. Researchers expanded the concept of vertical dyad linkage theory and Graen, Novak, and Sommerkamp (1982) renamed it to leader–member exchange theory. Whereas vertical dyad linkage was based on the establishment of differentiated relationships, leader–member exchange indicated the process and characteristics that influence differentiation (Graen & Uhl-Bien, 1995). There were two branches of investigation during this stage. The first branch indicated the physiognomies of the dyadic relationship, including the relationship role-making process; communication frequency and patterns, loyalty, and influence; and antecedents and determinants of leader–member exchange (Cropanzano & Mitchell, 2005). During the second branch, researchers evaluated the correlation between leader–member exchange

and organizational variables, such as job performance, job satisfaction, and turnover

(Goertzen & Fritz, 2004; Graen & Uhl-Bien, 1995). There were two key findings from

Stage 2: the validation of differentiated relationships (Graen & Uhl-Bien, 1995) and the

determination that leader–member exchange quality is related to organizational outcomes

(Tastan & Davoudi, 2015). Stage 2 indicated that the traits and behaviors of leaders and

members influence the development of the dyadic relationship and relationships with

high leader–member exchange quality contribute to effective leadership processes (Jha &

Jha, 2013).

Stage 3: Leadership-making. In Stage 3, researchers introduced the leadership

model, which indicated the benefits of high-quality dyadic relationships and signified a

mechanism for accomplishing these relationships through partnership building (Al-

Shammari & Ebrahim, 2014). This stage extended beyond the identification of low- and

high-level quality relationships and researchers used this phase to determine processes

that assist in developing leaders through building relationships (Goertzen & Fritz, 2004).

The primary focus of this era was how a leader can work with each employee to develop

a unique, personal relationship (Graen & Uhl-Bien, 1995). The findings from Stage 3

indicated the outcome that leader–member exchange can be more equitable and the

equitable approach to relationships increases the potential for more high-quality

relationships, which, in turn, increases leadership effectiveness (Al-Shammari &

Ebrahim, 2014). Researchers of the leadership making model determined that leaders

who accepted training on how to develop high-quality relationships dramatically

improved their performance (Hwang et al., 2016). The overall performance of the unit

also increased because of the increase in the number of high-quality relationships (Graen & Uhl-Bien, 1995). Researchers of the leadership making model supported the importance of producing more high-quality dyads and identified processes on how to generate more of these relationships.

Researchers considered the method for leadership making as a leadership relationship lifecycle. The first phase, stranger phase, of the lifecycle begins when two strangers with individual roles work toward improving working relationships through shared exchanges (Kang & Stewart, 2007). This phase indicates a low-quality leader–member exchange in which influence is unidirectional downward from the leader and formal roles define the relationship (Northouse, 2010). The next phase, acquaintance stage, is based on increased exchanges between a dyad in which some exchanges are social versus contractual (Robert, Dunne, & Iun, 2016).

The acquaintance phase indicates an intermediate leader–member exchange quality in which the leader and follower experience a more expanded relationship, although it is limited. A high-quality leader–member exchange signifies the maturity phase of the leadership relationship lifecycle and members in this final phase have moved beyond individual interests to a focus on shared interests (Setley, Dion, & Miller, 2013). Dyads progress differently through these phases and some relationships may not progress beyond a strictly contractual dyad (Park, Sturman, Vanderpool, & Chan, 2015). The central notion of the third stage of leader–member exchange evolution was that all superiors should be encouraged and trained to develop high-quality relationships with their employees.

Stage 4: Team-making competence network. In the fourth and most recent stage of leader–member exchange evolution, researchers have focused on aggregating the differentiated dyads into larger collections at the group and organizational levels (Al-Shammari & Ebrahim, 2014). Stage 4 expands beyond a specific work unit, and researchers use this phase to focus on developing relationships with multiple work groups throughout the organization and how these relationships impact an employee's collaborations with customers, suppliers, and other stakeholders (Graen & Uhl-Bien, 1995). Henderson, Wayne, Shore, Bommer, and Tetrick (2008) considered the multilevel view of leader–member exchange as the inclusion of the dyadic-level, individual within-team, and team-level concepts. The dyadic-level concept includes leader–member exchange similarity, which is an employee's perception of the similarity between a relationship with the leader and a specific coworker's relationship with the same leader (Tse et al., 2013; Zagenczyk, Purvis, Shoss, Scott, & Cruz, 2015).

The individual within-team level concept is an employee's comparison of a relationship with the supervisor and the supervisor's relationship with all other team members (Paik, 2016). Individual within-team relationships are measured either subjectively by employee perceptions (Baker & Omilion-Hodges, 2013) or objectively from relative leader–member exchange scores (Hu & Liden, 2013). A relative leader–member exchange score is the difference between a person's leader–member exchange score and the average leader–member exchange score for the working group (Paik, 2016). The team-level concept indicates the variance in the quality of a supervisor's relationship

with various team members and is referenced as leader–member exchange differentiation (Paik, 2016).

Stage 4 of leader–member exchange evolution is an aggregate of the productivity of individual employees to performance at the organizational level (Tariq, Mumtaz, Ahmad, & Waheed, 2014). May-Chiun, Mohamad, Chai, and Ramayah (2015) defined organizational performance as the capacity to achieve the needs of stakeholders while remaining competitive in the market. Tariq et al. (2014) evaluated the correlation between leader–member exchange and organizational performance and found a significant positive relationship between these two variables ($\beta = .695$, $p < .001$). Tariq et al. considered high-quality leader–member exchange dyads as a catalyst for employee commitment, which improves organizational performance and increases organizational competitiveness. The primary notion of the current stage of leader–member exchange is that the evaluation of leader–member exchange at the individual level is no longer sufficient and research on dyads must extend outward, crossing organizational borders.

Leader-Member Exchange Constructs and Measurements

Constructs. Researchers have argued on whether leader–member exchange is unidimensional or multidimensional. Dienesch and Liden (1986) considered leader–member exchange as multidimensional and comprised of the contribution, loyalty, and affect dimensions, but Graen and Scandura (1987) deemed the dimensions of leader–member exchange as trust, respect, openness, and honesty. Liden and Maslyn (1998) also regarded leader–member exchange as multidimensional, with the dimensions of affect, loyalty, contribution, and professional respect. Graen and Uhl-Bien (1995) noted other

researchers evaluated the dimensionality of leader–member-exchange and the single dimension was the most consistent across the studies, with the Cronbach's alpha for the single dimension ranging from .80 to .90. Graen and Uhl-Bien found leader–member exchange has multiple dimensions but considered little information is gained from using multiple measures because the dimensions are so highly correlated. Graen and Uhl-Bien considered the characteristics of dyadic relationships as respect, trust, and obligation, which are parallel to the stages of relationship building. In this study, I adopted Graen and Uhl-Bien's construct, which is evaluated through the LMX-7 instrument.

Leader–member exchange measurements. The numerous constructs of leader–member exchange and the evolution of leader–member exchange theory have contributed to a variety of instruments. The most common instruments for measuring leader–member exchange are the LMX-7 and LMX-MDM. Joseph, Newman, and Sin (2011) found an extremely high correlation ($r = .90$) between the LMX-7 and the LMX-MDM and considered the two instruments as simply alternative forms of the same measurement.

LMX-7. The LMX-7 is a unidimensional instrument developed by Graen, Novak, and Sommerkamp (1982) and is used to evaluate the level of respect, trust, and obligation reciprocated in a dyadic relationship. The scale evolved from Dansereau et al.'s (1975) 2-item scale, which has been used as a 4-item (Graen & Schiemann, 1978), 5-item (Graen, Liden, & Hoel, 1982), and 6-item (Schriesheim, Neider, Scandura, & Tepper, 1992) scale. The scale has also been used as a 10-item, 12-item, and 16-item scale, but Graen and Uhl-Bien (1995) stated the additional items in the expanded measures were highly correlated and had the same effects as the 7-item scale.

In an empirical article on vertical dyad linkage theory, Dansereau et al. (1975) tested negotiating latitude on 60 managers in the housing division of a large public university. The university had recently undergone a reorganization, which produced 90% new vertical dyads within the unit. Dansereau et al. administered a survey of two questions (LMX-2) and collected data during four intervals in a 9-month academic year. Each of the questions had four unique available responses. The correlations between the two questions were .62, .71, .66, and .72 for the initial, 4-month, 7-month, and 9-month time periods, respectively ($p < .001$ for all correlations). Results of the longitudinal study indicated the degree of latitude granted to a subordinate by the supervisor was predicted by the behavior of each member in the dyad (Dansereau et al., 1975).

The LMX-4 was developed by Graen and Schiemann (1978) by adding two additional questions to the LMX-2. The LMX-4 was administered to 109 managerial dyads in 3-month intervals at three different times (Graen & Schiemann, 1978). Each of the scale's four questions had a unique set of four available responses and the reliability coefficient estimate based on test-retest correlations was .96 (Graen & Schiemann, 1978). In a longitudinal study, Liden and Graen (1980) administered the same test to 41 dyads in service departments at a medium-sized public university to also test negotiating latitude. The correlation of scores from the initial period and a 3-month period for followers was .75 and the correlation of scores for superiors was .72. Graen, Liden, and Hoel (1982) added one additional question to the LMX-4 to test the LMX-5. Their study included data from 48 participants at a large midwestern public utility company collected at an initial period and then 1 year later. The five questions had four available responses specific to

each question, resulting in a total ranging from 5 to 20. The Cronbach's coefficient alpha for the LMX-5 was .80.

The LMX-7 was created by Graen, Novak, and Sommerkamp (1982) by adding two additional questions to the LMX-5. The authors used the LMX-7 to survey 132 participants at a large government organization in the Midwest at an initial time and then 26 weeks later after supervisor training on relationship building (Graen et al., 1982). The Cronbach's alpha of the LMX-7 scale for employee ratings was .86 at the initial stage and .84 after the supervisor training. The LMX-7 consists of seven items on a 5-point Likert scale with varying responses to each question ranging from 1 (left) to 5 (right; Graen et al., 1982). Responses on the left, such as *rarely*, *not at all*, and *none*, indicate a low-quality dyadic relationship. Responses on the right, such as *very often*, *fully*, and *very high*, indicate a high-quality dyadic relationship.

The total score on the LMX-7 ranges from 7 to 35. A score of 30 to 35 is considered a very high-quality leader–member exchange relationship and scores that range between 25 to 29, 20 to 24, 15 to 19, and 7 to 14 are considered high, moderate, low, and very low, respectively (Stringer, 2006). The LMX-7 is used to evaluate the level of respect, trust, and obligation reciprocated in a dyadic relationship (Graen & Uhl-Bien, 1995). In earlier studies, the Cronbach's alpha for the single construct of the LMX-7 scale ranged from .80 to .90 (Fisher, Strider, & Kelso, 2016). Subsequent studies have confirmed a comparable construct validity of the LMX-7 (Chan & Yeung, 2016; Herdman, Yang, & Arthur, 2017; Mariani, Curcuruto, Matic, Sciacovelli, & Toderi, 2017).

After researchers validated the LMX-7, Schriesheim et al. (1992) developed and tested the LMX-6. These researchers based the LMX-6 on Dienesch and Liden's (1986) recommended dimensions of perceived contribution to exchange, loyalty, and affect. Although the questions included in the LMX-6 deviated from those in the LMX-7 and earlier versions, the correlation between the LMX-6 and LMX-7 was moderately high (r = .82, p < .001). However, the alpha reliability estimates were higher for the LMX-7 (.93 as opposed to .81 for the LMX-6; Schriesheim et al., 1992). The LMX-7 instrument, along with its variations, has been used to measure leader–member exchange in 85% of related studies since 1999 (Hunt, 2014).

LMX-MDM. The LMX-MDM is a multidimensional scale measuring affect, loyalty, contribution, and professional respect (Peterson & Aikens, 2017). Liden and Maslyn (1998) questioned the unidimensional construct of leader–member exchange and sought to evaluate a multidimensional construct and measure. Their review of the literature on leader–member exchange indicated an initial 80 items for the multidimensional scale, and the items focused on the dimensions of contribution, affect, and loyalty. Liden and Maslyn conducted interviews with 24 advanced degree students, which resulted in the additional dimensions of trust and professional respect and an increase of items from 80 to 120. A group of faculty and PhD students validated the items and the scale was narrowed down to 31 items under the dimensions of affect, loyalty, contribution, and professional respect.

Responses for the LMX-MDM were based on a 7-point Likert scale with responses ranging from 1 (*strongly disagree*) to 7 (*strongly agree*; Liden & Maslyn,

1998). Liden and Maslyn (1998) conducted item analysis with 302 samples from working students and evaluated validity with 251 samples from employees from organizations in the hospitality and heavy equipment manufacturing industries. Test-retest was used to assess variability and stability, and exploratory factor analysis was used to determine the fit of the 31 items with the proposed construct. The final scale consisted of 11 items and accounted for 79.4% of the variance in the model. Latent variable reliability scores for affect, loyalty, contribution, and professional respect were .90, .78, .59, and .89, respectively.

Liden and Maslyn (1998) determined the results of their empirical study validated the multidimensional construct of leader–member exchange. Interestingly, the total score of the LMX-MDM scale had a correlation of .84 with the LMX-7 scale in Liden and Maslyn's study. Some researchers have argued that the multidimensional construct of leader–member exchange shows an increased understanding of how dyadic relationships develop (Salvaggio & Kent, 2016), but Martin et al. (2016) found little variance between the LMX-7 and the LMX-MDM when using leader–member exchange instrument-type as a moderator in their study. Graen and Uhl-Bien (1995) considered leader–member exchange as one higher order factor and Martin et al. stated most researchers tend to use the single score to measure leader–member exchange. Because the 12 questions on the LMX-MDM offer no incremental value beyond the seven questions on the LMX-7, I used the LMX-7 in this study to measure the quality of dyadic relationships as recommended by Graen and Uhl-Bien.

History of Emotional Intelligence

Emotional intelligence is the ability to accurately reason with emotions and improve thought through the use of emotions and emotional awareness (Allen, Weissman, Hellwig, MacCann, & Roberts, 2014). The distal roots of emotional intelligence began with Thorndike's (1920) concept of social intelligence, which the author referred to as the ability to understand and appropriately manage relationships. Until the 1940s, scholars abandoned research on social intelligence due to the lack of construct validity and a consistent measurement (Killian, 2012). Wechsler (1943, 1950), who was mentored by Thorndike, supported the concept of social intelligence and is best known for cognitive intelligence tests and the view that nonintellective factors contribute to general intelligence. Wechsler included subscales parallel to the aspects of social intelligence in cognitive intelligence tests (Kaufman & Kaufman, 2001) and later expanded a model of intelligence to include attributes of emotional intelligence (Killian, 2012).

Like Wechsler, Gardner (1983) also questioned intelligence being a unitary concept and offered that multiple, unique intelligences exist. Gardner suggested people have several aptitudes, including interpersonal and intrapersonal skills. Interpersonal intelligence is considered an individual's ability to identify the objectives, goals, and needs of others in order to facilitate effective interaction and collaboration (Petrovici & Dobrescu, 2014). Intrapersonal intelligence is the ability of an individual to assess their own needs, emotions, and abilities and to use this information to manage their life (Weinzimmer, Baumann, Gullifor, & Koubova, 2017). Although Gardner did not use the

term *emotional intelligence* in research, Gardner's concept of interpersonal and intrapersonal intelligences provided the foundation for emotional intelligence theory (Suifan, Abdallah, & Sweis, 2015).

Payne (1985) originally used the term *emotional intelligence* in a dissertation, but Mayer, DiPaolo, and Salovey (1990) and Salovey and Mayer (1990) were the first to publish the empirical definition of emotional intelligence, along with a theory and measure. Subsequently, Goleman (1995) is recognized for bringing prominence to emotional intelligence by capturing public curiosity with the statement that emotional intelligence predicts job performance and life success more than cognitive intelligence (Ybarra, Kross, & Sanchez-Burks, 2014). Joseph et al. (2015) recognized multiple emotional intelligence models and theories have evolved since the early 1990s, which focus on emotional intelligence as an ability, trait, or combination of the two. Although several emotional intelligence models exist, researchers consider the four primary models as the Mayer-Salovey model, the Goleman model, the Bar-On model, and Petrides's model, with each having multiple applicable instruments (Ackley, 2016; Cherniss, 2010).

The Mayer-Salovey and Petrides models are identified as the ability and trait models, respectively (Nagler, Reiter, Furtner, & Rauthmann, 2014). The Goleman and Bar-On models are considered mixed models (McCleskey, 2014). The ability model indicates a form of intelligence that is an intersection of emotion and cognition (Lopes, 2016) and indicates the cognitive ability to perceive, express, and manage emotions (Cabello et al., 2016). Herpetz et al. (2016) stated the mixed model of emotional intelligence is a combination of mental skills, personality attributes, and individual

dispositions, while the trait model is a blend of the self-perceived capacity of managing emotions with individual dispositions such as happiness.

Emotional Intelligence Models

Mayer-Salovey. The Mayer-Salovey model of emotional intelligence (also called the ability model) is the only one of the four primary models specifically based on ability and signifies a distinction between intelligence and personality/behavior (Mayer, Caruso, & Salovey, 2016). Salovey and Mayer (1990) first introduced emotional intelligence as a three-branch model, which included the areas of appraising emotions, regulating emotions, and utilizing emotions. Mayer and Salovey (1997) later expanded the concept into a four-branch model comprised of perceiving emotions, facilitating thought, understanding emotions, and managing emotions. Mayer and Salovey collaborated with Caruso to define emotional intelligence as the ability of an individual to comprehend and convey emotion, incorporate emotions in problem-solving, appreciate and rationalize with emotion, and evaluate their own emotions and the emotions expressed by others (Mayer, Salovey, & Caruso, 2000a).

The four branches of the ability model are arranged hierarchically, with perceiving emotions being the most basic psychological skill, facilitating thought and understanding emotions being moderate skills, and managing emotions being a more psychologically integrated and complex skill (Jauk, Freudenthaler, & Neubauer, 2016). Perceiving emotions is the ability to interpret the emotions of others by evaluating their facial and postural expressions (Hooker et al., 2013). Facilitating thought is the ability to determine when to include or exclude emotions in the thought process when problem-

solving (Parke, Seo, & Sherf, 2015). Fiori et al. (2014) stated understanding emotions is the ability to evaluate emotions and recognize how they develop and change during specific interactions. Managing emotions indicates the capacity to regulate the emotions of oneself and others to effectively achieve the goals of all individuals in a situation (Schutte, Malouff, & Thorsteinsson, 2013). Mayer, Salovey, and Caruso (2004) agreed with Goleman's (2004) statement that emotional intelligence progresses with age and further believed emotional intelligence skills could be developed through training and experience. The Mayer-Salovey ability-based model is the most widely accepted model and definition of the emotional intelligence concept (Allen et al., 2014; McCleskey, 2014).

> **Goleman's model.** Goleman (1995) brought popularity to emotional intelligence with the claim that emotional intelligence predicts job performance and life success better than cognitive intelligence (Vidyarthi, Anand, & Liden, 2014). Goleman (2005) later stated this original claim was misunderstood and the idea that emotional intelligence is more powerful than IQ is unrealistic. Goleman (1995) considered an emotionally intelligent individual as a person who is self-disciplined, passionate, and able to encourage themselves and others. Goleman's (1998) earlier mixed model of emotional intelligence included the five dimensions of self-awareness, self-regulation, motivation, empathy, and social skills, which were further defined by 25 competencies. Boyatzis, Goleman, and Rhee (2000) refined the construct and the current model comprises four domains, including self-awareness, self-management, social awareness, and relationship management, and 20 competencies (Mishar & Bangun, 2014).

The self-awareness dimension of Goleman's (2001) model includes the emotional self-awareness, accurate self-assessment, and self-confidence competencies. Butler, Kwantes, and Boglarsky (2014) defined self-awareness as an individual's capacity to recognize their own challenges and abilities and to reconcile their own emotions. Goleman's self-management dimension includes the competencies of self-control, trustworthiness, conscientiousness, adaptability, achievement drive, and initiative. Giorgi (2013) considered self-management as an individual's ability to control and regulate their emotions, and Hess and Bacigalupo (2014) deemed it one of the most critical emotional intelligence skills.

Social awareness comprises empathy, service orientation, and organizational awareness. Individuals with strong social awareness skills are more able to understand how to effectively react in various social situations (Karimi, Leggat, Donohue, Farrell, & Couper, 2014). Goleman's relationship management dimension includes the competencies of developing others, influence, communication, conflict management, leadership, change catalyst, building bonds, and team and collaboration. Obradovic, Jovanovic, Petrovic, Mihic, and Mitrovic (2013) considered relationship management the ability to effectively communicate, inspire, and reassure others, which leads to building respect and trust.

Bar-On. Bar-On (1997) defined emotional intelligence as a combination of skills and cognitive abilities used to successfully manage the challenges of the environment. Bar-On operationalized this mixed model of emotional and social intelligence through the creation of the Emotional Quotient Inventory and stated the mixed model is an

intersection of emotional and social noncognitive capabilities and skills. Bar-On's

original model included the four facets of intrapersonal, interpersonal, stress

management, and adaptability. Bar-On revised the model to five factors, which included

the additional element of general mood and 15 subscales.

The intrapersonal factor signifies an individual's personal skills and its subscales

include self-regard, emotional self-awareness, assertiveness, independence, and self-

actualization (Nafukho, Muyia, Farnia, Kacirek, & Lynham, 2016). Interpersonal skills

indicate a person's capacity to interact with others and this factor's subscales include

empathy, social responsibility, and interpersonal relationships (Rastogi, Kewalramani, &

Agrawal, 2015). Webb et al. (2013) stated the stress management factor is the ability to

tolerate and control stress during demanding situations and includes the subscales of

stress tolerance and impulse control. The adaptability factor includes reality testing,

flexibility, and problem-solving and entails the capacity to understand reality and adjust

to new circumstances (Dippenaar & Schaap, 2017). General mood indicates the

capability to be positive and content and includes the subscales of happiness and

optimism (Webb et al., 2013).

Petrides. Mayer et al. (2000a) classified the models of emotional intelligence as

either an ability or mixed model, with a model being ability if it is measured by a

performance test and mixed if it is measured through a self-report instrument. Petrides

and Furnham (2000b) disagreed with how Mayer et al. classified emotional intelligence

and proposed a distinction between ability emotional intelligence and trait emotional

intelligence in which the ability concept relates to cognitive function and the trait concept

relates to the personality realm. Petrides (2011) expressed concerns with the ability

model of emotional intelligence and believed emotional experiences are subjective,

which challenges the goal of maximum-performance tests. Petrides and Furnham (2000a,

2000b) considered the trait model of emotional intelligence as a collection of self-

perceived emotions that correlate with basic personality factors and behavioral

dispositions evaluated through a self-report instrument. Trait emotional intelligence is

exclusive from cognitive or mental abilities, and Petrides (2010) deemed it a separate

concept from ability and mixed models because they both include some aspects of

cognitive abilities.

      After a review of the literature on trait emotional intelligence models, Petrides

and Furnham (2001) identified 15 potential facets of trait emotional intelligence. Petrides

and Furnham (2001) confirmed trait emotional intelligence sits at the lower level of

established personality taxonomies and suggested further research on the high-order level

of trait emotional intelligence, with the creation of a full-scale trait instrument. In a

subsequent set of two studies, Petrides and Furnham (2003) developed the Trait

Emotional Intelligence Questionnaire (TEIQue) based on the previously identified facets

of trait emotional intelligence. The TEIQue measurement included 15 facets, with 144

items based on a 7-point Likert scale, and had an internal consistency of .86 (Petrides &

Furnham, 2003). The most recent version of the TEIQue consists of 153 items and 15

facets categorized by the four domains of well-being, self-control, sociability, and

emotionality (Siegling, Furnham, & Petrides, 2015). Petrides's (2010) model is usually

referenced as the trait emotional intelligence model and is the latest of the four models.

Emotional Intelligence Instruments

Emotional intelligence is measured through a variety of instruments. Webb et al. (2013) stated the diversity of emotional intelligence theories is evident in the vast selection of available tools created to assess the various models. Among the various methods for testing emotional intelligence, four primary instruments dominate the selection: the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT, Version 2.0; Mayer et al., 2002), the Emotional and Social Competency Inventory (Boyatzis, 2007), the Emotional Quotient Inventory (Bar-On, 1997), and the TEIQue (Petrides, 2009).

Mayer-Salovey-Caruso Emotional Intelligence Test. Mayer, Caruso, and Salovey (1999) stated an intelligence must meet three standard criteria to be considered valid. The intelligence should be a measurable set of abilities and the defined abilities of the intelligence should correlate with other existing intelligences yet show some exclusive variance. Additionally, the defined abilities should progress with age and practice. Mayer et al. considered emotional intelligence an ability that should be measured by a performance test as opposed to a self-report instrument. Mayer et al. sought to validate their ability emotional intelligence model as meeting the above three criteria through the development of a performance test, the Multifactor Emotional Intelligence Scale. The Multifactor Emotional Intelligence Scale, which included the four clusters of perceiving, assimilating, understanding, and managing emotions, consisted of 12 tasks containing 127 items (Mayer et al., 1999).

Mayer et al. (1999) administered a survey to 503 adults and the survey employed consensus, expert, and target scoring, with Mayer and Caruso serving as the experts. The

consensus and expert scores highly intercorrelated with the four clusters ranging from $r =$ .61 to .80 ($p < .001$ for all correlations), and the authors determined the Multifactor Emotional Intelligence Scale satisfied the first criterion of meeting an intelligence because the abilities were measurable. Factorial analysis produced a three-factor model with the perception, understanding, and management clusters. The Multifactor Emotional Intelligence Scale had a Cronbach's alpha of .96 for reliability and its correlation with verbal intelligence measures was $r = .36$ ($p < .01$), showing moderate correlation with a previously established intelligence (second criterion). In a second study, Mayer et al. compared the Multifactor Emotional Intelligence Scale scores of the 503 adults with that of 229 adolescents to validate the third criterion that emotional intelligence progresses with age and experience. Mayer et al.'s study showed that adults had higher emotional intelligence ability scores than adolescents, thereby confirming that emotional intelligence meets all three criteria to be considered a valid intelligence.

After subsequent research in the field of emotional intelligence, the Multifactor Emotional Intelligence Scale was revised to the first version of the MSCEIT (Mayer, Salovey, and Caruso 2000b). The most recent version of the MSCEIT comprises the four clusters of perceiving emotion accurately, using emotion to facilitate thought, understanding emotion, and managing emotion, with eight specific tasks that include 141 items (Mayer et al., 2002). In the revised version of the MSCEIT, 21 experts participated in the expert scoring as opposed to the two in the Multifactor Emotional Intelligence Scale (Mayer, Salovey, Caruso, & Sitarenios, 2003). Scores for the MSCEIT can be evaluated at the total score, four-branch, and eight task levels. Mayer et al. (2003) tested

the MSCEIT with 2,112 adults and reliability scores for the four branches ranged from

r(2004-2028) = .76 to .91. Task scores ranged from a Cronbach's alpha of r(2004-2111)

= .55 to .88 and total score reliability was r(1985) = .91 based on the expert scoring

responses (Mayer et al., 2003). The MSCEIT is the most widely known and used measure

of ability emotional intelligence (Fallon et al., 2014; Fiori et al., 2014).

Emotional and Social Competency Inventory. The Emotional and Social

Competency Inventory is the successor to Goleman and Boyatzis's original emotional

intelligence measure, the Emotional Competence Inventory (Boyatzis et al., 2000; Segon

& Booth, 2015). Boyatzis et al. (2000) integrated previous works of Goleman and

Boyatzis to develop the first measurement operationalizing Goleman's (1998) model of

emotional intelligence, which comprised five clusters and 25 competencies. After

collecting data from Emotional Competence Inventory scores on 596 study participants,

Boyatzis et al. revised the instrument to include the three clusters of self-awareness, self-

management, and social awareness, along with 19 competencies. In collaboration with

HayGroup, Boyatzis (2007) reviewed the clusters and questions from the Emotional

Competence Inventory and reduced the competencies from 19 to 12. Boyatzis conducted

a pilot study on 116 participants and 1,022 raters, which yielded a new cluster,

relationship management, in addition to the three original clusters (self-awareness, self-

management, and social awareness). Boyatzis and collaborators named the expanded

scale the Emotional and Social Competency Inventory because the revised model

included the additional component of social intelligence. Responses for the Emotional

and Social Competency Inventory are based on a 5-point Likert scale ranging from 1

(*never*) to 5 (*consistently*; Vidic, Burton, South, Pickering, & Start, 2016). The reliability

scores of the Emotional and Social Competency Inventory were comparable to the

Emotional Competence Inventory, with Cronbach's alpha ranging from .74 to .87 for the

12 competencies (Boyatzis, 2007).

Emotional Quotient Inventory. Bar-On (1997) operationalized the mixed model

of emotional intelligence through the creation of the Emotional Quotient Inventory, a

self-report measure of emotional and social behavior. The Emotional Quotient Inventory

comprises the five composite scales of intrapersonal emotional quotient (EQ),

interpersonal EQ, stress management EQ, adaptability EQ, and general mood EQ and

includes 15 subscales, with 133 items (Bar-On, 2006). Responses are based on a 5-point

Likert scale ranging from *very seldom or not true of me* to *very often true of me or true of*

me and are evaluated as a total EQ score, a five-composite score, or a 15-subscale score

(Bar-On, Tranel, Denburg, & Bechara, 2003). The Emotional Quotient Inventory has an

overall internal consistency score of .97 and a test-retest reliability of .72 for males and

.80 for females (Bar-On, 2006).

The Emotional Quotient Inventory has built-in factors that adjust the scores based

on scores from the validity indices of positive impression and negative impression (Bar-

On, 2006). This automatic adjustment increases the accuracy of the results and reduces

potential response bias, which may occur with self-response measures (Bar-On, 2006).

Bar-On (2006) stated the development of the Emotional Quotient Inventory was the result

of numerous studies over a 17-year period and researchers used the measurement in 20

predictive studies, with 22,971 people from seven countries. The findings of the 20

predictive studies showed a relationship between Emotional Quotient Inventory scores and physical health, psychological health, social interaction, workplace performance, and well-being (Bar-On, 2006). The Emotional Quotient Inventory is available in over 30 languages (Bar-On, 2006) and Webb et al. (2013) stated the instrument is the most widely used self-report measure of emotional intelligence.

Trait Emotional Intelligence Questionnaire. Petrides and Furnham (2003) developed the TEIQue based on previously identified facets of emotional intelligence. The original TEIQue measurement included 15 facets, with 144 items using a 7-point Likert scale, and had an internal consistency of .86 (Petrides & Furnham, 2003). Petrides and colleagues later expanded the TEIQue to the current version, which includes 153 items, with scores available on the 15-facet, four-factor, and global levels. The four factors comprise emotionality, self-control, sociability, and well-being and the internal reliability scores range from .75 to .83 for females and .78 to .84 for males (Petrides, 2009). The internal reliability for the TEIQue's global trait emotional intelligence score is .89 for females and .92 for males (Petrides, 2009). The TEIQue is also available in a 30-item short form (TEIQue-SF), which contains two items from each of the 15 facets and has been translated into over 15 languages (Petrides, 2009).

Petrides (2011) deemed it necessary to measure trait emotional intelligence through the TEIQue because, unlike some other self-report measures, this instrument is based on a purportedly solid, theoretical framework that is used for the measurement of emotional intelligence as a trait as opposed to an ability. Andrei, Siegling, Aloe, Baldaro, and Petrides (2016) recognized the criticism of trait emotional intelligence and performed

a meta-analysis to determine the TEIQue's incremental validity. Andrei et al. reviewed 24 articles that showed 114 incremental validity analyses of the TEIQue and determined the instrument has incremental variance beyond personality dimensions and other emotion-related attributes (Andrei et al., 2016). Although the TEIQue and Bar-On's Emotional Quotient Inventory correlated at .72, Di Fabio and Saklofske (2014) found the TEIQue predicted the three factors of career decision-making self-efficacy, career indecision, and career indecisiveness almost twice as much as the Emotional Quotient Inventory.

Assessing Emotions Scale. Schutte et al. (1998) took a positive approach to the varying concepts of emotional intelligence. The authors stated the different models operationalize distinct perspectives of emotional intelligence but the models do not contradict each other. Schutte et al. believed there was a need for a brief, validated measure of emotional intelligence that should be based on a comprehensive theoretical model and used Salovey and Mayer's (1990) three-branch emotional intelligence model as the theoretical foundation for their instrument. Schutte et al. acknowledged Mayer and Salovey (1997) expanded their original three-branch model to four branches that focus more on the cognitive aspect of emotional intelligence. However, Schutte et al. determined the original model was a better concept of an individual's current status of emotional development and appropriately integrated the majority of dimensions from other emotional intelligence models.

Schutte et al. (1998) produced a group of 62 items based on Salovey and Mayer's (1990) three factors of appraisal and expression of emotion, regulation of emotion, and

utilization of emotion. The researchers administered the survey to 346 participants and

responses were based on a 5-point Likert scale with responses ranging from 1 (*strongly*

disagree) to 5 (*strongly agree*; Schutte et al., 1998). After factor analysis of the

responses, the scale was reduced to a set of 33 items, with a Cronbach's alpha of .90 and

a 2-week test-retest reliability of .78 (Schutte et al., 1998). Schutte et al.'s scale was

unnamed in its empirical article, which led to the scale being referenced as the Self-

Report Emotional Intelligence Test (Ybarra et al., 2014), Schutte Emotional Intelligence

Scale (Schutte et al., 2009), and the Emotional Intelligence Scale (Zhoc, Li, & Webster,

2017), among other names. Ten years after its introduction, Schutte et al. (2009) named

the instrument the Assessing Emotions Scale. The Assessing Emotions Scale is a self-

report questionnaire, which takes an average of 5 minutes for respondents to rate

themselves (Schutte et al., 2009). Scores range from 33 to 165 and higher scores reflect

more characteristic emotional intelligence. Schutte et al. (1998) recommended using the

total score for the scale, although some have argued for subfactors (Petrides & Furnham,

2000b).

The Assessing Emotions Scale is based on ability emotional intelligence, but

Schutte et al. (2009) agreed that a pure ability model of emotional intelligence can be

measured only through a maximum-performance test. Schutte et al. considered the

Assessing Emotions Scale as a measurement for trait emotional intelligence because

evaluating emotional intelligence through a self-report instrument can measure only an

individual's perception of how they demonstrate the emotional intelligence trait in daily

life and not the actual ability (Schutte et al., 2009). Petrides and Furnham (2000a)

cautioned that self-report measures of emotional intelligence can produce bias because an individual's self-perception of their emotional intelligence level may differ from their actual ability. Schutte et al. agreed that self-report measures of emotional intelligence are vulnerable to biases in that respondents may score the items according to what they perceive as socially desirable answers. However, Schutte et al.'s study showed that when participants were allowed to respond confidentially, inclinations toward normative responding did not seem to affect scores on the Assessing Emotions Scale (Schutte et al., 2009). Kirk, Schutte, and Hine (2008) observed no correlation between participant scores on the Assessing Emotions Scale and the Marlowe-Crowne Social Desirability Scale. Siegling et al. (2015) stated the Assessing Emotions Scale is one of the most widely used measures of emotional intelligence and its attractiveness is due to it being a brief self-report instrument, with good psychometric properties, that is available at no cost to researchers. Based on the above reasons, I used the Assessing Emotions Scales in this study to measure the emotional intelligence of study participants.

Influence of Leader-Member Exchange on Resistance to Change

Some researchers have argued that contextual factors are the primary antecedents to resistance to change. Researchers have evaluated the relationship between resistance to change and numerous contextual factors, including employee engagement (Appelbaum et al., 2017b), participation (Garcia-Cabrera & Hernandez, 2014), communication (Belias & Koustelios, 2014; McKay et al., 2013), change history (Bordia et al., 2011), leadership style (Hon et al., 2014; Nging & Yazdanifard, 2015), perceived organizational support (Turgut et al., 2016), and leader–member exchange (Hwang et al., 2016; Peterson &

Aikens, 2017; Xerri et al., 2015). Empirical research indicated social factors, such as dyadic relationships, contribute to change attitudes and research in this area has developed exponentially over the past decade. Extending the empirical research on leader–member exchange and resistance to change, Hwang et al. (2016) proposed employees who perceive higher quality relationships with their supervisors are less likely to resist change.

Statistically significant relationships between leader–member exchange and change exist in findings from several studies. Arif et al. (2017) surveyed 185 employees to evaluate the mediating role of organizational culture on the relationship between leader–member exchange and organizational change management (readiness for change). The LMX-7 had a Cronbach's alpha of .731 and was used to measure leader–member exchange. The Reaction to Change Inventory (Zamor, 1998) was used to measure change management based on a participant's perception of change in general. Hofstede, Neuijen, Ohayv, and Sanders's (1990) scale was used to measure organizational culture. Cronbach's alpha for Zamor and Hofstede et al.'s instruments were .765 and .672, respectively (Arif et al., 2017). Arif et al.'s study indicated a significant positive relationship between leader–member exchange and the mediating variable, organizational culture ($r = .162$, $p = .05$), and leader–member exchange and the dependent variable, organizational change ($r = .194$, $p = .01$). The combination of leader–member exchange and organizational culture accounted for 23.6% of the variance ($p = .006$) in change management in their model. These findings indicated that dyadic relationships with

higher quality exchanges have a more favorable impact on organizational culture, which in turn has a positive influence on perceptions of change.

In a study using variables similar to those used by Arif et al. (2017), Sindhu et al. (2017) employed a moderating model instead of a mediating model. Whereas Arif et al. evaluated the relationship between leader–member exchange and change with a mediating variable (organizational culture), Sindhu et al. evaluated the relationship between leader–member exchange and organizational culture, with change as the moderating variable. Sindhu et al. used the same sample size (185 participants) and instruments as Arif et al. to measure leader–member exchange (LMX-7) and change (Reaction to Change Inventory). Niehoff and Moorman's (1993) scale was used to measure organizational culture. Study findings indicated a significant positive relationship between leader–member exchange and organizational change ($r = .33$, $p < .01$) and leader–member exchange and organizational culture ($r = .24$, $p < .01$; Sindhu et al., 2017). Multiple regression analysis showed that the moderating model accounted for 33.5% ($p < .05$) variation in organizational culture and that change moderated the relationship between leader–member exchange and organizational culture (Sindhu et al., 2017). These findings indicated that higher quality dyadic relationships influence perceived organizational culture and perceived organizational culture can be increased through effective change management.

Similar to Arif et al. (2017) and Sindhu et al.'s (2017) models, Georgalis et al. (2015) conceptualized a model that could be used to evaluate the mediating role of organizational justice on the relationship between change process characteristics (leader–

member exchange) and resistance to change. Georgalis et al. distributed a survey to 288

employees in an Australian workplace that incorporated questions from several

instruments, including the LMX-7 scale used to measure leader–member exchange and

the Resistance to Change Scale used to measure resistance to change. The Cronbach's

alpha for the two instruments was .87 and .93, respectively (Georgalis et al., 2015).

Although linear regression showed a statistically significant correlation between leader–

member exchange and resistance to change ($\beta = -.28$, $p < .01$), multiple mediated

regression revealed informational justice fully mediated this relationship (Georgalis et al.,

2015). These findings indicated that employees with high-quality leader–member

exchange perceive they are receiving appropriate information regarding the change, and,

in turn, this higher perception of informational justice minimizes resistance to change.

To further explore the relationship between dyadic relationships and change

attitudes, Mehta (2016) posited leader–member exchange will impact responses to

change and these responses will influence turnover intentions and performance. Mehta's

mediating model indicated the likelihood that employees in high-quality dyadic

relationships are generally more informed of the change process and this perceived

informational justice positively influences change responses. Parallel to Mehta's study,

Shamsudin, Radzi, and Othman (2016) recognized the impact of dyadic relationships on

reactions to change and stated employees in low-quality relationships perceive the

manager as dictatorial and domineering. Because of this perception of low support,

employees in low-quality relationships are less able to cope with change (Shamsudin et

al., 2016).

There have been some study findings that did not show a significant relationship between leader–member exchange and change attitudes. Xerri et al. (2015) surveyed 225 employees in an Australian asset management firm, and study findings did not show a statically significant relationship between leader–member exchange and attitudes toward change, although findings did show a statistically significant relationship between perceived organizational support and reaction to change ($\beta = .576$, $p < .01$). Xerri et al. conceded that employees in this study perceived relationships with the organization were more critical during change implementation than relationships with their direct supervisors. Xerri et al.'s rationale for the lack of importance of leader–member exchange in the study was that employees believed their supervisors were just as disempowered as the employees, and the investment in the dyadic relationship with their supervisor provided no value as far as receiving additional information or communication about the change. Even though the relationship between leader–member exchange and change reactions was insignificant, Xerri et al. indicated the importance of understanding how dyadic relationships influence reactions to change.

Parallel to Xerri et al.'s (2015) study, Ferreira, Cardoso, and Braun (2018) evaluated the relationship between organizational support and resistance to change in which organizational support represented an employee's perceived supervisory support. The sample population included 323 Portuguese employees recruited through LinkedIn and employed in the public and private sectors. Ferreira et al.'s study showed a significant relationship between supervisory support and behavioral resistance to change ($\beta = -.096$, $p < .10$). Ferreira et al. acknowledged the low coefficient for the relationship

between supervisory support and behavioral resistance to change but conceded that the study indicated supervisory support is relative to dyadic relationships. Ferreira et al. recommended future research to include mediator variables, leader–member exchange, and individual factor variables.

Influence of Emotional Intelligence on Resistance to Change

As opposed to contextual factors, some researchers have argued that individual factors are the primary antecedents to resistance to change. Researchers have evaluated the relationship between resistance to change and individual factors, such as personality (Sasikala & Anthonyraj, 2015), psychological capital (Malik & Masood, 2015), and emotional intelligence (Asnawi et al., 2014; Smollan 2014). To expand on the conceptual importance of emotional intelligence and resistance to change, Gelaidan et al. (2016) suggested that employees that have high emotional intelligence are less likely to resist change. Emotional intelligence can be increased through training (Dhingra & Punia, 2016). Di Fabio and Salofske (2014) expressed the importance of evaluating change-related variables that can be developed over time because the enhancement of these variables may reduce resistance to change. Although the impact of emotional intelligence on organizational change continues to be underresearched (Dasborough et al., 2015; McKay et al., 2013; Mehta, 2016), research on the correlation between emotional intelligence and resistance to change has developed increasingly over the past 15 years.

Shortly after the popularization of emotional intelligence in the early 1990s, Walsh (1995) noted that little information was known about the influence of emotional intelligence on change and further research was warranted. Huy (1999) offered one of the

first conceptual models for evaluating the emotional intelligence-change relationship, but Jordan and Troth (2002) were the first to quantitatively evaluate the relationship between emotional intelligence and factors contributing to change attitudes. Jordan and Troth's study showed a significant positive relationship between collaboration and awareness of a person's own emotions ($r = .28$, $p < .05$) and collaboration and control of a person's own emotions ($r = .39$, $p < .01$) suggesting that those with higher levels of emotional intelligence can collaboratively resolve conflict. Jordan and Troth linked collaboration to skills that impact attitudes during change implementation and offered that organizational leaders can assist employees in managing emotions during change by providing emotional intelligence improvement programs. Jordan and Troth recommended future studies in which researchers specifically focus on emotional intelligence and organizational change.

Reactions to change comprise the cognitive and emotional dimensions and change elicits negative emotions, such as anxiety and fear (Saruhan, 2013; Steigenberger, 2015). Vakola et al. (2004) empirically evaluated the influence of emotional intelligence and personality on change attitudes. The study included data from 137 professionals in public and private organizations in Athens, Greece. Vakola et al. used the Attitudes to Change Questionnaire to measure change attitudes, the Emotional Intelligence Questionnaire to measure emotional intelligence, and the Traits Personality Questionnaire 5 to measure personality traits. Vakola et al.'s study showed a significant positive relationship between change attitudes and all four dimensions of emotional intelligence (with r ranging from .29 to .53, $p < .01$) and overall emotional intelligence score ($r = .53$, $p < .01$). Vakola et

al. used hierarchical multiple regression to determine if emotional intelligence explains

an additional variance of change attitudes beyond personality traits. Study findings

indicated personality traits contributed a 30% variance ($p < .001$) in predicting attitudes

toward change and emotional intelligence added an additional 8% variance ($p < .01$) in

predicting change attitudes.

Similar to Vakola et al.'s (2004) study findings, Di Fabio et al.'s (2014) study

showed emotional intelligence accounted for a 10% greater variance, $F(1, 269) = 33.04$, p

$< .001$, in predicting change attitudes above and beyond personality traits. Other studies

have also supported a significant relationship between emotional intelligence and change

attitudes. Dasborough et al. (2015) offered that change produces intense emotions, and

emotions impact receptiveness to change and change implementation outcomes.

Employees with higher levels of emotional intelligence are more accepting to change

(Asnawi et al., 2014). Dhingra and Punia (2016) surveyed 510 employees to determine

how emotional intelligence influences change management skills. Dhingra and Punia's

study showed that the emotional intelligence dimensions of self-awareness ($r = .399$),

social awareness ($r = .296$), self-management ($r = .397$), and social skills ($r = .302$)

positively correlated with change management skills ($p < .01$ for all correlations). Overall

emotional intelligence ($r = .407$, $p < .01$) also positively correlated with change

management skills (Dhingra & Punia, 2016). These study findings indicated that

employees with higher levels of emotional intelligence are better able to manage change.

Emotional intelligence is a critical factor in addressing resistance to change. An

employee's level of emotional intelligence can affect their acceptance of change

(Gelaidan et al., 2016). Although the literature on change management indicated that emotional intelligence influences change, Mehta (2016) and Smollan (2014) stated emotional intelligence and reactions to change have been underresearched. Malik and Masood (2015) offered that resistance to change is a primary obstacle to change implementation and emotional intelligence can minimize negative change attitudes. Malik and Masood evaluated the correlation between emotional intelligence and resistance to change with 170 employees from the telecom sector in Pakistan. The Resistance to Change Scale had a Cronbach's alpha of .92. The Wong and Law Emotional Intelligence Scale (Wong & Law, 2002) was used to measure the four emotional intelligence dimensions of self-appraisal of emotions, other's emotion appraisal, use of emotions, and regulation of emotions (Cronbach's alpha = .91). Malik and Masood demonstrated a negative correlation between emotional intelligence and resistance to change ($r = -.215$, $p < .01$) suggesting that employees with higher levels of emotional intelligence will be less resistant to change. Malik and Masood further assessed the mediating role of psychological capital on the relationship between emotional intelligence and resistance to change. In addition, Malik and Masood showed that only psychological capital remained significant in the mediating model ($\beta = -.198$, $p = .018$), demonstrating that psychological capital fully mediated the emotional intelligence-resistance to change relationship. Malik and Masood recommended researchers use similar interaction models to explore variables related to emotional intelligence and change.

Leader-Member Exchange and Emotional Intelligence Relationship

Employees assess their supervisor's emotions as a mechanism to validate the appropriateness of their emotions within the organizational context (Martin, 2015). Martin (2015) stated there is widespread consensus that building high-quality dyadic relationships is critical to the development of successful leaders and engaged employees, and emotional intelligence is a primary component of establishing these effective relationships. Researchers have evaluated the correlation between leader–member exchange and emotional intelligence, along with how these contextual and individual factors interact with other variables.

Ordun and Acar (2014) surveyed 214 section chiefs of a grocery store chain to determine if there was a correlation between the emotional intelligence of employees and how they perceive the quality of the relationship with their supervisor. The Wong and Law Emotional Intelligence Scale was used to measure the four dimensions of emotional intelligence, which include others' emotion appraisal, use of emotion, regulation of emotion, and self-emotion appraisal. The LMX-MDM was used to measure leader–member exchange and the four dimensions of affect, loyalty, contribution, and professional respect. An ANOVA analysis showed employees who perceived higher quality relationships with their supervisors had a higher mean score of emotional intelligence than those who perceived lower quality relationships. Pearson's product-moment correlation showed all the dimensions of the Wong and Law Emotional Intelligence Scale and LMX-MDM were positively correlated ($p < .01$), with the lowest correlation between others' emotional appraisal and loyalty ($r = .27$, $p < .01$) and the

highest correlation between self-emotion appraisal and professional respect ($r = .548$, $p < .01$).

Research has indicated that supervisors can minimize work-related stress for employees by offering emotional support. Huang, Chan, Lam, and Nan (2010) used a study sample of 493 dyads from a telecommunication call center to test the relationship between emotional intelligence and leader–member exchange. The Wong and Law Emotional Intelligence Scale was used to measure emotional intelligence and the LMX-7 was used to measure leader–member exchange. All four dimensions of emotional intelligence significantly correlated with leader–member exchange, with r ranging from .18 to .29 ($p < .01$). Huang et al. asserted that the call center profession requires employees to more often regulate their emotions. Based on their study findings, Huang et al. suggested call center employees with low emotional intelligence may require more emotional support from their supervisors. In contrast, call center employees with higher emotional intelligence may require less emotional support from their supervisors.

Researchers have shown leader–member exchange and emotional intelligence can both influence work-related outcomes. Karim (2008) examined the interaction between leader–member exchange and emotional intelligence and found that emotional intelligence is a significant predictor of leader–member exchange ($\beta = .559$, $t = 6.609$, $p < .05$). In a subsequent study, Karim (2011) showed that emotional intelligence was significantly positively related to leader–member exchange ($\beta = .65$, $t = 10.49$, $p < .001$) and emotional intelligence accounted for 43% of the variance in leader–member exchange. Sears and Holmvall (2010) assessed 37 dyads in a public service organization

to determine if an employee's level of emotional intelligence influences the perception of leader–member exchange quality. The study findings showed a moderate correlation between subordinate emotional intelligence and leader–member exchange ($r = .43$, $p <$ .01). I was only able to find one recent study in which a significant relationship was not found between emotional intelligence and leader–member exchange ($r = .02$, n.s.; Qian, Wang, Han, & Song, 2017).

Role of Moderating Variables

Moderating variables alter the strength and direction of the relationship between a predictor and a criterion variable (Dawson, 2014). A review of the literature indicated that leader–member exchange, emotional intelligence, and resistance to change are crucial factors in organizational change suggesting that a moderating variable model that includes these three variables may advance the understanding of change attitudes. The selection of emotional intelligence as a possible moderator of the leader–member exchange and resistance to change relationship is consistent with Oreg's multidimensional resistance-to-change model, which indicates a combination of individual and contextual factors influence change attitudes. Oreg (2006) found that most empirical research on resistance to change has shown contextual variables as the primary contributing factor to resistance, but few researchers have emphasized individual differences and even fewer proposed a combined focus on individual and contextual aspects.

Individual factors are individual characteristics of a person, including personality traits, resilience, and emotional intelligence (Turgut et al., 2016). Contextual factors are

characteristics specific to an organization, such as organizational climate, manager

leadership styles, and leader–member exchange quality (Hon et al., 2014). The

multidimensional approach to resistance to change signifies how a combination of factors

contribute to change attitudes (Di Fabio et al., 2014; Radzi & Othman, 2016). Although

researchers have acknowledged the importance of leader–member exchange, emotional

intelligence, and resistance to change, there is inadequate empirical indication of these

variables being analytically assessed simultaneously in relation to organizational change

management.

　　　　Georgalis et al. (2015) evaluated the mediating role of informational justice on

leader–member exchange and resistance to change. Study findings showed leader–

member exchange had a significant negative correlation with resistance to change (β = -

.28, p < .05) and accounted for 7.8% of the 14% variance of the whole model in which

$F(6, 93) = 2.45$, $p < .05$. No direct effect was found between leader–member exchange

and resistance to change, indicating that the relationship was fully mediated by

informational justice. Georgalis et al. recommended researchers consider additional

variables, such as affect (emotions), that may interact with leader–member exchange and

resistance to change. Shamsudin et al. (2016) found a significant positive relationship

between leader–member exchange and motivation during change implementation (β =

.213, $p < .001$) and determined various individual and contextual variables, such as role

breadth self-efficacy and ambiguity, contribute to change attitudes. Shamsudin et al. did

not find a moderating effect for openness to experience on the relationship between

leader–member exchange and motivation during change implementation, substantiating

the need to explore other variables that may interact with leader–member exchange and change implementation.

Other researchers have also considered a mixed approach to change attitudes. Arif et al. (2017) evaluated the mediating role of organizational culture on leader–member exchange and change management. Study findings showed a significant positive correlation between leader–member exchange and change management ($r = .194$, $p = .01$) and that leader–member exchange and organizational culture accounted for 23.6% of the variance ($p = .006$) in change management. Regression analysis indicated organizational culture mediated this relationship, and the authors recommended researchers conduct studies to assess moderators of the leader–member exchange and change management relationship.

Similar to Arif et al. (2017), Ferreira et al. (2018) found a significant relationship between supervisory support and resistance to change ($\beta = -.096$, $p < .10$) and that ego-resilience mediated this relationship. Ferreira et al.'s study findings indicated that change attitudes are influenced by both individual and contextual factors and Ferreira et al. also recommended future research on variables that interact with leader–member exchange and resistance to change. In this study, I adopted Oreg's multidimensional resistance-to-change model, which includes both individual and contextual factors as antecedents to resistance to change. In response to recommendations by other researchers, I evaluated the moderating role of emotional intelligence (as measured by the Assessing Emotions Scale) on the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale).

Summary and Transition

This chapter included a synthesis of the literature on the foundational models and theories relevant to the problem statement, purpose, and research questions of the study. Approximately two thirds of change initiatives fail and resistance to change is the most commonly cited reason for this failure (Michel et al., 2013). Some researchers have argued that contextual factors are the primary reason for resistance to change, while others have argued that individual factors are the main antecedent of resistance. Through the literature review in this chapter, I provided support that statistically significant relationships exist between the contextual factor of leader–member exchange and resistance to change (Georgalis et al., 2015) and the individual factor of emotional intelligence and resistance to change (Gelaidan et al., 2016).

While Oreg (2003) acknowledged that organizational context contributes to resistance to change, Oreg considered the individual as the primary resistance source and organizational context as a moderator of resistance to change. Based on this combined perspective, Oreg (2006) conceptualized a multidimensional resistance-to-change model that included both individual and contextual factors as influences of resistance. Researchers have used Oreg's multidimensional model to evaluate how contextual and individual factors interact with resistance to change (Radzi & Othman, 2016; Saruhan, 2013). Georgalis et al.'s (2015) study showed informational justice mediates the relationship between leader–member exchange and resistance to change and called for future research on additional variables that may interact with the leader–member exchange and resistance to change relationship.

Emotions arise during organizational change and researchers have determined that these emotions play a role in reactions to change (Saruhan, 2013; Steigenberger, 2015). As exposed in the literature review, a gap in research exists on the evaluation of the simultaneous influence of dyadic relationships and emotional intelligence on resistance to change. I designed this study to address this gap through the extension of Georgalis et al.'s (2015) research in which the authors recommended the exploration of other variables that influence the leader–member exchange and resistance to change relationship. Based on Oreg's multidimensional resistance-to-change model and previous studies that included Oreg's model, I chose to use leader–member exchange (as measured by the LMX-7) and emotional intelligence (as measured by the Assessing Emotions Scale) as the contextual factor and individual factor variables, respectively. Chapter 3 will include an explanation of the design and methodology used to address the problem statement for this study.

Chapter 3: Research Method

Introduction

The purpose of this quantitative, correlational research was to determine how emotional intelligence influences the relationship between leader–member exchange and reactions to change. This chapter will include a detailed description of the methodology used to address the research questions and hypotheses related to the identified gap in the literature. The sections include (a) research design and rationale, (b) methodology, (c) data analysis plan, and (d) threats to validity.

Research Design and Rationale

In this study, I employed a quantitative descriptive, correlational design with a cross-sectional survey methodology. The predictor variable for this study was leader–member exchange as measured by the LMX-7, and the criterion variable was resistance to change as measured by the Resistance to Change Scale. The moderating variable was emotional intelligence as measured by the Assessing Emotions Scale. Demographic variables included age, gender, tenure, supervisory role, and education.

I chose the quantitative method because its purpose is for researchers to create and test hypotheses, develop models and theories that clarify behavior, and generalize the results across a greater population through the measurement of statistics (see Hoy & Adams, 2015). Additionally, the quantitative method is a cost-effective way to obtain data from a large number of participants in a short amount of time. A correlational design is effective in determining whether a relationship exists between a predictor and criterion variable, and the correlational design aligned with the research questions and hypotheses

of this study (see Hoy & Adams, 2015). Cross-sectional surveys are used to collect data

on a sample at one point in time, whereas longitudinal surveys are used to obtain data

from multiple time points (Lavrakas, 2008). I chose a cross-sectional survey design

because I evaluated the perceptions of change in general and not perceptions of change

before and after a specific change.

Methodology

Population

The unit of analysis for this study was an individual participant. The target

population for a study is the group of individuals who the researcher wants to understand

(Allen, 2017). The target population intended for generalization of the study findings was

men and women employed in the United States who had encountered organizational

change within their place of employment. The size of this population was not currently

known.

Sampling and Sampling Procedures

A convenience sample is one in which the participants are in close proximity

and/or easily accessible to the researcher (Allen, 2017). I chose to use a convenience

sample because this type of sample is accessible and feasible regarding time and cost. In

a convenience sample, individuals in a target population do not have a predetermined

probability of being included in the study sample, and as a result, a convenience sample

is considered a type of nonprobability sampling (Allen, 2017). The sample for this study

was a convenience sample of research administrators that were members of a research

administration listserv. My rationale for selecting this study sample was that the research

administration listserv was accessible, being that I am a member, and the listserv has almost 5,000 members, providing an increased potential of obtaining the responses needed to assess for statistical significance. I obtained permission to use the listserv for recruiting study participants from the listserv's owning organization.

Members of the research administration listserv represent a diverse population of research administrators from various organizations and geographical locations, position levels, ethnic groups, and economic and cultural backgrounds. As such, the study results may be generalizable to the general population of the United States. Walden University's Institutional Review Board (IRB) authorized human subjects research for this study on May 14, 2018 under IRB Approval Number 05-14-18-0472012. Upon receiving IRB approval, I e-mailed an invitation to participate in the study to the research administration listserv. The e-mail included a summary of the study; the problem I aimed to address through the study; instructions for participating in the study; and a link to the survey site, SurveyMonkey. Upon entering the survey site, participants saw a welcome message reiterating the strict enforcement of confidentiality and anonymity followed by two inclusion questions and the Informed Consent Form. To be eligible for the study individuals had to be 18 years of age or older and employed in the United States at the time of completing the survey. The first page of the survey comprised demographic questions regarding age, gender, tenure, supervisory role, and education. The demographic survey can be found in Appendix D. The subsequent pages comprised a questionnaire, which included a combination of questions from the Resistance to Change

Scale, the LMX-7 scale, and the Assessing Emotions Scale. Participants accessed the online survey through the SurveyMonkey website.

I calculated a power analysis using G*Power to determine the sample size for this study. Multiple linear regression and moderation analysis were used to test the hypotheses of this study. The recommended minimum power level for regression analysis is .80, although .95 is more desirable (Lakens, 2013). I used .95 as the power level in the power analysis based on Lakens's (2013) recommendation. The effect sizes for multiple regression are .02 for small, .15 for medium, and .35 for large (Cohen, 1998). A review of the literature showed a broad range of effect sizes for studies similar to this study.

Saruhan's (2013) study on trust, psychological capital, and organizational change showed a small effect size of .05, while Arif et al.'s (2017) study on leader–member exchange and change management showed a large effect size of .31. Di Fabio et al.'s (2014) study on emotional intelligence and Georgalis et al.'s (2015) study on leader–member exchange, informational justice, and resistance to change showed medium effect sizes of .11 and .16, respectively. Based on the broad range of effect sizes found in studies similar to my study, I chose to use the medium effect size ($f^2 = .15$) in the power analysis. The commonly accepted confidence level in social sciences research is 95% (Aneshensel, 2013) and an alpha level of .05 is typically used as the cutoff for statistical significance (Greenland et al., 2016). G*Power analysis indicated the need for a minimal study sample of 153 participants based on the test family of F tests, the linear multiple regression-fixed model R^2 increase statistical test, a power level of .95, a medium effect size ($f^2 = .15$), a confidence level of 95%, and an alpha level of .05.

Procedures for Recruitment, Participation, and Data Collection (Primary Data)

Recruitment. The study sample for this study included members of a research administration listserv, who were 18 years of age or older and currently employed in the United States. I obtained permission from the listserv's owning organization to use the listserv for recruiting study participants. All members of the research administration listserv had an equal opportunity to participate in the study if they met the sampling frame criteria and had access to the Internet.

Participation. I e-mailed an invitation to participate in the study to the research administration listserv, along with a link to complete the survey. The e-mail included a summary of the study; the problem I aimed to address through the study; instructions for participating in the study; and a link to the survey site, SurveyMonkey. In the e-mail, I informed the listserv members that participating in the study was completely voluntary and that all responses would remain anonymous. The e-mail also included my contact information, along with contact information for my dissertation advisor and the Walden University IRB. I stated in the e-mail that the estimated time to complete the entire survey would be less than 15 minutes. If necessary, I had planned to send a follow-up invitation e-mail 2 weeks after the initial e-mail to increase the response rate. I received more than the required sample number of 153 by the end of the first week and closed the survey at that time.

Demographic data. In the survey, study participants answered a set of questions related to their age, gender, tenure, supervisory role, and education. I chose these demographic variables because past researchers have used these variables in studies on

resistance to change (see Hon et al., 2014; Kunze et al., 2013; Turgut et al., 2016; Xu et al., 2016). The demographic variables also served as control variables in the hierarchical multiple linear regression analysis.

Data collection. I collected all data for this study online through SurveyMonkey. Before the opening period of the survey, I performed a brief test to identify any user-based issues with the online survey. The e-mail invitation to participate in the study included a link to the survey site, SurveyMonkey. Upon entering the survey site, participants saw a welcome message reiterating my commitment to confidentiality and anonymity followed by two inclusion criteria questions and the Informed Consent Form as approved by Walden University's IRB. The Informed Consent Form signified that participants could exit the survey at any time. Individuals that indicated they were eligible for participation and agreed to participate clicked "I Consent" and "Next" at the bottom of the informed consent page and were automatically advanced to the survey.

The survey comprised demographic questions and a questionnaire, which included a combination of questions from the Resistance to Change Scale, the LMX-7 scale, and the Assessing Emotions Scale. All survey item responses were based on a Likert-type scale. Participants exited the study upon completion of the survey, and there were no follow-up requirements. I downloaded the raw data from SurveyMonkey into an Excel file for cleaning and analysis and then uploaded the Excel file into SPSS. The Excel file was password protected and saved on my personal, password-protected laptop. I also stored the data on a password-protected file on a USB flash drive for backup.

Instrumentation and Operationalization of Constructs

I measured the predictor (leader–member exchange as measured by the LMX-7),

moderator (emotional intelligence as measured by the Assessing Emotions Scale), and

criterion (resistance to change as measured by the Resistance to Change Scale) variables

using instruments that have demonstrated reliability and validity (see Graen, Novak, &

Sommerkamp, 1982; Oreg, 2003; Schutte et al., 1998). In subsequent subsections in this

chapter, I will discuss the scoring, reliability, and validity of each instrument. Permission

to use these instruments can be found in Appendices A, B, and C.

Leader–member exchange. I operationalized leader–member exchange in this

study as a participant's total score on the LMX-7, which is a unidimensional instrument.

The LMX-7 is used to evaluate the level of respect, trust, and obligation reciprocated in a

dyadic relationship between a supervisor and employee (Graen & Uhl-Bien, 1995).

Researchers have evaluated dyadic relationships and change using the LMX-7 in recent

studies similar to this study (Arif et al., 2017; Georgalis et al., 2015; Sindhu et al., 2017).

I chose to use the LMX-7 instrument because of its direct relationship to leader–member

exchange theory, its high psychometric properties, and the frequency of use in similar

studies. The LMX-7, along with its variations, has been used to measure leader–member

exchange in 85% of related studies since 1999 (Hunt, 2014).

Scoring. The LMX-7 consists of seven items on a 5-point Likert scale with

varying responses to each question ranging from 1 (left) to 5 (right). Responses on the

left, such as *rarely*, *not at all*, and *none*, indicate a low-quality dyadic relationship, while

responses on the right, such as *very often*, *fully*, and *very high*, indicate a high-quality

dyadic relationship (Graen, Novak, & Sommerkamp, 1982). The total score on the LMX-

7 ranges from 7 to 35 with a score of 30 to 35 being considered a very high-quality

leader–member exchange relationship, and scores that range between 25 to 29, 20 to 24,

15 to 19, and 7 to 14 considered high, moderate, low, and very low, respectively

(Stringer, 2006). A sample item is, "How would you characterize your working

relationship with your leader?" The survey questions of the LMX-7 can be found in

Appendix E.

   Reliability. In its empirical study, the LMX-7 was tested for reliability using

Cronbach's alpha coefficient, which was .86 for a sample of employees in a large

government organization in the Midwest (Graen, Novak, & Sommerkamp, 1982).

Subsequent studies, similar to my study, showed a comparable Cronbach's alpha

coefficient ranging from .85 to .93 (Els, Viljoen, de Beer, & Brand-Labuschagne, 2016;

Harris, Li, & Kirkman, 2014; Herdman et al., 2016; Newman, Schwarz, Cooper, &

Sendjaya, 2017). According to Fisher et al. (2016), the LMX-7 has the highest reliability

of instruments measuring leader–member exchange. These measures of reliability

indicated that the LMX-7 had acceptable reliability for use in research.

   Validity. The LMX-7 is the leading instrument for measuring leader–member

exchange and has been shown to have high validity and reliability (Notgrass, 2014).

Gerstner and Day (1997) reviewed over 79 studies in which researchers measured leader–

member exchange with various instruments. The LMX-7 showed the best predictive

validity of leader–member exchange and correlated higher with outcomes than other

measurements (Gerstner & Day, 1997). In a more recent study, Olutade et al. (2015)

considered the LMX-7 as demonstrating construct and predictive validity in measuring leader–member exchange.

      Emotional intelligence. The operational definition of emotional intelligence in this study was the participant's total score on the Assessing Emotions Scale. The Assessing Emotions Scale is a unidimensional instrument that measures a person's perception of how they demonstrate the emotional intelligence trait in daily life (Schutte et al., 1998). Schutte et al. (1998) believed there was a need for a brief, validated measure of emotional intelligence that should be based on a comprehensive theoretical model and used Salovey and Mayer's three-branch model of emotional intelligence as the theoretical foundation for their instrument. Salovey and Mayer (1990) considered the three branches of emotional intelligence as appraising emotions, regulating emotions, and utilizing emotions.

      In the empirical article, Schutte et al.'s (1998) scale was not given a name. Researchers have referenced the scale as the Self-Report Emotional Intelligence Test (Ybarra et al., 2014), Schutte Emotional Intelligence Scale (Schutte et al., 2009), and the Emotional Intelligence Scale (Zhoc et al., 2017), among other names. Ten years after its introduction, Schutte et al. (2009) named the instrument the Assessing Emotions Scale. The Assessing Emotions Scale has been used in recent studies to evaluate emotional intelligence (Clarke & Mahadi, 2017; Sasikala & Anthonyraj, 2015; Thomas et al., 2017). The Assessing Emotions Scale was chosen over other self-report instruments because it aligns with the theoretical criteria of ability emotional intelligence.

Scoring. The Assessing Emotions Scale is a self-report questionnaire, which takes an average of 5 minutes for respondents to rate themselves (Schutte et al., 2009). The Assessing Emotions Scale consists of 33 items on a 5-point Likert scale with responses ranging from 1 (*strongly disagree*) to 5 (*strongly agree*; Schutte et al., 1998, 2009). Although some researchers have argued for the existence of unique subfactors (Petrides & Furnham, 2000b), Schutte et al. (1998) recommended using the total score for the scale. Scores range from 33 to 165, and the total score is calculated by reverse coding Items 5, 28, and 33 and then totaling all items (Schutte et al., 1998; 2009). Higher scores indicate more characteristic emotional intelligence. A sample item is, "By looking at their facial expressions, I recognize the emotions people are experiencing." The survey questions of the Assessing Emotions Scale can be found in Appendix F.

Reliability. Schutte et al. (1998) administered the survey to 346 participants in a diverse, metropolitan region in the southeastern United States. A factor analysis demonstrated a Cronbach's alpha of .90 and a 2-week test-retest reliability of .78 (Schutte et al., 1998). Recent studies using the Assessing Emotions Scale indicated acceptable reliability levels with Cronbach's alpha coefficients ranging from .83 to .88 (Clarke & Mahadi, 2017; Karimi et al., 2014; Weinzimmer et al., 2017).

Validity. Researchers have validated the Assessing Emotions Scale for use across multiple geographical locations and cultures (Arunachalam & Palanichamy, 2017; Craparo et al., 2014; Naeem & Muijtjens, 2015). The Assessing Emotions Scale has demonstrated internal reliability, construct validity, and divergent validity (Clarke & Mahadi, 2017; Karimi et al., 2014; Schutte et al., 2009; Zhoc et al., 2017). Siegling et al.

(2015) stated the Assessing Emotions Scale is one of the most widely used measures of emotional intelligence and its attractiveness is due to it being a brief self-report instrument, with good psychometric properties, that is available at no cost to researchers. For these reasons, I used the Assessing Emotions Scale in this study to measure the emotional intelligence of study participants.

Resistance to change. The operational definition of resistance to change in this study was the mean of all the responses by the participant on the Resistance to Change Scale. Resistance to change was measured using the Resistance to Change Scale, which is a self-report instrument that measures an individual's tendency to resist change. Although previous researchers have assessed change reactions with instruments designed for other purposes, the Resistance to Change Scale is the only instrument that measures dispositional resistance to change (Oreg, 2003). The Resistance to Change Scale comprises the four factors of routine seeking, emotional reaction to imposed change, short-term focus, and cognitive rigidity (Oreg, 2003). Researchers evaluated attitudes toward change using the Resistance to Change Scale in recent studies, similar to this study (Dunican & Keaster, 2015; Sasikala & Anthonyraj, 2015). I chose the Resistance to Change Scale because of its high psychometric properties and its frequent use in similar studies.

Scoring. The Resistance to Change Scale consists of 17 items based on a 6-point Likert scale (Oreg, 2003). Responses range from 1 (*strongly disagree*) to 6 (*strongly agree*). The total score is calculated by determining the mean of all responses. A higher score denotes a greater tendency to resist change (Oreg, 2003). A sample item is, "When

things don't go according to plans, it stresses me out." The survey questions of the

Resistance to Change Scale can be found in Appendix G.

   Reliability. In its empirical study, the Resistance to Change Scale had a

Cronbach's alpha of .92 for the total scale and the Cronbach's alpha ranged from .71 to

.89 for the subscales (Oreg, 2003). A retest of the scale in the same study indicated

reliability with a Cronbach's alpha of .87 for the full scale and a Cronbach's alpha

ranging from .69 to .75 for each of the subscales (Oreg, 2003). Subsequent studies,

similar to my study, have confirmed a comparable Cronbach's alpha coefficient ranging

from .83 to .93 (Garcia-Cabrera & Hernandez, 2014; Kunze et al., 2013; Saruhan, 2013).

These measures indicated that the Resistance to Change Scale had acceptable reliability

for use in this study.

   Validity. The Resistance to Change Scale indicated predictive, convergent, and

discriminant validity in its empirical study (Oreg, 2003). The instrument was later

validated cross-nationally in 17 countries (Oreg et al., 2008). The Resistance to Change

Scale has been extensively used and acknowledged as an appropriate instrument to

measure dispositional resistance to change (Dyehouse et al., 2017; Hon et al., 2014;

Laumer et al., 2016; Xu et al., 2016).

Data Analysis Plan

Data Cleaning and Screening

   All data were collected online through SurveyMonkey. I downloaded the raw data

from SurveyMonkey into an Excel file for cleaning, screening, and analysis and then

uploaded the Excel file into SPSS. I ran frequencies and descriptive statistics on all

variables to determine the sample number, frequencies, mean, median, and standard deviation. Data were screened for missing data, outliers, independence of residuals, normality, linearity, homoscedasticity of residuals, and multicollinearity to ensure the data met the assumptions of hierarchical multiple linear regression. I assessed the continuous variables for missing data using Little's (1998) missing completely at random test. The mean imputation technique (Waqas, Saeed-Ur-Rahman, Imran, & Rehan, 2016) was used to replace the missing data of the continuous variables. I coded the missing data for the categorical variables as "-9999" so that SPPS would exclude the missing data in the analysis (Cox, McIntosh, Reason, & Terenzini, 2014).

Outliers were assessed by evaluating the studentized deleted residual values for greater than +/-3 standard deviations. Independence of residuals was evaluated using the Durbin-Watson test. I used a visual inspection of the histograms, along with tests for skewness and kurtosis, to screen for normal distribution (Salkind, 2010). I tested for linearity using the scatter plot for the studentized residuals versus predicted values and the partial regression plots. The plot of studentized residuals against the unstandardized predicted values was used to test for homoscedasticity.

To test for multicollinearity, I viewed the variance inflation factor and confirmed that no values were less than 10 (Best & Wolf, 2014). I performed a CFA to confirm the validity of the three instruments used in the survey. After cleaning and screening the data, I conducted hierarchical multiple linear regression to address Hypotheses 1 through 4. I used the Hayes PROCESS macro to evaluate the moderating effect of emotional intelligence (as measured by the Resistance to Change Scale) on the relationship between

leader–member exchange (as measured by the LMX-7) and resistance to change (as

measured by the Resistance to Change Scale). I will restate the questions and hypotheses

in the subsequent subsection of this chapter.

Research Questions and Hypotheses

RQ1: What is the relationship between leader–member exchange (as measured by

the LMX-7) and resistance to change (as measured by the Resistance to Change

Scale)?

$H_0 1$: There is no relationship between leader–member exchange (as

measured by the LMX-7) and resistance to change (as measured by the

Resistance to Change Scale).

$H_a 1$: There is a relationship between leader–member exchange (as

measured by the LMX-7) and resistance to change (as measured by the

Resistance to Change Scale).

RQ2: What is the relationship between emotional intelligence (as measured by

the Assessing Emotions Scale) and resistance to change (as measured by the

Resistance to Change Scale)?

$H_0 2$: There is no relationship between emotional intelligence (as measured

by the Assessing Emotions Scale) and resistance to change (as measured

by the Resistance to Change Scale).

$H_a 2$: There is a relationship between emotional intelligence (as measured

by the Assessing Emotions Scale) and resistance to change (as measured

by the Resistance to Change Scale).

RQ3: What is the relationship between leader–member exchange (as measured by the LMX-7) and emotional intelligence (as measured by the Assessing Emotions Scale)?

H_03: There is no relationship between leader–member exchange (as measured by the LMX-7) and emotional intelligence (as measured by the Assessing Emotions Scale).

H_a3: There is a relationship between leader–member exchange (as measured by the LMX-7) and emotional intelligence (as measured by the Assessing Emotions Scale).

RQ4: What is the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale), controlling for demographic variables?

H_04: There is no relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale), controlling for demographic variables.

H_a4: There is a relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale), controlling for demographic variables.

RQ5: What is the moderating effect of emotional intelligence (as measured by the Assessing Emotions Scale) on the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale)?

H$_0$5: There is no moderating effect of emotional intelligence (as measured

by the Assessing Emotions Scale) on the relationship between leader–

member exchange (as measured by the LMX-7) and resistance to change

(as measured by the Resistance to Change Scale).

H$_a$5: Emotional intelligence (as measured by the Assessing Emotions

Scale) has a moderating effect on the relationship between leader–member

exchange (as measured by the LMX-7) and resistance to change (as

measured by the Resistance to Change Scale).

Statistical Tests

I chose statistical tests that align with the research questions, hypotheses, and

variables of this study. I chose the covariates for the statistical analyses based on

theoretical relevance established in the literature review in Chapter 2. All data were

evaluated to ensure hierarchical multiple linear regression assumptions were met based

on the process outlined in the Data Cleaning and Screening section. I used hierarchical

multiple linear regression to test Hypotheses 1 through 4. Moderating variables alter the

strength and direction of the relationship between a predictor and a criterion variable

(Dawson, 2014). I used the Hayes PROCESS macro to evaluate the moderating effect of

emotional intelligence (as measured by the Assessing Emotions Scale) on the relationship

between leader–member exchange (as measured by the LMX-7) and resistance to change

(as measured by the Resistance to Change Scale) as stated in Hypothesis 5. I used a

recommended alpha level of .05 to determine statistical significance and a confidence

level of 95% to interpret the statistical tests (Greenland et al., 2016). The chosen

statistical tests and interpretation parameters supported reliability of the data and processes used to evaluate the outcomes of the study.

Threats to Validity

External Validity

External validity is the extent to which the study findings can be generalized to the target population (Lavrakas, 2008). Examples of threats to external validity for survey studies include sample characteristics, setting characteristics, low response rates, response bias, and social desirability (Lavrakas, 2008). To ensure generalizability of the study findings to the target population, the characteristics of the study sample (age, gender, tenure, supervisory role, and education) should be representative of the target population (Lavrakas, 2008). To minimize the threat of sample characteristics, I used a sample of members of a research administration listserv. This listserv includes a diverse population of over 5,000 members. The setting of a survey study can impact threats to validity, especially if all participants are from one geographical location. Participants represented various regions across the United States, which maximized the external validity of this study.

Low response rates for a survey study increase the threats to external validity (Lavrakas, 2008). G*Power analysis indicated the need for a minimal study sample of 153 based on the test family of F tests, the linear multiple regression-fixed model R^2 increase statistical test, a power level of .95, a medium effect size ($f^2 = .15$), a confidence level of 95%, and an alpha level of .05. According to the G*Power analysis, the final sample size of 349 was more than adequate to determine statistical significance.

Individuals who do not complete some survey questions, or do not complete the survey at

all, may differ from the individuals that do respond to the survey. The varying

interpretations of the survey questions may present response bias (Lavrakas, 2008). To

minimize response bias, I provided my contact information in the e-mail and the online

survey so that participants could contact me to clarify a question. The use of self-report

measures increases the external validity threat of social desirability. Social desirability is

the act of choosing survey responses based on what the participant believes to be the

most socially accepted response (Lavrakas, 2008). To minimize the external threat of

social desirability, I encouraged participants to respond based on their true feelings and

reiterated that all responses would be completely anonymous.

Internal Validity

The internal validity of a descriptive, correlational study is the degree to which a

study's research design is appropriate for testing the relationship between the

independent and dependent variables (Lavrakas, 2008). I chose a descriptive,

correlational study design based on the purpose, research questions, and hypotheses of

this study. The research instruments I used in this study have been deemed reliable and

valid for their intended purposes as described in the instrumentation section.

Construct Validity

Construct validity is the extent to which a research instrument measures what it is

purported to measure (Lavrakas, 2008). Individual differences were the foundational

constructs for this research, and individual differences suggest that emotional intelligence

and the perceptions of dyadic relationship quality correlate with attitudes toward change.

Construct validity for this study was increased by using reliable and valid instruments that align with the leader–member exchange, resistance to change, and emotional intelligence theories. The LMX-7 is considered a reliable and valid instrument for measuring leader–member exchange (Fisher et al., 2016; Olutade et al., 2015) and has been used to measure leader–member exchange in 85% of related studies since 1999 (Hunt, 2014). Researchers have confirmed the reliability and validity of the Resistance to Change Scale making it an appropriate instrument to measure dispositional resistance to change for this study (Dyehouse et al., 2017; Hon et al., 2014; Laumer et al., 2016; Xu et al., 2016). The Assessing Emotions Scale has shown internal reliability, construct validity, and divergent validity for measuring emotional intelligence (Clarke & Mahadi, 2017; Karimi et al., 2014; Schutte et al., 2009; Zhoc et al., 2017). My use of these reliable and valid instruments minimized the threat of construct validity.

Ethical Procedures

I obtained written approval from Walden University's IRB before conducting any research involving human subjects. I did not design this study to intentionally recruit participants from protected populations, such as minors, the elderly (ages 65+), economically disadvantaged individuals, or incarcerated individuals. The survey included an inclusion question to determine the eligibility criteria of the participant being 18 years of age or older; however, I considered it overly invasive to screen for other vulnerable population groups. I obtained permission by the listserv's owning organization to use the listserv for recruiting study participants.

The e-mail invitation to participate in the study included a summary of the study; the problem I aimed to address through the study; instructions for participating in the study; and a link to the survey site, which was SurveyMonkey. I stated in the e-mail communication that participation was completely voluntary. Upon entering the survey site, participants saw a welcome message that reiterated the strict enforcement of confidentiality and anonymity followed by the two inclusion criteria questions and the Informed Consent Form as approved by Walden University's IRB. The informed consent page indicated that participants could withdraw from the survey at any time, and participants had the option to print a copy of the consent form. Individuals provided consent to participate by clicking "I Consent" and "Next" at the bottom of the electronic informed consent page.

Participants were not asked to provide any personally identifying information; I only asked questions about sociodemographic information, including age, gender, tenure, supervisory role, and education. I downloaded the raw data from SurveyMonkey into a password-protected file on my personal, password-protected laptop. I also stored the data on a password-protected file on a USB flash drive for backup. The file is accessible to only me and, upon request, to the dissertation committee and Walden University's IRB. I have stored the USB flash drive in a locked file cabinet, and the laptop file will remain password protected for 5 years from the date of dissertation approval. At the end of the 5-year period, I will permanently destroy the data on the laptop with a commercial software application designed to remove all data from a storage device, and I will destroy the USB flash drive at a certified document destruction facility.

Summary

In this chapter, I discussed the descriptive, correlational design with a cross-sectional survey methodology that I used for this study to test the moderating role of emotional intelligence (as measured by the Assessing Emotions Scale) on the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale). Data collected from the research administration listserv members were evaluated for the required assumptions and then analyzed using hierarchical multiple linear regression and the Hayes PROCESS macro. The findings of this study will be included in Chapter 4 and the results will be reviewed in detail in the concluding chapter.

Chapter 4: Results

Introduction

The purpose of this quantitative, correlational research was to contribute novel information about the relationship between leader–member exchange and resistance to change by evaluating the moderating effect of emotional intelligence on that relationship. The research questions and hypotheses were as follows:

RQ1: What is the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale)?

$H_0$1: There is no relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale).

H_a1: There is a relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale).

RQ2: What is the relationship between emotional intelligence (as measured by the Assessing Emotions Scale) and resistance to change (as measured by the Resistance to Change Scale)?

$H_0$2: There is no relationship between emotional intelligence (as measured by the Assessing Emotions Scale) and resistance to change (as measured by the Resistance to Change Scale).

H_a2: There is a relationship between emotional intelligence (as measured

by the Assessing Emotions Scale) and resistance to change (as measured

by the Resistance to Change Scale).

RQ3: What is the relationship between leader–member exchange (as measured by

the LMX-7) and emotional intelligence (as measured by the Assessing Emotions

Scale)?

H_03: There is no relationship between leader–member exchange (as

measured by the LMX-7) and emotional intelligence (as measured by the

Assessing Emotions Scale).

H_a3: There is a relationship between leader–member exchange (as

measured by the LMX-7) and emotional intelligence (as measured by the

Assessing Emotions Scale).

RQ4: What is the relationship between leader–member exchange (as measured by

the LMX-7) and resistance to change (as measured by the Resistance to Change

Scale), controlling for demographic variables?

H_04: There is no relationship between leader–member exchange (as

measured by the LMX-7) and resistance to change (as measured by the

Resistance to Change Scale), controlling for demographic variables.

H_a4: There is a relationship between leader–member exchange (as

measured by the LMX-7) and resistance to change (as measured by the

Resistance to Change Scale), controlling for demographic variables.

RQ5: What is the moderating effect of emotional intelligence (as measured by the Assessing Emotions Scale) on the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale)?

> $H_0$5: There is no moderating effect of emotional intelligence (as measured by the Assessing Emotions Scale) on the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale).

> H_a5: Emotional intelligence (as measured by the Assessing Emotions Scale) has a moderating effect on the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale).

This chapter will begin with a description of the participant recruitment and data collection processes followed by the method used for handling missing data. I will then provide an assessment of the sample characteristics of the demographic variables. The Study Results section will include a review of the assumptions, descriptive characteristics of the survey instruments, results of the CFAs, and the findings of the hierarchical multiple regression and moderation analysis macro. The chapter will end with a summary and transition to Chapter 5.

Data Collection

I sent an e-mail to a research administration listserv inviting members to voluntarily and anonymously participate in the study. A link to the survey in

SurveyMonkey was provided in the e-mail. At the time of recruitment, there were 4,986

members of the listserv. I collected data over a 1-week period in May 2018 using a self-

administered, online survey. The scales in the survey included the Resistance to Change

Scale, the LMX-7, and the Assessing Emotions Scale. There were no modifications to the

data collection plan presented in Chapter 3.

A total of 426 people attempted to access the online survey. Of these, two did not

fit the inclusion criteria of being employed in the United States and an additional 31 did

not consent to the survey. I removed these 33 cases from the dataset, leaving 393 cases. I

assessed the continuous variables for missing data using Little's (1998) missing

completely at random test. Of the 393 cases, 42 were missing more than 50% of the data

and these cases were deleted. Each of the remaining 351 cases had less than 2% missing

data, indicating the randomness of missing values.

The standardized root mean square residual (SRMR) is one of the preferred

indexes used to determine a good fit when conducting CFA in Amos (Taasoobshirazi &

Wang, 2016). However, the SRMR is available in Amos only when the dataset does not

have missing values (Liuzhan, 2014). To allow for the review of the SRMR in Amos, I

used the mean imputation technique to replace the missing data of the continuous

variables (see Waqas et al., 2016). I coded the missing data for the categorical variables

as "-9999." Two outliers were removed during the hierarchical multiple regression

assumptions analysis, resulting in a final sample size of 349. I will describe the

assumptions review in detail in the Assumptions section of this chapter. Based on a

listserv membership of 4,986, the effective response rate was 7% (349/4,986). The

sample size of 349 was more than the required sample size of 153 stated in Chapter 3 as being necessary to perform a regression analysis on seven independent variables.

Study participants completed a short demographic survey that provided information regarding their age, gender, tenure, supervisory role, and education. The largest group of participants ($n = 309$, 88.5%) were female. The majority of the participants ($n = 186$, 53.3%) were not supervisors. For the highest level of education, 171 (49%) reported obtaining a master's degree, with 124 (35.5%) reporting their highest level of education as a bachelor's degree. More participants reported earning a doctoral degree ($n = 29$, 8.3%) than those with some college ($n = 16$, 4.6%) or an associate degree ($n = 9$, 2.6%). Although *high school* was a response option for a participant's highest level of education, all participants reported their highest educational achievement as beyond high school.

For the continuous demographic variables, the participants reported their age as a mean of 46.38 ($SD = 10.34$) years and their tenure as a mean of 13.22 ($SD = 8.97$) years. The demographic characteristics were similar to another study that used research administrators as the sample population in which 45.6% had obtained a master's degree, 85% were females, 57% were in the 40–59 age range, and 38% had 10 to 20 years of tenure (Shambrook, Lasrado, Roberts, & O'Neal, 2015). The descriptive statistics for the continuous demographic variables can be found in Table 1.

Table 1

Descriptive Statistics for Continuous Demographic Variables

				Range	
Variable	*M*	*SD*	Median	Minimum	Maximum
Age	46.38	10.34	46	25	71
Tenure	13.22	8.77	12	0	40

Study Results

Assumptions

There are eight assumptions that need to be considered for hierarchical multiple regression (Allen, 2017). The first two assumptions concern the chosen study design and measurements, while the other six assumptions concern the fit of the data to the hierarchical multiple regression (Allen, 2017). The first assumption is that the dependent variable is measured at the continuous level (Allen, 2017). The dependent variable for this study was resistance to change, which was the mean of all responses by a participant on the Resistance to Change Scale. The Resistance to Change Scale is a Likert scale and Likert scales can be treated as continuous data (Harpe, 2015). Because the dependent variable was treated as continuous, I considered the first assumption of the hierarchical multiple regression as met.

The second assumption of hierarchical multiple regression is that two or more independent variables are measured at either the continuous or nominal level (Allen, 2017). The independent variables for this study were leader–member exchange,

emotional intelligence, age, gender, tenure, supervisory role, and education. I

operationalized leader–member exchange, measured on a Likert scale, as a participant's

total score on the LMX-7. Emotional intelligence, also measured on a Likert scale, was

operationalized as a participant's total score on the Assessing Emotions Scale. Leader–

member exchange and emotional intelligence were treated as continuous variables. Age

and tenure were continuous variables, and gender and supervisory role were nominal

variables. Because the education variable was an ordinal measurement, I transformed

education into a dichotomous variable. All participants reported their highest educational

achievement as beyond high school (obtaining at least some college education). As a

result, I used the following two categories for the dichotomous education variable: no

degree (the some college category) coded as 1 and degree (all other categories – the

associate, bachelor's, master's, and doctorate) coded as 0. Based on the final sample size

of 349, those with some college education represented 4.6% ($n = 16$) of the sample

population and those with a degree represented 95.4% ($n = 333$) of the sample

population. As all independent variables were either continuous or nominal, I considered

the second assumption of hierarchical multiple regression as met.

I evaluated the additional six general assumptions of regression on the sample size

of 351 before conducting the data analysis. The six assumptions include (a) no high

leverage points, highly influential points, or significant outliers; (b) independence of

residuals; (c) a linear relationship between resistance to change (dependent variable) and

the independent variables, both individually and collectively; (d) homoscedasticity of

residuals; (e) no multicollinearity; and (f) normal distribution of errors (residuals; Allen,

2017). All data points were below the safe leverage value of 0.2 indicating no high

leverage points. The Cook's distance values were all below 1 indicating no influential

cases. I assessed the studentized deleted residual values for outliers, and there were two

residuals greater than +/-3 standard deviations. The first outlier was a tenure of 50 years

compared to the mean of 13.30. The second outlier was a resistance-to-change score of

5.11 compared to the mean of 3.00. I removed these two outliers leaving a sample size of

349. The Durbin-Watson statistic of 2.16 indicated independence of residuals. The scatter

plot for the studentized residuals versus predicted values and the partial regression plots

for each continuous variable indicated linearity. The plot of studentized residuals against

the unstandardized predicted values indicated homoscedasticity. My inspection of the

correlation statistics showed that no correlations were greater than .70. The coefficients

statistics showed that the variance inflation factor values were less than 10 (the highest

was 1.75), indicating no concerns for multicollinearity. All continuous variables had

characteristics of normal distribution according to a visual inspection of the histograms

and Tabachnick and Fidell's (2007) guidance of acceptable skewness (< 1) and kurtosis

(< 2) values for sample sizes of 100 or more cases. The skewness and kurtosis of the

continuous variables are presented in Table 2. Based on the above evaluation, I

considered the eight assumptions for hierarchical multiple regression as met.

Table 2

Skewness and Kurtosis of Continuous Variables

Variable	Skewness	Kurtosis
Age	.11	-.89
Tenure	.66	-.22
Resistance to change	-.01	-.23
Leader–member exchange	-.54	-.48
Emotional intelligence	-.36	.53

Descriptive Characteristics of Scales

After assessing for the required assumptions and removing the two outliers discovered during the assessment, I evaluated the descriptive characteristics and reliability of each of the three scales. The Resistance to Change Scale consists of 17 items based on a 6-point Likert scale (Oreg, 2003). Responses range from 1 (*strongly disagree*) to 6 (*strongly agree*), and a participant's total score is calculated by determining the mean of all responses (Oreg, 2003). A higher score indicates a greater tendency to resist change (Oreg, 2003).

The LMX-7 consists of seven items on a 5-point Likert scale (Graen, Novak, & Sommerkamp, 1982). Responses range from 1 (left) to 5 (right) and vary on each item (Graen et al., 1982). Responses on the left, such as *rarely*, *not at all*, and *none*, indicate a low-quality dyadic relationship, while responses on the right, such as *very often*, *fully*, and *very high*, indicate a high-quality dyadic relationship (Graen et al., 1982). The

participant's total score on the LMX-7 is the sum of all the participant's responses and a

higher score indicates a high-quality dyadic relationship (Graen et al., 1982).

The Assessing Emotions Scale consists of 33 items on a 5-point Likert scale

(Schutte et al., 1998). Responses range from 1 (*strongly disagree*) to 5 (*strongly agree*),

and a participant's total score is calculated by determining the sum of all responses

(Schutte et al., 1998). A higher score indicates a higher level of emotional intelligence

(Schutte et al., 1998). The Cronbach's alpha of each scale was significantly above

Nunnally's (1978) recommendation of .70, indicating reliability. The mean, standard

deviation, and reliability (Cronbach's alpha) for the three survey instruments are

presented in Table 3.

Table 3

Mean, Standard Deviation, and Reliability for Scales

Scale	*M*	*SD*	Reliability
Resistance to Change Scale	2.99	0.57	.87
LMX-7	24.71	6.85	.94
Assessing Emotions Scale	128.32	13.48	.91

Confirmatory Factor Analysis of Scales

To confirm the construct validity of the three instruments, I performed CFA using

Amos software. The most commonly used fit indexes for CFA include the comparative fit

index (CFI), the Tucker-Lewis Index (TLI), SRMR, and the root mean square error of

approximation (RMSEA; Taasoobshirazi & Wang, 2016). The acceptable value for the

CFI and TLI is greater than .9 (Awang, 2011; Kline, 2005). A value below .08 for the

SRMR and RMSEA is considered acceptable (Kline, 2005). The Chi-square test is also used as a fit index, but sample sizes greater than 200 can affect the results (Siddiqui, 2013). Because my sample size was greater than 200 ($n = 349$), I chose to use the CFI, TLI, SRMR, and RMSEA as the fit indexes when performing CFA on the three instruments.

  Resistance to Change Scale. Oreg (2003) considered the Resistance to Change Scale as consisting of four factors, including routine seeking, emotional reaction, short-term focus, and cognitive rigidity. The Resistance to Change Scale has also been used as a unidimensional construct in studies similar to this study (Georgalis et al., 2015; Sasikala et al., 2015; & Xu et al., 2016). Because I chose to use the unidimensional model of the Resistance to Change scale, I first performed CFA on the unidimensional model.

  Awang (2011) recommended covarying error terms when conducting CFA if two items are closely related or redundant. Because Items 14 ("I often change my mind") and 15 ("I don't change my mind easily") are a reverse of one another, I chose to covary the error terms for these two indicator variables. For the unidimensional model, Items 14 ($p = .062$) and 17 ($p = .361$) did not load significantly to the latent construct. All other items loaded significantly to the latent construct ($p < .001$). The CFI (.785) and TLI (.752) were below the .9 minimum. The SRMR (.081) and RMSEA (.111) were above the .08 threshold. Based on these index values, I did not consider the model a good fit with the data. Estimated standardized regression weights for the unidimensional model are presented in Table 4.

Table 4

Estimated Standardized Regression Weights for Oreg's Unidimensional Resistance-to-Change Model

Item	Estimate
1. I generally consider changes to be a negative thing.	.632
2. I'll take a routine day over a day full of unexpected events any time.	.625
3. I like to do the same old things rather than try new and different ones.	.600
4. Whenever my life forms a stable routine, I look for ways to change it.	.452
5. I'd rather be bored than surprised.	.564
6. If I were to be informed that there's going to be a significant change regarding the way things are done at work, I would probably feel stressed.	.720
7. When I am informed of a change of plans, I tense up a bit.	.785
8. When things don't go according to plans, it stresses me out.	.677
9. If my boss changed the criteria for evaluating employees, it would probably make me feel uncomfortable even if I thought I'd do just as well without having to do any extra work.	.602
10. Changing plans seems like a real hassle to me.	.696
11. Often, I feel a bit uncomfortable even about changes that may potentially improve my life.	.753
12. When someone pressures me to change something, I tend to resist it even if I think the changes may ultimately benefit me.	.632
13. I sometimes find myself avoiding changes that I know will be good for me.	.632
14. I often change my mind.	-.105
15. I don't change my mind easily.	.195
16. Once I've come to a conclusion, I'm not likely to change my mind.	.301
17. My views are very consistent over my time.	.051

Because the unidimensional model was not a good fit, I performed CFA on Oreg's (2003) four-factor model with my data. A second-order latent construct represented resistance to change and four first-order latent factors represented Oreg's four facets. As with the unidimensional model, I covaried the error terms for Items 14 and 15. All four first-order latent factors loaded significantly on the second-order latent construct ($p < .001$). All indicator variables loaded significantly on their expected factor ($p < .001$; except Item 14 was $p = .014$). The CFI (.915) was above the .9 minimum and the TLI (.899) was at the .9 minimum. The SRMR (.07) and RMSEA (.07) were below the .08 threshold. Based on these index values, I considered the four-factor model a good fit for the data. Estimated standardized regression weights for the four-factor model are presented in Table 5.

Table 5

Estimated Standardized Regression Weights for Oreg's Four-Factor Model

Item	Estimate
Factor 1 (routine seeking)	.762[a]
1. I generally consider changes to be a negative thing.	.648
2. I'll take a routine day over a day full of unexpected events any time.	.765
3. I like to do the same old things rather than try new and different ones.	.768
4. Whenever my life forms a stable routine, I look for ways to change it.	.541
5. I'd rather be bored than surprised.	.670
Factor 2 (emotional reaction)	.862[a]
6. If I were to be informed that there's going to be a significant change regarding the way things are done at work, I would probably feel stressed.	.820
7. When I am informed of a change of plans, I tense up a bit.	.886
8. When things don't go according to plans, it stresses me out.	.676
9. If my boss changed the criteria for evaluating employees, it would probably make me feel uncomfortable even if I thought I'd do just as well without having to do any extra work.	.584
Factor 3 (short-term thinking)	.953[a]
10. Changing plans seems like a real hassle to me.	.678
11. Often, I feel a bit uncomfortable even about changes that may potentially improve my life.	.808
12. When someone pressures me to change something, I tend to resist it even if I think the changes may ultimately benefit me.	.697
13. I sometimes find myself avoiding changes that I know will be good for me.	.696
Factor 4 (cognitive rigidity)	.350[a]
14. I often change my mind.	.166
15. I don't change my mind easily.	.537
16. Once I've come to a conclusion, I'm not likely to change my mind.	.806
17. My views are very consistent over time.	.437

[a]Estimates for first-order factor loadings on the second-order RTC construct.

LMX-7 Scale. I performed CFA on the seven items from the LMX-7 and all items loaded significantly to the latent construct (p < .001). The CFI (.969) and TLI (.954) were well above the .9 minimum. The SRMR (.03) was well below the .08 threshold, but the RMSEA (.112) was well above the .08 threshold. A model with less than 10 variables (or 10 items for an instrument) has a smaller number of degrees of freedom (Taasoobshirazi & Wang, 2016). Even in sample sizes of up to 1,000, decreased degrees of freedom may sometimes result in an RMSEA value that falsely indicates a poor fit (Kenny, Kaniskan, & McCoach, 2014). As such, Kenny et al. (2014) indicated that researchers should proceed with caution when using the RMSEA with small degrees of freedom. Because the CFI, TLI, and SRMR were well within their acceptable thresholds and the estimated standardized regression weights were all above .70, I considered the model a good fit with the data. Estimated standardized regression weights for the LMX-7 are presented in Table 6.

Table 6

Estimated Standardized Regression Weights for LMX-7

Item	Estimate
1. Do you know where you stand with your leader? Do you usually know how satisfied your leader is with what you do?	.784
2. How well does your leader understand your job problems and need?	.831
3. How well does your leader recognize your potential?	.844
4. Regardless of how much formal authority he/she has built into his/her position, what are the chances that your leader would use his/her power to help you solve problems in your work?	.794
5. Again, regardless of the amount of formal authority your leader has, what are the chances that he/she would "bail you," at his/her expense?	.794
6. I have enough confidence in my leader that I would defend and justify his/her decision if he/she were not present to do so.	.814
7. How would you characterize your working relationship with your leader?	.901

Assessing Emotions Scale. The Assessing Emotions Scale was created as a unidimensional model with 33 items (Schutte et al., 1998). CFA showed that all items loaded significantly to the latent construct ($p < .001$; except Item 6 was $p = .004$). The CFI (.641) and TLI (.617) were well below the .9 minimum. The SRMR (.081) and the RMSEA (.088) were slightly above the .08 threshold. Based on these index values, I did not consider the model a good fit with the data. Estimated standardized regression weights for the unidimensional model are presented in Table 7.

Table 7

Estimated Standardized Regression Weights for Unidimensional Assessing Emotions Scale

Item	Estimate
1. I know when to speak about my personal problems to others.	.406
2. When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.	.437
I expect that I will do well on most things I try.	.393
4. Other people find it easy to confide in me.	.472
5. I find it hard to understand the non-verbal messages of other people.	.567
6. Some of the major events of my life have led me to re-evaluate what is important and not important.	.173
7. When my mood changes, I see new possibilities.	.201
8. Emotions are one of the things that make my life worth living.	.291
9. I am aware of my emotions as I experience them.	.624
10. I expect good things to happen.	.478
11. I like to share my emotions with others.	.309
12. When I experience a positive emotion, I know how to make it last.	.599
13. I arrange events others enjoy.	.396
14. I seek out activities that make me happy.	.498
15. I am aware of the non-verbal messages I send to others.	.610
16. I present myself in a way that makes a good impression on others.	.627
17. When I am in a positive mood, solving problems is easy for me.	.467
18. By looking at their facial expressions, I recognize the emotions people are experiencing.	.690
19. I know why my emotions change.	.569
20. When I am in a positive mood, I am able to come up with new ideas.	.486
21. I have control over my emotions.	.458
22. I easily recognize my emotions as I experience them.	.638
23. I motivate myself by imagining a good outcome on tasks I take on.	.490
24. I compliment others when they have done something well.	.416
25. I am aware of the non-verbal messages other people send.	.681
26. When another person tells me about an important event in his or her life, I almost feel as though I experienced this event myself.	.471
27. When I feel a change in emotions, I tend to come up with new ideas.	.342
28. When I am faced with a challenge, I give up because I believe I will fail.	.370
29. I know what other people are feeling just by looking at them.	.535
30. I help other people feel better when they are down.	.443
31. I use good moods to help myself keep trying in the face of obstacles.	.509
32. I can tell how people are feeling by listening to the tone of their voice.	.566
33. It is difficult for me to understand why people feel the way they do.	.442

Several scholars have argued that the Assessing Emotions Scale is a multidimensional construct (Gignac, Palmer, Manocha, & Stough, 2005; Petrides & Furnham, 2000b; Zhoc et al., 2017). Because the unidimensional model was not a good fit, I performed CFA on Petrides and Furnham's (2000b) four-factor model. I chose Petrides and Furnham's multidimensional model because numerous other researchers have also evaluated this four-factor model (Kun, Balazs, Kapitany, Urban, & Demetrovics, 2010). A second-order latent construct represented emotional intelligence and four first-order factors represented one of the four facets of the Petrides and Furnham model.

All four of the first-order factors loaded significantly on the second-order latent construct ($p < .001$). All indicator variables loaded significantly on their expected factor ($p < .001$; except Item 6 was $p = .003$). The CFI (.783) and TLI (.767) were well below the required .9 minimum. The SRMR (.071) and RMSEA (.069) were below the maximum threshold of .08, however, based on the low CFI and TLI values, I did not consider Petrides and Furnham's four-factor model a good fit for the data. Although both the unidimensional and multidimensional models of the Assessing Emotions Scale showed poor fit with my data, I continued to use the scale to measure emotional intelligence in the hierarchical multiple regression because of its psychometric properties discussed in Chapter 3. Estimated standardized regression weights for the four-factor model are presented in Table 8.

Table 8

Estimated Standardized Regression Weights for Petrides and Furnham's Four-Factor Model of Emotional Intelligence

Item	Estimate
Factor 1	.822[a]
10. I expect good things to happen.	.619
3. I expect that I will do well on most things I try.	.485
23. I motivate myself by imagining a good outcome on tasks I take on.	.603
14. I seek out activities that make me happy.	.575
21. I have control over my emotions.	.491
12. When I experience a positive emotion, I know how to make it last.	.718
28. When I a faced with a challenge, I give up because I believe I will fail.	.427
2. When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.	.496
31. I use good moods to help myself keep trying in the face of obstacles.	.612
Factor 2	.740[a]
18. By looking at their facial expressions, I recognize the emotions people are experiencing.	.829
25. I am aware of the non-verbal messages other people send.	.823
29. I know what other people are feeling just by looking at them.	.651
19. I know why my emotions change.	.547
5. I find it hard to understand the non-verbal messages of other people.	.674
32. I can tell how people are feeling by listening to the tone of their voice.	.639
22. I easily recognize my emotions as I experience them.	.609
15. I am aware of the non-verbal messages I send to others.	.600
9. I am aware of my emotions as I experience them.	.565
Factor 3	.988[a]
11. I like to share my emotions with others.	.371
4. Other people find it easy to confide in me.	.525
13. I arrange events others enjoy.	.459
30. I help other people feel better when they are down.	.505
26. When another person tells me about an important event in his or her life, I almost feel as though I experienced this event myself.	.508
6. Some of the major events of my life have led me to re-evaluate what is important and not important.	.193
24. I compliment others when they have done something well.	.476
16. I present myself in a way that makes a good impression on others.	.651
1. I know when to speak about my personal problems to others.	.389
8. Emotions are one of the things that make my life worth living.	.299
33. It is difficult for me to understand why people feel the way they do.	.422
Factor 4	.591[a]
20. When I am in a positive mood, I am able to come up with new ideas.	.807
7. When my mood changes, I see new possibilities.	.385
27. When I feel a change in emotions, I tend to come up with new ideas.	.513
17. When I am in a positive mood, solving problems is easy for me.	.737

[a]Estimates for first-order factor loadings on the second-order RTC construct.

Detailed Analysis

RQ1: What is the relationship between leader–member exchange (as measured by

the LMX-7) and resistance to change (as measured by the Resistance to Change

Scale)?

$H_0 1$: There is no relationship between leader–member exchange (as

measured by the LMX-7) and resistance to change (as measured by the

Resistance to Change Scale).

$H_a 1$: There is a relationship between leader–member exchange (as

measured by the LMX-7) and resistance to change (as measured by the

Resistance to Change Scale).

Hierarchical multiple regression was performed to test the null hypotheses for the

first four research questions. I chose the option in SPSS to exclude the cases that had

missing values listwise. For the first step, I added resistance to change and the

demographic variables of age, gender, tenure, supervisory role, and education. For the

second step, I added leader–member exchange and for the third step I added emotional

intelligence. No statistical significance was found between resistance to change and the

demographic variables of tenure, $r(339) = -.03$, $p = .265$; gender, $r(339) = .08$, $p = .071$;

or education, $r(339) = .04$, $p = .247$. As a result, I reran the hierarchical multiple

regression and excluded tenure and education. However, I included gender in the analysis

because prior research has indicated mixed results for the correlation between gender and

resistance to change. Leader–member exchange was found to have a significant negative

correlation with resistance to change, $r(340) = -.11$, $p = .024$. Thus, the null hypothesis

that leader–member exchange would not be correlated to resistance to change was rejected.

RQ2: What is the relationship between emotional intelligence (as measured by the Assessing Emotions Scale) and resistance to change (as measured by the Resistance to Change Scale)?

$H_0$2: There is no relationship between emotional intelligence (as measured by the Assessing Emotions Scale) and resistance to change (as measured by the Resistance to Change Scale).

H_a2: There is a relationship between emotional intelligence (as measured by the Assessing Emotions Scale) and resistance to change (as measured by the Resistance to Change Scale).

I added emotional intelligence to the third block in the hierarchical multiple regression. Emotional intelligence was shown to have a significant negative correlation with resistance to change, $r(339) = -.26$, $p < .001$. Thus, the null hypothesis that emotional intelligence would not be correlated to resistance to change was rejected.

RQ3: What is the relationship between leader–member exchange (as measured by the LMX-7) and emotional intelligence (as measured by the Assessing Emotions Scale)?

$H_0$3: There is no relationship between leader–member exchange (as measured by the LMX-7) and emotional intelligence (as measured by the Assessing Emotions Scale).

Hₐ3: There is a relationship between leader–member exchange (as

measured by the LMX-7) and emotional intelligence (as measured by the

Assessing Emotions Scale).

Leader–member exchange was not found to be correlated with emotional

intelligence, $r(339) = .07$, $p = .098$. Thus, the null hypothesis that leader–member

exchange would not be correlated to emotional intelligence was accepted. Pearson

product-moment correlations are presented in Table 9.

Table 9

Pearson Product-Moment Correlations Between Independent and Dependent Variables

Variable	1	2	3	4	5
1. RTC	—				
2. Age	-.12*	—			
3. Gender	.08	.04	—		
4. Supervisory role	.13**	-.15**	.05	—	
5. LMX	-.11*	.01	-.01	-.10*	—
6. EI	-.26***	.14**	.10*	-.03	.07

Note. $n = 345$. RTC = resistance to change, LMX = leader–member exchange; EI = emotional intelligence.
*$p < .05$. **$p < .01$. ***$p < .001$.

RQ4: What is the relationship between leader–member exchange (as measured by

the LMX-7) and resistance to change (as measured by the Resistance to Change

Scale), controlling for demographic variables?

$H_0$4: There is no relationship between leader–member exchange (as

measured by the LMX-7) and resistance to change (as measured by the

Resistance to Change Scale), controlling for demographic variables.

H_a4: There is a relationship between leader–member exchange (as

measured by the LMX-7) and resistance to change (as measured by the

Resistance to Change Scale), controlling for demographic variables.

As with the first hierarchical multiple regression, I chose the option in SPSS to

exclude the cases that had missing values listwise. For the second hierarchical multiple

regression, resistance to change was entered as the dependent variable in the first step

(model) with age, gender, and supervisory role as the independent variables. Leader–

member exchange and emotional intelligence were entered into the second and third steps

(models), respectively. The demographic variables in Model 1 attributed to 3.4% of the

variance in resistance to change, $R^2 = .034$, $F(3, 341) = 3.96$, $p < .009$. The addition of

leader–member exchange to the demographic variables in Model 2 resulted in an

insignificant increase in R^2 of .009, $F(1, 340) = 3.17$, $p = .076$. Therefore, the null

hypothesis that leader–member exchange would not be correlated with resistance to

change when controlling for demographic variables was accepted.

The addition of emotional intelligence to the demographic variables and leader–

member exchange to determine the prediction of resistance to change (Model 3) resulted

in a statistically significant increase in R^2 of .059, $F(1, 339) = 22.25$, $p < .001$. The full

model of age, gender, supervisory role, leader–member exchange, and emotional

intelligence in predicting resistance to change was statistically significant, $R^2 = .102$, $F(5,$

$339) = 7.66$, $p < .001$, adjusted $R^2 = .088$.

The effect sizes for multiple regression are .02 for small, .15 for medium, and .35

for large (Cohen, 1998). Because of the broad range of effect sizes found in studies

similar to this study, I targeted a medium effect size ($f^2 = .15$). Cohen's (1998) formula

for calculating effect size for multiple regression is $f^2 = R^2/(1 - R^2)$. The effect size for the

overall regression model in this study was .11, approaching the targeted medium effect

size ($f^2 = .15$). A summary of the models is presented in Table 10.

Table 10

Summary of Models Used to Assess the Interactions Between the Predictor Variables and Resistance to Change

Predictor	R	R^2	Adjusted R^2	ΔR^2	ΔF	$df1$	$df2$	Sig. ΔF
Model 1	.183[a]	.034	.025	.034	3.96	3	341	.01
Model 2	.206[b]	.043	.031	.009	3.17	1	340	.07
Model 3	.319[c]	.102	.088	.059	22.25	1	339	<.001

Note. Constant = resistance to change. LMX = leader–member exchange; EI = emotional intelligence; RTC = resistance to change.
[a]Predictors: (constant), supervisor, gender, age. [b]Predictors: (constant), supervisor, gender, age, leader–member exchange. [c]Predictors: (constant), supervisor, gender, age, leader–member exchange, emotional intelligence.

The coefficients for each of the variables entered into the hierarchical multiple

regression steps are presented in Table 11. In the first step, age ($\beta = -.11$, $t = -1.95$, $p =$

.052) and gender ($\beta = .08$, $t = 1.46$, $p = .146$) were not statistically significant, while

supervisory role showed statistical significance ($\beta = .11$, $t = 2.1105$, $p = .036$). Leader–

member exchange did not show significant correlation with resistance to change when added to the second step and controlling for demographic variables (β = -.10, t = -1.78, p = .076). When emotional intelligence was added to age, gender, supervisory role, and leader–member exchange in the third step, only emotional intelligence showed significant correlation with resistance to change such that each unit increase in emotional intelligence resulted in a decrease of 0.01 units of resistance to change (β = -.25, t = -4.72, p < .001).

Table 11

Statistical Output of Hierarchical Multiple Regression

Predictor	Unstandardized Coefficients		Standardized coefficients			
	B	SE	β	t	p	ΔR^2
Step 1					.009	.034
Age	-.001	.00	-.11	-1.95	.052	
Gender	.14	.10	.08	1.46	.146	
Supervisor	.13	.06	.11	2.11	.036	
Step 2					.076	.009
Age	-.01	.00	-.11	-1.96	.051	
Gender	.14	.10	.08	1.47	.143	
Supervisor	.12	.06	.10	1.92	.055	
LMX	-.01	.00	-.10	-1.8	.076	
Step 3					<.001	.059
Age	-.00	.00	-.07	-1.40	.163	
Gender	.18	.09	.10	1.96	.051	
Supervisor	.11	.06	.10	1.97	.056	
LMX	-.01	.00	-.08	-1.51	.132	
EI	-.01	.00	-.25	-4.72	<.001	

Note. n = 345. LMX = Leader-Member Exchange; EI = Emotional Intelligence. Total R^2 = .102.

RQ5: What is the moderating effect of emotional intelligence (as measured by the Assessing Emotions Scale) on the relationship between leader–member exchange

(as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale)?

> H$_0$5: There is no moderating effect of emotional intelligence (as measured by the Assessing Emotions Scale) on the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale).
>
> H$_a$5: Emotional intelligence (as measured by the Assessing Emotions Scale) has a moderating effect on the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale).

I analyzed the moderating role of emotional intelligence on the relationship between leader–member exchange and resistance to change using the Hayes PROCESS macro. The interaction between leader–member exchange and emotional intelligence was found not to be statistically significant, $B = .00$, 95% CI [-.0008, .0005], $p = .665$. Therefore, I accepted the null hypothesis that emotional intelligence would not moderate the relationship between leader–member exchange and resistance to change.

Summary

The purpose of this study was to determine how emotional intelligence influences the relationship between leader–member exchange and resistance to change. SurveyMonkey was used as the platform to administer a demographic questionnaire, along with questions from three survey instruments. A total of 426 individuals accessed the online survey over a period of 1 week. Of these, 77 cases were removed because they

either did not fit the inclusion criteria, did not consent to the survey, had more than 50%

missing data, or were considered an outlier. Following the determination of the sample

characteristics of the demographic variables, analysis of the assumptions, attainment of

the descriptive characteristics for the survey instruments, and the completion of CFAs, I

evaluated each of the null hypotheses through the use of hierarchical multiple regression

and moderation analysis using the Hayes PROCESS macro.

The first null hypothesis was that leader–member exchange would not correlate

with resistance to change. I rejected the null hypothesis as leader–member exchange was

found to have a significant negative correlation with resistance to change. The second

null hypothesis was that there would be no relationship between emotional intelligence

and resistance to change. I also rejected this null hypothesis because emotional

intelligence was found to have a significant negative correlation with resistance to

change. The third null hypothesis was that leader–member exchange would not correlate

with emotional intelligence. This null hypothesis was accepted because no significant

relationship was found between leader–member exchange and emotional intelligence.

The fourth null hypothesis was that leader–member exchange would not correlate with

resistance to change when controlling for demographic variables. This null hypothesis

was accepted because the hierarchical multiple regression showed no significant

relationship between leader–member exchange and resistance to change when controlling

for the demographic variables of age, gender, and supervisory role. When I added

emotional intelligence to the demographic variables and leader–member exchange in the

hierarchical multiple regression model, none of the demographic variables or leader–

member exchange were significantly correlated to resistance to change, indicating emotional intelligence accounted for all of the 10.2% variance ($p < .001$) in resistance to change in the model. The fifth null hypothesis was that emotional intelligence would moderate the relationship between leader–member exchange and resistance to change. I accepted this null hypothesis because the Hayes PROCESS macro showed emotional intelligence had no significant interaction effect on the relationship between leader–member exchange and resistance to change.

In Chapter 5, I will discuss the study results in the context of the literature review in Chapter 2. Additionally, I will present the study limitations, recommendations for future research, and the implications for positive social change. Chapter 5 will end with a conclusion of the overall study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative, correlational research was to determine the moderating role of emotional intelligence on the relationship between leader–member exchange and resistance to change. The problem I addressed in this study was that researchers know that emotions play a role in change (see Dhingra & Punia, 2016; Mehta, 2016) but do not know how emotional intelligence affects the relationship between leader–member exchange and resistance to change. Researchers have studied leader–member exchange and resistance to change (Georgalis et al., 2015), emotional intelligence and resistance to change (Gelaidan et al., 2016), and leader–member exchange and emotional intelligence (Ordun & Acar, 2014); however, I found no extant literature explaining how emotional intelligence interacts with the relationship between leader–member exchange and resistance to change.

My selection of the predictor (i.e., leader–member exchange), criterion (i.e., resistance to change), and moderating (i.e., emotional intelligence) variables for this study was driven by Georgalis et al.'s (2015) recommendation to consider variables other than informational justice that may interact with the relationship between leader–member exchange and resistance to change. Demographic variables for this study included age, gender, tenure, supervisory role, and education. Tenure and education were excluded from the hierarchical multiple regression analysis because the Pearson product-moment correlation showed they had no significant correlation with resistance to change. The participants were a convenience sample of members of a research administration listserv

($n = 349$). I obtained data for the study from a demographic survey, along with participant scores from the Resistance to Change Scale, LMX-7, and Assessing Emotions Scale. Statistical analyses were completed in SPSS using hierarchical multiple regression, confirmatory factor analysis, and the Hayes PROCESS macro.

The findings of this quantitative, nonexperimental study indicated that there was a significant negative relationship between leader–member exchange and resistance to change, but this relationship became insignificant when controlling for the demographic variables of age, gender, and supervisory role. I also found a significant negative correlation between emotional intelligence and resistance to change. Leader–member exchange was not significantly related to emotional intelligence. When emotional intelligence was added in the final block of the hierarchical multiple regression model, only emotional intelligence had a significant correlation with resistance to change, indicating emotional intelligence accounted for all of the 10.2% variance ($p < .001$) in resistance to change in the model. Finally, emotional intelligence was not found to moderate the relationship between leader–member exchange and resistance to change.

Interpretation of Findings

I developed the following research questions to address the purpose of this study.

RQ1: What is the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale)?

RQ2: What is the relationship between emotional intelligence (as measured by the Assessing Emotions Scale) and resistance to change (as measured by the Resistance to Change Scale)?

RQ3: What is the relationship between leader–member exchange (as measured by the LMX-7) and emotional intelligence (as measured by the Assessing Emotions Scale)?

RQ4: What is the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale), controlling for demographic variables?

RQ5: What is the moderating effect of emotional intelligence (as measured by the Assessing Emotions Scale) on the relationship between leader–member exchange (as measured by the LMX-7) and resistance to change (as measured by the Resistance to Change Scale)?

Leader-Member Exchange and Resistance to Change

I found a significant negative correlation between leader–member exchange and resistance to change, $r(340) = -.11$, $p = .024$. This outcome was expected because the findings of previous studies indicated a relationship between leader–member exchange and change reactions. Mehta (2016) posited that leader–member exchange influences change reactions and proposed further testing of how this relationship interacts with change-related outcomes. Shamsudin et al. (2016) shared a comparable perspective and considered that employees who perceive low-quality leader–member exchange with their supervisors are less able to cope with change. My study confirmed both Mehta and

Shamsudin et al.'s proposed relationship between leader–member exchange and change. Arif et al. (2017) and Sindhu et al. (2017) also found a significant correlation between leader–member exchange and change, corroborating the findings of my study. The significant correlation between leader–member exchange and change reactions indicated that employees are less likely to resist change when they perceive a higher quality relationship with their supervisor.

Emotional Intelligence and Resistance to Change

I found a significant negative correlation between emotional intelligence and resistance to change, $r(340) = -.26$, $p < .001$. This relationship was anticipated and confirmed findings from previous studies discussed in Chapter 2. Malik and Masood (2015) found similar results and demonstrated a negative correlation between emotional intelligence and resistance to change. Additionally, Vakola et al. (2004) found a significant relationship between change attitudes and emotional intelligence and that emotional intelligence accounted for 8% ($p < .01$) of the variance in predicting change attitudes. Similar to Vakola et al., Di Fabio et al. (2014) found that emotional intelligence accounted for 10% of the variance in predicting change attitudes, $F(1, 269) = 33.04$, $p < .001$. The study finding of a negative correlation between emotional intelligence and resistance to change indicated employees are less likely to resist change when they have a higher level of emotional intelligence.

Leader-Member Exchange and Emotional Intelligence

I found no relationship between leader–member exchange and emotional intelligence. This outcome was not anticipated and disconfirmed findings from similar

studies. For example, Ordun and Acar (2014) found a significant positive relationship between leader–member exchange and emotional intelligence. Huang et al. (2010) also demonstrated a significant positive correlation between leader–member exchange and emotional intelligence. Karim (2008) showed emotional intelligence positively predicted leader–member exchange, and, in a subsequent study, Karim (2011) again found a significant positive correlation between emotional intelligence and leader–member exchange in which emotional intelligence accounted for 43% of the variance in leader–member exchange. Sears and Holmvall (2010) also found a significant positive correlation between leader–member exchange and emotional intelligence. My study findings indicated there is no relationship between an employee's emotional intelligence and their perceived relationship quality with their supervisor for the study sample of research administrators.

Leader-Member Exchange, Resistance to Change, and Demographic Variables

Although the Pearson's product-moment correlation showed a significant negative relationship between leader–member exchange and resistance to change, $r(340) = -.11$, $p = .024$, the correlation became insignificant when controlling for the demographic variables of age, gender, and supervisory role in the hierarchical regression model. The outcome for this statistical analysis was unanticipated based on the findings of studies discussed in Chapter 2 that showed a significant correlation between leader–member exchange and resistance to change (Mehta, 2016; Shamsudin et al., 2016; Sindhu et al., 2017). My review of the literature did not reveal any studies in which researchers had evaluated a moderating variable on the relationship between leader–member exchange

and resistance to change. As such, there were no parallel studies to compare the statistical analysis of controlling for demographic variables. However, when reviewing studies on the relationship between leader–member exchange and resistance to change in which researchers used a mediating model or included other variables in a regression analysis, a theme emerged in which the significant correlation between leader–member exchange and resistance to change became insignificant after other variables were added to the regression model (Ferreira et al., 2018; Georgalis et al., 2015; Xerri et al., 2015).

Xerri et al. (2015) tested the influence of perceived organizational support and leader–member exchange on change attitudes, affective commitment, and psychological well-being. Similar to my study, the Pearson's product-moment correlation in their study showed a significant relationship between leader–member exchange and change attitudes, but after testing the full model through structural equation modeling, the relationship between leader–member exchange and change attitudes became insignificant. Georgalis et al. (2015) tested the mediating role of organizational justice on the relationship between leader–member exchange and resistance to change. Parallel to my study, Georgalis et al. found a significant correlation between leader–member exchange and resistance to change. However, when testing the mediation model, Georgalis et al. demonstrated that the relationship between leader–member exchange and resistance to change was fully mediated by organizational justice. Using multiple regression analysis, Ferreira et al. (2018) found a significant negative relationship between supervisor-subordinate relationships and behavioral resistance to change, but after the relationship was tested through a mediation model, Ferreira et al. observed the relationship was fully

mediated by ego resilience. My study findings indicated that there may not be a direct relationship between leader–member exchange and resistance to change, and confounding variables may be the reason for the statistically significant correlation between the two variables.

Emotional Intelligence as a Moderator

I found no moderating effect of emotional intelligence on the relationship between leader–member exchange and resistance to change. This outcome was unanticipated because a review of the literature showed several studies that indicated a significant correlation between leader–member exchange and resistance to change (Mehta, 2016; Shamsudin et al., 2016; Sindhu et al., 2017) and emotional intelligence and resistance to change (Di Fabio et al., 2014; Malik & Masood, 2015; Vakola et al., 2004). Though it was unanticipated that emotional intelligence would not act as a moderator, the findings confirmed other studies discussed in Chapter 2 in which the direct relationship between leader–member exchange and resistance to change became insignificant when additional variables were added to the model (Arif et al., 2017; Georgalis et al., 2015; Xerri et al., 2015). This finding indicated that there may not be a direct relationship between leader–member exchange and resistance to change, and, as a result, emotional intelligence cannot moderate a direct relationship that does not exist.

Interpretation of Results in Relation to the Theoretical Framework

I used Oreg's multidimensional resistance-to-change model to provide the foundation for the design of this study. Oreg (2006) indicated that both contextual and individual factors contribute to reactions to change, and findings from several studies

have confirmed the multidimensional model (Michel et al. 2013; Radzi & Othman, 2016; Saruhan, 2013). Georgalis et al. (2015) demonstrated that informational justice mediated the relationship between leader–member exchange and resistance to change and recommended further research to consider additional variables that may interact with the relationship between leader–member exchange and resistance to change. Based on Oreg's multidimensional model, I chose to apply Georgalis et al.'s recommendation by evaluating the moderating role of emotional intelligence (i.e., the individual factor) on the relationship between leader–member exchange (i.e., the contextual factor) and resistance to change. I used leader–member exchange theory to emphasize the importance of high-quality dyadic relationships during the change process. My use of emotional intelligence theory showed how a person's ability to perceive, utilize, understand, and regulate emotions contributes to responses to change.

The findings of this study enhance the knowledge of the resistance-to-change discipline by confirming, disconfirming, and extending previous research. The results of this study confirmed Oreg's multidimensional model in that a significant correlation was found between leader–member exchange (i.e., the contextual factor) and resistance to change and between emotional intelligence (i.e., the individual factor) and resistance to change. Although numerous studies in the literature showed a significant relationship between leader–member exchange and emotional intelligence (Huang et al., 2010; Karim, 2011; Ordun & Acar, 2014), the findings of this study indicated there was no correlation between leader–member exchange and emotional intelligence in the study sample of research administrators.

The results of this study showed a significant correlation between leader–member exchange and resistance to change, but the relationship became insignificant when controlling for demographic variables. I could identify no other studies in the extant literature in which researchers had evaluated a moderating role of a variable on the relationship between leader–member and resistance to change. However, consistent with the findings of my study, numerous other studies showed that the relationship between leader–member exchange and resistance to change became insignificant when adding other variables to the model (Arif et al., 2017; Georgalis et al., 2015; Xerri et al., 2015). This study finding extends the discipline of resistance to change by indicating that the relationship between leader–member exchange and resistance to change may be significant only because of confounding variables. As a result, there may not be a direct relationship between leader–member exchange and resistance to change for emotional intelligence to moderate.

Limitations of the Study

The findings from this study support that there are interactions between the contextual factor of leader–member exchange and the individual factor of emotional intelligence in relation to resistance to change. I based this study on a correlational design, and although multiple regression can contribute to identifying the relationship between a dependent variable and one or more independent variables, a correlational study does not determine a causal relationship. Participants were obtained through a convenience sample of members of a research administration listserv. Although members of the research administration profession may face similar challenges of other

professions, the attitudes toward change may represent the cultural norms of the research administration profession. As such, the results of this study may be only generalizable to the research administration profession.

My use of a convenience sample may have introduced self-selection bias because the views of those that chose not to participate may have been different from those that did participate. A potential limitation is that I am a member of the research administration listserv used for the study sample and participants may have answered questions based on what they perceived I wanted to see rather than their true feelings. To minimize this limitation, I encouraged participants to provide responses based on their true feelings and reiterated that all responses were completely anonymous. A final limitation is the use of self-report instruments, which may have contributed to response bias. All the instruments used in this study were confirmed to be valid and reliable; however, bias could be minimized but not eliminated.

Recommendations

The purpose of this study was to determine how emotional intelligence influences the relationship between leader–member exchange and reactions to change. The findings from this study supported Oreg's multidimensional model that both contextual and individual factors contribute to resistance to change. A significant negative relationship was found between leader–member exchange (contextual factor) and resistance to change and also between emotional intelligence (individual factor) and resistance to change. There was no direct relationship found between leader–member exchange and resistance to change. Hierarchical multiple regression, which included age, gender, supervisory role,

leader member-exchange, emotional intelligence, and resistance to change, indicated in the final block that emotional intelligence accounted for all of the 10.2% variance ($p <$ .001) in resistance to change in the model. Based on the results of this study, I present several recommendations for future research.

This study indicated there was no direct relationship between leader–member exchange and resistance to change. To further extend research on Oreg's multidimensional model, I recommend exploring other contextual variables, such as perceived organizational support, organizational culture, and change history, that may interact with emotional intelligence and resistance to change in a mediating or moderating model or model that combines the two types of interactions. My use of a self-report instrument to measure emotional intelligence may have presented a bias because participant scores are based on how participants identify their ability to perceive, utilize, understand, and regulate emotions. A recommendation for future studies is to measure emotional intelligence using the MSCEIT because it is a performance-based test that measures emotional intelligence as an ability.

Females accounted for 89% of the sample in this study and this percentage is similar to the gender demographics of research administrators (85%) in another study (Shambrook et al., 2015). A recommendation for future research is to use a sample population that has a greater balance of participants for the gender demographic. For this quantitative, correlational study, I used a descriptive, cross-sectional, survey design in which all the questions were close-ended. The use of a qualitative design could reveal

viewpoints and perceptions on resistance to change that were not captured by the close-ended survey questions.

Implications

Positive Social Change

Effective change implementation is the accomplishment of meeting predetermined objectives, such as project deliverables and stakeholder satisfaction (Al-Haddad & Kotnour, 2015). Employee attitudes toward change are considered one of the most critical factors predicting the success of change initiatives (Nging & Yazdanifard, 2015). The results of this study contribute to positive social change at the organizational level because leaders may use the findings to adopt change management processes that positively influence change attitudes and change implementation outcomes. The findings of this study validate that both contextual and individual factors influence change attitudes.

As stated in the literature review, Appelbaum et al. (2017b) noted that the contextual factor of employee engagement is critical to change behaviors because engaged employees are more likely to participate in the change process. Employee participation can minimize ambiguity, low performance, and stress, thereby reducing resistance to change (Asnawi et al., 2014). Communication and trust in management were two other contextual factors frequently mentioned in the literature as antecedents to resistance to change (Akan et al., 2016; Oreg, 2006). Individual factors repeatedly mentioned in the literature included personality traits and emotional intelligence (Di Fabio et al., 2014; Vakola et al., 2004).

At the organizational level, a heightened understanding of the antecedents that influence change attitudes could be used to design change management processes that address these antecedents prior to implementing change. This study indicated that employees are less likely to resist change when they perceive a higher quality relationship with their supervisor and have a higher level of emotional intelligence. The study findings indicated the importance of adopting change management programs that include components that assist in increasing the quality of dyadic relationships and emotional intelligence. A positive social change implication for organizations is that leaders may integrate these practical applications in change management programs to minimize ambiguity, anxiety, and resistance during change implementation, thereby increasing the likelihood of achieving the organizational goals intended by the change.

Theoretical

This study is theoretically significant because the findings contribute to the body of knowledge on leader–member exchange, emotional intelligence, and resistance to change. The examination of these variables simultaneously offers an alternative perspective in considering the roles of dyadic relationships and emotional intelligence during change implementation. Similar to other studies, the direct relationship between leader–member exchange and resistance to change became insignificant when adding other variables to the model in this study. However, as discussed in the literature review, several studies showed that the combination of leader–member exchange and mediating variables significantly influences resistance to change (Arif et al., 2017; Georgalis et al., 2015; Xerri et al., 2015).

No relationship was found between leader–member exchange and emotional intelligence. This outcome was not expected because numerous studies in the literature showed a direct relationship between leader–member exchange and emotional intelligence (Karim, 2011; Ordun & Acar, 2014; Sears & Holmvall, 2010). This unanticipated finding may be an anomaly; however, it renders the unanswered question of whether the research administration profession is unique in how emotional intelligence influences leader–member exchange.

A review of the literature indicated several studies that showed a significant correlation between emotional intelligence and resistance to change (Di Fabio et al., 2014; Vakola et al., 2004). Similarly, a significant correlation was found between emotional intelligence and resistance to change, $r(340) = -.26$, $p < .001$, in this study and emotional intelligence accounted for all of the 10.2% variance ($p < .001$) in resistance to change in the model. The results of this study enhance existing theory based on the findings that varying levels of emotional intelligence augment the effects of resistance to change. This study has further theoretical implications in that it contributes to the validation of Oreg's multidimensional resistance-to-change model because it supports that both contextual (i.e., leader–member exchange) and individual factors (i.e., emotional intelligence) contribute to reactions to change.

Recommendations for Practice

Employee reactions to change directly influence the level of success for organizational change implementation (Stevens, 2013). About two thirds of change initiatives fail (Shin et al., 2012), and researchers have identified the need for studies

designed to discover processes that address the high failure rate of change initiatives (Grady & Grady, 2013; Heckmann et al., 2016). This study can be applied to professional practice because employees, managers, and organizational leaders may gain a broader and more accurate understanding of the role of leader–member exchange quality and emotional intelligence levels in change recipients' reactions to change by the knowledge made available from this study. The results of this research indicated the need for organizational leaders to incorporate training on how to increase leader–member exchange quality and emotional intelligence in change implementation programs. Additionally, this study theoretically supports the incentive for managers to advance their personal training on building high-quality relationships and increasing their emotional intelligence, thereby facilitating a positive experience for their team during the change process.

Conclusions

The problem addressed in this study was that researchers know that emotions play a role in change (Dhingra & Punia, 2016; Mehta, 2016) but do not know how emotional intelligence affects the relationship between leader–member exchange and reactions to change. The purpose of this quantitative, correlational research was to determine how emotional intelligence influences the relationship between leader–member exchange and reactions to change. I used a descriptive, cross-sectional, survey design and a nonprobability sample of participants who were members of a research administration listserv. This was an important study because 70% of change initiatives fail to achieve the anticipated outcomes (Hossan, 2015) and resistance to change is continuously cited in the

literature as one of the most common reasons for change failure (Mdletye et al., 2014; Michel et al., 2013; Rafferty et al., 2013).

Oreg's multidimensional resistance-to-change model was used to provide the foundation for the design of this study. Oreg (2006) indicated that both contextual and individual factors contribute to reactions to change and findings from several studies have confirmed this multidimensional model (Michel et al., 2013; Radzi & Othman, 2016; Saruhan, 2013). Leader–member exchange and emotional intelligence were used as the contextual and individual factors for this study, respectively. Leader–member exchange theory was used to emphasize the importance of high-quality dyadic relationships during the change implementation process. Emotional intelligence theory showed how an individual's ability to perceive, utilize, understand, and regulate emotions contributes to responses to change.

The findings of this quantitative, nonexperimental study indicated that there was a significant negative relationship between leader–member exchange and resistance to change, but this relationship became insignificant when controlling for the demographic variables of age, gender, and supervisory role. A significant negative correlation was found between emotional intelligence and resistance to change but no relationship was found between emotional intelligence and leader–member exchange. When emotional intelligence was added in the final block of the hierarchical multiple regression model, emotional intelligence accounted for all of the 10.2% variance ($p < .001$) in resistance to change in the model. The study findings indicated emotional intelligence did not moderate the relationship between leader–member exchange and resistance to change.

This study further confirmed Oreg's multidimensional resistance-to-change model in that both a contextual factor (i.e., leader–member exchange) and an individual factor (i.e., emotional intelligence) were found to influence resistance to change. Although combining demographic variables with leader–member exchange and resistance to change resulted in an insignificant model for this study, a review of the literature indicated that the combination of leader–member exchange and mediating variables significantly influences reactions to change (Arif et al., 2017; Georgalis et al., 2015). Because my study did not indicate a direct relationship between leader–member exchange and resistance to change, the findings can be used as a foundation to greater extend Oreg's multidimensional model through the exploration of other contextual variables, such as perceived organizational support, organizational culture, and change history, that may interact with emotional intelligence and resistance to change in a mediating or moderating model.

My study supported that employees are less likely to resist change when they perceive a higher quality relationship with their supervisor and have a higher level of emotional intelligence. The information from this study supports an incentive for motivating managers to advance their personal training in building high-quality relationships with their direct reports and incorporating emotional intelligence skill building in team exercises. The study results indicated the importance of organizational leaders adopting change management programs that include components on increasing the quality of dyadic relationships and emotional intelligence. The integration of these practical applications in change management programs may assist in reducing ambiguity,

anxiety, and resistance during change implementation, thereby increasing the likelihood

of achieving the organizational goals intended by the change.

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Appendix A: Permission to Use the Resistance to Change Scale

From: Shaul Oreg < XXXXXXXX>

Sent: Wednesday, January 17, 2018 12:15 PM

To: Michelle Smith

Subject: Re: Permission to Use Resistance to Change Scale

Dear Michelle. Please feel free to use the scale for your research.

Shaul

On 17 Jan 2018, at 18:43, Michelle Smith < XXXXXXXX> **wrote:**

Dr. Oreg,

I am a PhD candidate in the Walden University Management program, with a

concentration in Leadership and Organizational Change. The topic of my dissertation is,

"Leader-Member Exchange and Resistance to Change: Moderating Role of Emotional

Intelligence." I believe your Resistance to Change Scale from your 2003 article is well-

suited for my research project, and I am seeking your permission to use this instrument in

my dissertation. Thank you for your consideration.

Kind regards,

Michelle Hinnant Smith

Appendix B: Permission to Use the LMX-7

From: Uhl-Bien, Mary <XXXXXXXX>

Sent: Wednesday, January 17, 2018 1:26 PM

To: Michelle Smith

Subject: Re: Permission to Use LMX-7

It is a publicly available measure so you are free to use it.

Best,

Mary

From: Michelle Smith <XXXXXXXX>

Sent: Wednesday, January 17, 2018 10:53 AM

To: Uhl-Bien, Mary

Subject: Permission to Use LMX-7

Dr. Uhl-Bien,

I am a PhD candidate in the Walden University Management program, with a

concentration in Leadership and Organizational Change. The topic of my dissertation is,

"Leader-Member Exchange and Resistance to Change: Moderating Role of Emotional

Intelligence." I believe your LMX-7 scale from the 1995 Graen and Uhl-Bien publication

is well-suited for my research project, and I am seeking your permission to use this

instrument in my dissertation. Thank you for your consideration.

Kind regards,

Michelle Hinnant Smith

Appendix C: Permission to Use the Assessing Emotions Scale

From: Nicola Schutte <XXXXXXXX>

Sent: Wednesday, January 17, 2018 7:42 PM

To: Michelle Smith

Subject: RE: Permission to Use Assessing Emotions Scale

Thank you for your message.

You are welcome to use the assessing emotions scale (SSEIT); this message provides

permission of use. Please find attached the manuscript version of a published chapter

that contains the scale and background information, including regarding scoring,

reliability and validity.

Kind regards, Nicola Schutte

From: Michelle Smith [mailto:XXXXXXXX]

Sent: Thursday, 18 January 2018 3:30 AM

To: Nicola Schutte <XXXXXXXX>

Subject: Permission to Use Assessing Emotions Scale

Dr. Schutte,

I am a PhD candidate in the Walden University Management program, with a

concentration in Leadership and Organizational Change. The topic of my dissertation is,

"Leader-Member Exchange and Resistance to Change: Moderating Role of Emotional

Intelligence." I believe your Assessing Emotions Scale is well-suited for my research

project, and I am seeking your permission to use this instrument in my dissertation.

Thank you for your consideration.

Michelle Hinnant Smith

Appendix D: Demographic Survey

1. What is your age? _____

2. What is your gender?
☐ Male
☐ Female

3. How many years of research administration experience do you have? _____

4. Do you directly supervise other employees?
☐ Yes
☐ No

5. What is your highest level of education?
☐ High School or GED
☐ Some College Credit
☐ Associate Degree
☐ Bachelor's Degree
☐ Master's Degree
☐ Doctoral Degree

Appendix E: LMX-7 Scale

Test Format: Continuous scale with total score as the sum of all answers (1 left to 5 right).

1. 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

2. 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

3. How well does your leader recognize your potential?
       Not at All   A Little   Moderately   Mostly   Fully

4. Regardless of how much formal authority he/she has built into his/her position, what are the chances that your leader would use his/her power to help you solve problems in your work?
       None   Small   Moderate   High   Very High

5. Again, regardless of the amount of formal authority your leader has, what are the chances that he/she would "bail you," at his/her expense?
       None   Small   Moderate   High   Very High

6. I have enough confidence in my leader that I would defend and justify his/her decision if he/she were not present to do so?
       Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

7. How would you characterize your working relationship with your leader?
       Extremely   Worse Than   Better Than   Extremely
         Ineffective   Average   Average   Average   Effective

From "Relationship-based approach to leadership: Development of leader–member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective," by G. B. Graen, and M. Uhl-Bien, 1995, *The Leadership Quarterly, 6*(2), p. 237. Copyright 1995 by Elsevier Science. Adapted with permission.

Appendix F: Assessing Emotions Scale

1. I know when to speak about my personal problems to others.
2. When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.
3. I expect that I will do well on most things I try.
4. Other people find it easy to confide in me.
5. I find it hard to understand the non-verbal messages of other people.
6. Some of the major events of my life have led me to re-evaluate what is important and not important.
7. When my mood changes, I see new possibilities.
8. Emotions are one of the things that make my life worth living.
9. I am aware of my emotions as I experience them.
10. I expect good things to happen.
11. I like to share my emotions with others.
12. When I experience a positive emotion, I know how to make it last.
13. I arrange events others enjoy.
14. I seek out activities that make me happy.
15. I am aware of the non-verbal messages I send to others.
16. I present myself in a way that makes a good impression on others.
17. When I am in a positive mood, solving problems is easy for me.
18. By looking at their facial expressions, I recognize the emotions people are experiencing.
19. I know why my emotions change.
20. When I am in a positive mood, I am able to come up with new ideas.
21. I have control over my emotions.
22. I easily recognize my emotions as I experience them.
23. I motivate myself by imagining a good outcome to tasks I take on.
24. I compliment others when they have done something well.
25. I am aware of the non-verbal messages other people send.
26. When another person tells me about an important event in his or her life, I almost feel as though I experienced this event myself.
27. When I feel a change in emotions, I tend to come up with new ideas.
28. When I am faced with a challenge, I give up because I believe I will fail.
29. I know what other people are feeling just by looking at them.
30. I help other people feel better when they are down.
31. I use good moods to help myself keep trying in the face of obstacles.
32. I can tell how people are feeling by listening to the tone of their voice.
33. It is difficult for me to understand why people feel the way they do.

Appendix G: Resistance to Change Scale

Test Format: Respondents use a 6-point scale in which a 1 represents *strongly disagree* and a 6 represents *strongly agree*. Items 4 and 14 are reverse scored.

Routine Seeking
1. I generally consider changes to be a negative thing.
2. I'll take a routine day over a day full of unexpected events any time.
3. I like to do the same old things rather than try new and different ones.
4. Whenever my life forms a stable routine, I look for ways to change it.
5. I'd rather be bored than surprised.

Emotional Reaction
6. If I were to be informed that there's going to be a significant change regarding the way things are done at work, I would probably feel stressed.
7. When I am informed of a change of plans, I tense up a bit.
8. When things don't go according to plans, it stresses me out.
9. If my boss changed the criteria for evaluating employees, it would probably make me feel uncomfortable even if I thought I'd do just as well without having to do any extra work.

Short-Term Thinking
10. Changing plans seems like a real hassle to me.
11. Often, I feel a bit uncomfortable even about changes that may potentially improve my life.
12. When someone pressures me to change something, I tend to resist it even if I think the change may ultimately benefit me.
13. I sometimes find myself avoiding changes that I know will be good for me.

Cognitive Rigidity
14. I often change my mind.
15. I don't change my mind easily.
16. Once I've come to a conclusion, I'm not likely to change my mind.
17. My views are very consistent over time.

From "Dispositional resistance to change: Measurement equivalence and the link to personal values across 17 nations," by S. M. Oreg, M. M. Bayazit, M. L. Vakola, L. A. Arciniega, A. R. Armenakis, R. Barkauskiene…K. van Dam, 2008, *Journal of Applied Psychology, 93*(4), p 939. Copyright 2008 by American Psychological Association. Adapted with permission.