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Harnessing Pygmalion in Reverse: The Effect of Older Workers' Expectations on Their Younger Supervisors' Leadership Behavior

Mary Frances Hair Collins

HARNESSING PYGMALION IN REVERSE:
THE EFFECT OF OLDER WORKERS' EXPECTATIONS ON THEIR
YOUNGER SUPERVISORS' LEADERSHIP BEHAVIOR

DISSERTATION

Presented in Partial Fulfillment of the Requirement for
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Barry University

By

Mary Frances Hair Collins, A.A., B.S.B.A., M.S.

* * * *

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APPROVED BY:

Betty Hubschman, Ed.D.
Chairperson, Dissertation Committee

Kitty Eeltink, Ph.D.
Member, Dissertation Committee

Paul Rendulic, Ph.D.
Member, Dissertation Committee

Sister Evelyn Piche, O.P., Ph.D.
Dean, Adrian Dominican School of Education

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ABSTRACT

HARNESSING PYGMALION IN REVERSE: THE EFFECT OF OLDER WORKERS' EXPECTATIONS ON THEIR YOUNGER SUPERVISORS' LEADERSHIP BEHAVIOR

Mary Frances Hair Collins

Barry University, 2006

Dissertation Chairperson: Dr. Betty Hubschman

Purpose

Current demographic trends show the workforce is growing older as a group and the proportion of younger supervisors is increasing. Although negative stereotypes exist about older workers, research supports their positive attributes. Changing demographics have created a need for additional studies of VDL, LMX, and relational demography. Studies of the Pygmalion effect and Pygmalion in reverse can also contribute to our understanding of age-reversed work relationships. Research confirms the mutual effects of supervisory expectations and subordinate expectations. Considering the positive attributes of older workers, they may have high expectations of their younger supervisors. The purpose of this research study is to determine if older workers have higher

expectations than younger workers of their younger supervisor, thus eliciting more effective leadership behaviors.

Method

This study measured the differences between the workers' expectations and the supervisors' leadership behavior among four categories: (1) older worker-younger supervisor; (2) older worker-older supervisor; (3) younger worker-younger supervisor; and, (4) younger worker-older supervisor. Workers' expectations were measured by administering the new General Self-Efficacy Scale (Chen, Gully, & Eden, 2001) and the Leadership Effectiveness Instrument (Gurie, 2002). Leadership behavior was measured by administering the Leadership Practices Inventory-Observer (LPI-O) (Kouzes and Posner, 2003). Leadership qualities measured by Kouzes and Posner's LPI-O are: 1) propensity to seek out challenges; 2) enlist others to follow their vision; 3) create an atmosphere of trust and mutual respect; 4) set an example for others to follow and create opportunities for victory; and (5) encourage others by recognizing contributions and celebrating their accomplishments. Factor analysis (Hair, Black, Babin, Anderson & Tatham, 2006) was conducted on leadership behavior, subordinate expectations, and subordinate self-efficacy. ANOVA (Hair et al., 2006) was used to examine the relationships among the instruments measuring leadership expectations, self-efficacy and leadership behaviors. Chi-square and ANOVA were used to examine the workers' demographic attributes of age, gender, tenure and educational background.

The research questionnaires were administered by a survey research firm via Internet to workers who were employed in a business environment that employed 100 or more employees. The research focused on supervisor-subordinate dyads in the workplace.

This research focused on older workers with a younger supervisor compared to younger workers with a younger supervisor. For purposes of this research, the older worker was defined as a worker age 50 or above and the younger supervisor was defined as age 39 or below.

Major Findings

The major findings of this research study for the population surveyed were that older workers did not expect more than younger workers expected from their younger supervisors, older workers did not rate their younger supervisors' leadership behavior significantly different than younger workers did, the workers' self-efficacy did contribute to their perception of their younger supervisors' leadership behavior, and the demographic attributes of age, gender, worker tenure, and educational level did not contribute to the workers' perception of the leadership behavior of their younger supervisors. This research study did not confirm the researcher's hypothesis that older workers have higher expectations than do younger workers of their younger supervisor, thus harnessing Pygmalion in reverse and bringing about better leadership behavior from their supervisor. However, the researcher believes that this research study will lead to further scholarly research of the reverse Pygmalion effect in the older worker-younger supervisor dyad and add to the body of knowledge in the areas of the older worker and supervisor-subordinate dyadic relationships in the workplace.

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CHAPTER I

THE PROBLEM

Introduction

There is presently a demographic revolution emerging in the United States -- the aging of America's workforce. The Bureau of the Census has published statistics showing that during the next five years the younger age groups will decline significantly, while those in older age groups will increase significantly (Fullerton & Toossi, 2001). They also published statistics that show older workers in the civilian labor force will increase at a much faster rate than younger workers, especially in workers age 55 and older. Traditionally, older workers have been stereotyped as less productive workers than younger workers; however, research has found that older workers have greater pride in their work and attribute more moral importance to work (Vecchio, 1993). As the age of the workforce advances, there is also a new phenomenon of increasing numbers of older workers reporting to a younger supervisor. This new trend of older workers reporting to a younger supervisor is the result of the prevalence of companies merging or reorganizing (Shore, Cleveland & Goldberg, 2003) and because there are fewer younger employees to fill entry-level jobs (Perry, Kulik & Zhou, 1999). Sopranos (1999) reported that it is now common to find workers in their fifties reporting to supervisors in their twenties or thirties. This is the result of younger employees being promoted into management positions. This trend is attributed to the younger supervisor's education in strategic planning and information technology skills (Sopranos, 1999).

In the past, there has been a tradition that the manager is normally older and more experienced than their subordinates (Shore et al., 2003). Therefore, this new demographic

trend violates expected age norms, which state that older workers are more experienced and normally supervise younger, inexperienced workers (Perry et al., 1999). Formerly, traditional age norms were primarily based on seniority, while today they are often based more on technical expertise or advanced education. Hirsch (1990) identified distinctive problems associated with the older worker-younger supervisor dyad, such as the younger supervisor feeling they are giving orders to their grandparents. However, Perry et al. found that workers who were older than their supervisor missed less work and displayed characteristics of good citizenship more often than coworkers who were younger than their supervisor. They also found that the younger supervisor may be perceived as not having the wisdom and training to lead their older subordinates, nor the contacts within the company to obtain resources. Perry et al. proposed that a supervisor who is younger than the subordinate may violate norms for status, age, and the career timetable for supervisory positions, leading to distorted perceptions for both the supervisor and subordinate.

Demographic attributes in the supervisor-subordinate dyad are becoming increasingly important to the organization of the future. Tsui and O'Reilly (1989) studied demographic characteristics of the members of dyads. They coined the term *Relational Demography* to denote their comparisons of demographic differences and similarities between members in a dyad that regularly interact. They proposed that studying these demographic dissimilarities and similarities in the supervisor-subordinate dyad could provide important information to the organization about the behavior of the dyad and resulting job outcomes.

Another line of research that could be useful in understanding the demographic relationship of the supervisor-subordinate dyad is known as the *Pygmalion effect*. The term *Pygmalion* had its origins in Greek mythology. Pygmalion was a Greek prince from Cyprus who carved an ivory statue in the image of his ideal woman. It was so perfect that he fell in love with the statue and named it Galatea. Because of Pygmalion's strong love for Galatea, the Goddess of Love, Aphrodite, brought the statue to life. Pygmalion loved the statue so much that his expectations and desires changed the statue into a person, thus creating the Pygmalion effect or a self-fulfilling prophecy (Loftus, 1995; Murphy, Campbell & Garavan, 1999; Rosenthal, 1973).

Since that time, the Pygmalion effect has been studied in various settings and disciplines including educational and training settings, the workplace, behavioral sciences, economics, psychotherapy, the military, and industrial settings. In more recent times, the Pygmalion effect has been defined as the "enhanced performance of subordinates of whom supervisors expect more" (Eden, 1984, p. 64). The theme common to the Pygmalion effect is that one person's vision, prophecy, or expectation of another person ultimately causes the expectation to come true (Eden, 1990).

Researchers have also identified a *reverse Pygmalion effect* in which subordinate performance and expectations influence the leadership behavior of their supervisor (Eden, 1984; Livingston, 2002; Murphy et al., 1999; White & Locke, 2000). Eden (1984) proposed that a subordinate's high performance might arouse high expectations in the supervisor, triggering better leadership on the part of the supervisor. He coined the phrase *harnessing Pygmalion in reverse* to define this effect. Eden proposed that subordinates could actually mold their supervisor's behavior. In their research on the closely related

concept of *followership*, Gilbert and Hyde (1988) proposed that “leadership may be a *consequence* of subordinate behavior” (p. 962). While Eden’s (1984) theory of harnessing Pygmalion in reverse postulated that the high performance of a subordinate may impact the supervisor’s leadership behavior, in a later published book Eden (1990) speaks of a similar concept in which a subordinate’s high *expectations* toward their supervisor impact the effectiveness of their supervisor which he referred to as “upward expectancy effects” (p. 196). In a review of published articles on the Pygmalion effect and related research on the *followers* of charismatic leaders, White and Locke (2000) recommended that more attention be directed to the supervisor-subordinate relationship. They proposed that it is the interaction between leaders and followers that contributes to the Pygmalion effect, and that studying the characteristics of followers could lead to greater understanding of this concept.

Many researchers have documented the importance of followership, the Pygmalion effect, and harnessing Pygmalion in reverse. The role of expectations is central to these theories, whether it is the supervisor’s expectations of a subordinate or the subordinate’s expectations of their supervisor. In studies of the implications of the Pygmalion effect in educational, training and workplace settings, Murphy et al. (1999) related a discussion between two aeronautical engineers who were discussing the aerodynamics of the bumblebee. The first engineer stated, “It’s aerodynamically impossible for the bumblebee to fly. His wings are much too short and his body way too bulky for him to even lift off the ground. How do you suppose he does it?” The second engineer responded, “Maybe nobody ever told him he couldn’t fly”(p. 249). This discussion illustrates the importance of the role of expectations in one situation. It has

been found that expectations play a major role in many diverse situations, such as the supervisor-subordinate relationship. Therefore, studies of the Pygmalion and reverse Pygmalion effects in this dyad are becoming more important as the demographics of the workplace continue to evolve into a more diverse workforce in which older workers will increasingly report to younger supervisors.

Background

Population and labor statistics point to the fact that many of America's most experienced workers will soon be eligible to retire, and there won't be enough knowledgeable, skilled workers to replace them. Peter Drucker, known as the father of management, has stated that the most important factor to businesses in the future will be demographics (Drucker, 1997). Others have predicted the magnitude of the problem that will be created by changing demographics. A new phenomenon that has been noted by researchers is the incidence of an older worker reporting to a much younger supervisor (Perry et al., 1999; Shore et al., 2003). Statistics also point to a more demographically diverse workforce where people more frequently work with others who are different in age, race, gender, and ethnicity (Tsui, Egan & O'Reilly, 1992). Tsui, Xin and Egan (1996) found that there has been little analysis of demographic diversity between supervisors and subordinates. They argued that understanding this relationship could improve the relationship between employees and the organization. Research has also shown that the Pygmalion and reverse Pygmalion theories can be impacted by the relationship in the supervisor-subordinate dyad (Eden, 1984).

The Pygmalion effect in its most basic form is simply an *expectation* by one person about another person that brings about a *new behavior* leading to an *outcome* that

fulfills and reinforces the expectation (Eden, 1990). According to Eden, managers are prophets who unknowingly initiate the Pygmalion effect with either positive or negative expectations. The Pygmalion effect has also been referred to as the *Experimenter Effect* in studies by Robert Rosenthal (1985). His doctoral research into the self-fulfilling prophecy made use of a standard before-after experimental design with three groups of subjects. In comparing scores before and after the experiment, he found significant pretest differences between the three groups. Since there was no difference between the way the pre-test was administered to the participants, the only possible explanation he found was that he had somehow unknowingly conveyed to them his research hypothesis. These pretest differences were totally unexpected and led Rosenthal to the conclusion that experimenters may actually confirm their hypotheses by somehow conveying their expectations to the subjects of their experiment. Eden (1990) stated that, “scientists’ hypotheses are expectations” (p. 10), a statement which brings up numerous questions and concerns about standard experimental procedures for research projects. One concern is that researchers’ expectations could actually cause the confirmation of their hypotheses.

There is also research on the related concept of harnessing Pygmalion in reverse (Eden, 1984) that refers to a subordinate’s performance influencing the expectations of the supervisor, leading to improved leadership behavior of the supervisor. Eden (1990) also proposed that a subordinate’s high expectations toward their supervisor impact the effectiveness of the supervisor. Other researchers have stated that the behavior of the leader could actually be caused by the behavior of the subordinate (Gilbert & Hyde, 1988; Herold, 1977; Farris & Lim, 1969), a concept that is called followership.

Statement of the Problem

Research in relational demography and the reverse Pygmalion effect as it relates to the older worker-younger supervisor dyad is needed because of the relatively new phenomenon of older workers reporting to a much younger supervisor. The incidence of an older worker reporting to a younger supervisor is a new dyad that has been noted by many researchers (Perry et al., 1999; Shore et al., 2003; Tsui & O'Reilly, 1989; Tsui et al., 1996) and reporters. For instance, Fitter (1994) reported that many older workers will be working for younger supervisors who are the same age as their children. Hirsch (1990) found that younger supervisors will be reluctant to give orders to a worker that is as old as the younger supervisor's grandparents. Problems such as these, as well as stereotypes about older workers, have created a need for more research about issues affecting the older worker.

Research on relational demography shows that demographic similarities and differences, such as age, are important in the supervisor-subordinate relationship and have a great impact on the organization (Tsui & O'Reilly, 1989; Tsui et al., 1996; Vecchio, 1993). In spite of these research findings, there has been little research on the effects of age differences and the behavior of leaders (Gilbert, Collins & Brenner, 1990), thus creating a need for the proposed research. Tsui et al. (1996) combined research from the disciplines of relational demography, vertical dyad linkage, and leader-member exchange theory. They found that demographic similarities and differences contribute to the supervisor-subordinate relationship and affect subordinate performance and subordinate support for their supervisor. This has created a need for further understanding

of the demographic relationship between subordinates and supervisors and the impact these relationships will have on leadership behavior and work outcomes.

Research on the reverse Pygmalion effect has also led researchers to recommend more research into the effects of subordinate expectations on their supervisor's behavior. In research on the effect of subordinate performance and expectations on supervisory behavior, Eden and Shani (1982) recommended future research to further investigate the mutual effects of subordinate performance and leadership behavior. They proposed that expectancy training of subordinates could cause them to bring about more effective leadership from their supervisors. There is a need for research to determine if employees can be trained to improve supervisory leadership behavior. This is important because it could lead to new and innovative training in the workplace.

Purpose of the Study

The purpose of this study was to determine if older workers have higher expectations than younger workers of their younger supervisors, leading to better leadership and management behavior from younger supervisors. If a reverse Pygmalion effect exists primarily in the older worker-younger supervisor dyad, it could inform organizations of the value of an older workforce, leading to a new appreciation of the older worker and enhanced training for older workers. There could also be an additional benefit to organizations through enhanced leadership and management development training of all employees.

Research on the reverse Pygmalion effect addresses the extent to which subordinate performance impacts leadership styles (Eden, 1984). Studies have shown that workers can impact the leadership behavior of their supervisor, which, in turn, impacts

the success of the organization (Eden, 1984; Eden & Shani, 1982; Lowin & Craig, 1968). Changing demographics point to a workforce in which the average age of the worker is quickly increasing (Fullerton & Toossi, 2001), and a new phenomenon of older workers reporting to a younger supervisor will become more prevalent (Perry et al., 1999). This study contributes to our understanding of demographic relationships between subordinates and supervisors and the impact these relationships will have to the organization in the areas of leadership behavior and work outcomes.

In a study of a closely related concept called followership, Brown and Thornborrow (1996) found that employees can be trained to be more effective in the role of follower. White and Locke (2000) proposed that studying the interaction between followers and leaders could lead to greater understanding of followership and the Pygmalion effect. Research studies to discover if older workers elicit better leadership behavior than younger workers from their younger supervisors is important to the field of human resource development because it could inform organizations of the value of an older workforce, lead to new and innovative training methods for older and younger workers and the field of management development, and contribute to better overall performance for the organization. In addition, there is the potential of using studies of followership and the reverse Pygmalion effect to add to our understanding of relational demography and leader-member exchange theory. The need to study relational demography and a workforce that is demographically different is becoming increasingly important because in today's business environment people more frequently work with others who are different in age, race, gender, and ethnicity (Tsui et al., 1992).

Rationale and Theoretical Framework

Changing demographics show an increasing incidence of younger supervisors, and the workforce is growing older as a group. Many myths and negative stereotypes exist about the older worker, but research supports the positive characteristics of older workers. Technology has introduced younger workers to positions in management at an earlier time in their career. Demographics point to an increase in older workers reporting to younger supervisors. Studies of the relationship between the supervisor and subordinate, based on the similarity-attraction paradigm identified by Byrne (1971), show how important this relationship is to organizations. Research studies of the constructs of vertical dyad linkage, leader-member exchange theory and relational demography have investigated how the relationships in supervisor-subordinate dyads impact organizations and confirmed the importance of these relationships (Tsui et al., 1996). There is another stream of literature that focuses on the supervisor-subordinate relationship that holds the potential to explain these new age-reversed work relationships in a new way. These studies of the Pygmalion effect have shown that supervisory expectations impact the performance of the subordinate, called the Pygmalion effect (Eden, 1984). Studies have also shown that a subordinate's expectations of their supervisor has an impact on the leadership behavior of the supervisor, called reverse Pygmalion (Eden, 1984, Eden & Shani, 1982; White & Locke, 2000) and followership (Gilbert & Hyde, 1988; White & Locke, 2000). Some studies support the theory that the employee who is older than their supervisor is more supportive (Vecchio, 1993) than younger employees. Other studies found that the older worker reacts more positively and has better citizenship behavior than younger employees (Perry et al., 1999). If older workers have higher expectations

than younger workers of their younger supervisors, they may bring about better leadership and management behavior from their supervisors, thus positively shaping the younger supervisor's leadership behavior.

Research Questions

This research focused on two overlooked aspects of the Pygmalion effect: (1) the older worker-younger supervisor dyad; and (2) harnessing Pygmalion in reverse. The stated purpose of this research was to determine if older workers have higher expectations than younger workers of their younger supervisors. To determine this, the research questions addressed were: (1) to what extent do older workers expect more effective leadership than younger workers from their younger supervisor?; (2) do younger supervisors of older workers display more effective leadership behavior than younger supervisors of younger workers?; (3) to what extent does subordinate self-efficacy contribute to the leadership behavior of the younger supervisor?; and (4) do the demographic attributes of a worker's age, gender, tenure, and educational level have a relationship to the leadership behavior of the younger supervisor?

Statement of Hypotheses

1. Older workers with younger supervisors will expect more effective leadership than will younger workers with younger supervisors.
2. There is a statistically significant difference between the leadership behavior of the younger supervisor of an older worker versus the younger supervisor of a younger worker.
3. A relationship exists between subordinate self-efficacy and the supervisor's leadership behavior.

4. The leadership behavior of the younger supervisor is affected by the following worker demographic attributes: (a) age; (b) gender; (c) worker tenure; and (d) educational level.

Significance of the Study to Human Resource Development

Research to discover if older workers expected more effective leadership behavior from their younger supervisors was important to the field of human resource development because changing demographics are forcing organizations to deal with new combinations of age groups. Although the stated hypotheses were not confirmed for this research study, additional research regarding the older worker-younger supervisor dyadic relationship could impact organizations by further demonstrating the value of the older employee. The researcher believes that future research performed in much larger, more industrial and high tech industries could yield a more definitive picture of this new, emerging relationship in the workplace. Although the older worker-younger supervisor dyad existed in the smaller businesses surveyed in this study, it is felt that those younger supervisors did not have the knowledge and experience that would be expected in larger, high tech industries. It may also be true that the younger supervisor in these smaller businesses had significantly less tenure than the older worker did with the firm in which they were employed. If future research in larger industries confirms the stated hypotheses that older workers expect more and their high expectations bring about more effective leadership from their younger supervisors, these organizations will realize the value of the older worker. In addition, if this effect is confirmed in future research in larger businesses, older workers could be made aware of the impact of harnessing Pygmalion in reverse and thus shape their own behavior to elicit desirable supervisory

behaviors. In addition, older workers who are aware of the impact of their higher expectations on both their younger supervisor and the organization will have higher feelings of self-efficacy, thus bringing about the never-ending loop of the self-perpetuating prophecy described by Eden (1984). Moreover, additional studies into the supervisor-subordinate dyadic relationship could point to the value of new and innovative training methods that add value to the organization by enhancing the leadership behavior and performance of managers. The self-perpetuating prophecy could be found to extend to the younger supervisor, causing them to enter into a continuous loop of better leadership brought about by the higher expectations of the older worker. If a subordinate's high self-expectancy leads to higher performance, it could elicit higher expectations in the supervisor, bringing about better leadership. This is an example of what Salomon (1981) called a self-sustaining prophecy and could ultimately lead to highly positive effects on the organization as a whole.

Conceptual or Substantive Assumption

1. The assumption is made that the participants were honest in evaluating their supervisor's behavior and their own expectations of their supervisor.

Limitations

1. The results cannot be generalized to the entire older worker-younger supervisor population.
2. Participants were all volunteers.

Delimitations

1. Participants were selected from companies of 100 or more employees.
2. For the purpose of this study, the primary focus of reverse Pygmalion effects was on older workers' expectations of their younger supervisor.

Definitions

Age Norms – the normal age at which a worker attains a certain position within the organization. According to Lawrence (1988) norms are “widely shared judgments of the standard or typical ages of individuals holding a role or status” (pp.309-310). In the past, age norms were largely determined by seniority in the organization, whereas today this is more often determined by technical expertise or advanced education.

Career Timetable – average time for steps in a career path to occur.

Expectancy – according to Vroom (1964), “a momentary belief concerning the likelihood that a particular act will be followed by a particular outcome” (p. 17).

Followership – subordinate behavior influences supervisory effectiveness by the willingness of the subordinate to follow.

Older Supervisor – a supervisor that is age 50 and above.

Older Worker – a worker that is age 50 and above.

Pygmalion Effect – supervisory expectations impact the performance of subordinates.

Relational Demography – comparisons of demographic differences and similarities between members in a dyad that regularly interact.

Reverse Pygmalion – a subordinate’s high expectations and performance arouse high expectations in the supervisor, bringing about better leadership on the part of the supervisor.

Self-Efficacy – an individual’s judgment of their ability to organize and execute a course of action required to perform a designated task (Bandura, 1986).

Younger Supervisor – a supervisor that is age 39 or below.

Younger Worker – a worker that is age 39 or below.

Summary

The intent of Chapter I was to provide essential background information on the need for the study and to delineate the purpose of the study. Chapter II contains a review of related literature to provide the reader with a broader perspective of the subject area being studied. Chapter III describes the methodology employed in conducting the study. Chapter IV presents the results of the study. Chapter V contains the conclusions of the study, implications of the study, and recommendations for future research.

CHAPTER II

REVIEW OF THE LITERATURE

The Changing Nature of the Workforce

Population Growing Older; Increasing Numbers of Older Workers

At the present time, the United States of America is in the middle of a revolution – a demographic revolution – the aging of America. The aging of America's workforce is a phenomenon that has been brought about by the maturing of the baby boomers, increased longevity, and a simultaneous decline in the birth rate (Crampton & Hodge, 1996). Some researchers believe that the impact of this phenomenon will be so great that it could be compared to many of the well-known social and economic events in the past, such as industrialization of the great cities of the United States, the changes brought about by the baby boom generation after World War II, the civil rights movement, and the women's rights movement (Bront & Pifer, 1986). Each of these events had a great impact on America, but the aging of our population could quite possibly have a greater impact than any of these events.

The population of America has been growing older for some time. In the year 1800, one-half of the population was under the age of sixteen and very few lived to be sixty. Since that time, the population has steadily grown older except for the brief period after World War II known as the baby boom. According to the Current Population Survey (2000) published by the Bureau of the Census, the age group from 55-64 will increase by 11 million during the period 2000 to 2010, while the age group from 35-44 will decline by 5.1 million (Fullerton & Toossi, 2001). Fullerton and Toossi at the Bureau of Labor Statistics attribute the changes in the population from 1980 to 2000 to four demographic

events: (1) the low birth rate of the late 1920s and early 1930s; (2) the baby boom from 1946 to 1964; (3) the small increase in births during the latter part of the 1970s through the beginning of the 1990s; and (4) the surge in immigration to America starting in the 1970s and still continuing. They stated that all of these past events are contributing to the makeup of the labor force in the year 2010.

In addition to population trends, Fullerton and Toossi (2001) reported that as the population grows older, the workers that make up the labor force participation rate are also growing older. During the period from 1990 to 2000, the civilian labor force participation rate for workers aged 25 to 54 increased by only .06% while the workers aged 55 and older increased by 2.2%. Projections for the period 2000 to 2010 show a 1.5% increase in workers aged 25 to 54, while projections for the same period show a 4.8% increase in workers of age 55 and older. This demographic trend toward an older workforce has led to many studies on the attributes of the older worker. Although many negative myths and stereotypes exist about older workers' performance, significant research also exists supporting the fact that the older worker is an asset in many ways to organizational effectiveness. Studies have shown the older worker to be more effective supervisors, more dependable and loyal (Peterson & Coberly, 1988), and just as productive (McEvoy & Cascio, 1989) and accurate (Birdi & Pennington, 1997) as younger workers. According to Rix (1997), older workers cost less because they have fewer accidents and better attendance than younger workers. Rix also points out that older workers have a maturity that can only be learned from life experiences.

All of these population and labor data point to the fact that many of America's most experienced workers will soon be eligible to retire, and there won't be enough

knowledgeable, skilled workers to replace them. This is because the lower birthrate has come at the same time as the demand for more knowledge workers has increased (Crampton & Hodge, 1996). According to Drucker (1997), the most important factor to businesses in the future will be demographics, and economic growth will come only from “knowledge work and knowledge workers” (p. 20). Experts who are studying this demographic phenomenon have predicted the impact it will have on the workforce. Reingold (1999) stated that, “it’s almost like geological plates, but it’s demographic plates. The graying of America will alter everything from office furniture to the meaning of work itself” (p. 114).

Increasing Number of Younger Managers Supervise Older Workers

In addition to the increasing age of the workforce, the incidence of an older worker reporting to a younger supervisor is a new phenomenon that has been noted by many researchers. In their research on demographic differences in the workforce, Perry et al. (1999) found that older workers are now more likely to have a younger supervisor, due in part to the fact that there are fewer younger employees to fill the entry-level jobs. This has forced businesses to hire older workers into lower level positions, thus violating traditional age norms in the workplace (Lawrence, 1988). These expected age norms state that older workers are more experienced and normally hold a higher-level position (Perry et al., 1999). In studies about the age of the manager and the work environment, Shore et al. (2003) found that the prevalence of companies merging or reorganizing has led to greater numbers of older workers reporting to a younger supervisor.

New Dyad Creates Distinctive Challenges in Workplace

Hirsch (1990) reported that the trend of increasing numbers of older workers reporting to much younger supervisors is creating distinctive challenges and problems in the workplace, such as the reluctance of a younger supervisor to give orders to a worker who is as old as the younger supervisor's grandparents. According to Shore et al. (2003), there has been a tradition that the manager is normally older and more experienced than their subordinates, but a new trend of an older worker reporting to a much younger supervisor will become more prevalent in the workforce of the future (Perry et al., 1999; Shore et al., 2003). This trend will create a need for further understanding of this relationship and make research into this area important to the organization of the future (Shore et al., 2003; Tsui et al., 1996).

Relational Demography

Research on Relational Demography

Research on relational demography offers insight into the supervisor-subordinate relationship and shows that demographic similarities and differences, such as age, are important in the supervisor-subordinate dyad and have a great impact on the organization (Tsui & O'Reilly, 1989; Tsui et al., 1996; Vecchio, 1993). Tsui et al. (1996) stated that demographic similarities lead to the conclusion that there are also similarities in values, attitudes and beliefs. Demographic similarities or differences are important in the initial categorization made between a supervisor and subordinate and influence the quality of the exchange relationship in this dyad (Tsui et al., 1996). In spite of the importance of demographic similarities and differences to the organization, Gilbert et al. (1990) reported that there has been little research on the effects of age differences and the

behavior of leaders. Based on empirical data, Gilbert et al. analyzed age and effectiveness of the leader to determine if differences in leadership behavior could be attributed to the age of the leader. They found that there were differences between younger and older leaders; however, the differences could not be attributed solely to age:

Indeed, the very education of younger leaders has been less prescriptive and more self-directed, group-focused, and organic. Thus, differences revealed in leader behavior between older and younger leaders are more likely a result of their having internalized different cultural mores which become apparent when observed in the same organization than age, itself. (p. 194)

Tsui and O'Reilly (1989) studied the importance of demographic effects and extended the concept of demography to include supervisor-subordinate dyads. They coined the term relational demography and used it to describe their research into the differences between manager and subordinate characteristics, using a conceptual basis of the similarity-attraction paradigm researched by Byrne (1971). The similarity-attraction paradigm hypothesizes that similarity in attitudes creates more attraction between individuals (Tsui et al., 1992). Tsui and O'Reilly (1989) proposed that the demographic similarity (or dissimilarity) between supervisor and subordinate may explain their attitudes, their behavior, and how demographic characteristics affect job performance. They found that the effects of relational demography may be related to Byrne's (1971) similarity-attraction paradigm, which found that individuals are more highly attracted to people that are similar in attitudes and experiences. They proposed that high levels of attraction within the supervisor-subordinate dyad may be the result of similarity in attitude, experience, and values. Tsui and O'Reilly (1989) proposed that if the similarity or dissimilarity of demographic attributes of a superior-subordinate dyad is known, it may provide valuable information about attitudes, behavior, and performance. The

increasing need to study relational demography and a workforce that is demographically different is becoming more important because people more frequently work with others who are different in age, race, gender, and ethnicity (Tsui et al., 1992).

Tsui and O'Reilly (1989) investigated the multivariate effects of age, education, gender, race, and tenure on supervisor's performance ratings of their subordinates. Their field study of supervisor-subordinate dyads supported Byrne's (1971) previous research finding that dissimilarity within the dyad creates the perception by the supervisor of lower effectiveness and attraction to the subordinate. They conducted a field study of 272 supervisor-subordinate dyads in a Fortune 500 company in which they studied four outcomes of relational demography: (1) subordinate performance; (2) liking for subordinates; (3) subordinate role ambiguity; and (4) subordinate role conflict. Their study extended the research on demography to the supervisor-subordinate dyad, and supported their hypothesis that dissimilarity in this dyad produces less attraction for the subordinate. Shore et al. (2003) found that the employee's age and the manager's age both affect how the manager perceives an employee.

Tsui et al. (1996) proposed that relational demography is important in formation of the exchange relationship between supervisor and subordinate. They also found that demographic similarity increases attraction within the supervisor-subordinate dyad. However, they also proposed that in some instances dissimilarity can be desirable; for example, subordinates with lower levels of education were liked better by their supervisors.

Prior research into demographic diversity focused on the supervisor-subordinate dyadic relationship, and was called vertical dyad linkage (VDL) by Dansereau, Cashman

and Graen (1973). VDL was later re-named leader-member exchange (LMX) theory by Graen, Novak and Sommerkamp (1982). Tsui et al. (1996) combined research from the disciplines of relational demography, VDL, and LMX and proposed that understanding the relationship between an individual and their immediate supervisor is of great importance to organizations and that demographic attributes contribute to this relationship. They also found that demographic similarities or differences affect subordinate performance and support for their supervisor and may affect VDL and LMX theories, which will be discussed below. Their research into VDL led them to the study of relational demography. They recommended future research on the role of demographics in the supervisor and subordinate exchange relationship.

Vertical Dyad Linkage (VDL) and Leader-Member Exchange (LMX)

Vertical Dyad Linkage (VDL) has been researched primarily by Graen and his associates who were the first to focus on the supervisor-subordinate dyadic relationship. VDL theory proposes that leaders do not use the same leadership style with all subordinates, and that unique exchange relationships develop between a supervisor and each member of the group. These exchange relationships lead to a subordinate being part of either the ingroup or the outgroup (Graen & Cashman, 1975). Leaders quickly categorize their subordinates into either the ingroup or the outgroup. Characteristics of the ingroup are high levels of trust, more interaction, support from the leader, and informal or formal rewards. Characteristics of the outgroup are lower levels of trust, less interaction and support, and fewer rewards (Tsui et al., 1996). These relationships develop quickly and tend to remain stable over time, although Scandura and Graen (1984) have shown that supervisory training can significantly improve the quality of the

relationship. Tsui et al. (1996) stated that recategorization from the outgroup to the ingroup can be accomplished with information and behavior exchange between the supervisor and subordinate and by facilitation of concepts developed by Argyris (1990) in overcoming organizational defensive routines.

While most of the research has focused on the supervisor categorizing the subordinate into the ingroup or outgroup, Dienesch and Liden (1986) confirmed the importance of the exchange in the areas of perceived contribution of each member of the dyad, the loyalty of each member, and the amount of attraction between each member. In later research, Tsui et al. (1996) emphasized the quality of exchange between both members of the dyad: “mutuality and reciprocity in the exchange process...both the leader and the subordinate can influence the nature of the exchange by what they bring to the relationship in terms of predispositions and actual behaviors” (p. 102). Tsui et al. found that subordinates influence the quality of leader-member exchange by their willingness to cooperate and by the way they perceive and react to the behavior of their leader. Just as studies of the reverse Pygmalion theory posit the importance of the subordinate in influencing the supervisor-subordinate relationship, studies of VDL and LMX theory recognize that there is a mutual exchange process in which the subordinate categorizes the supervisor and contributes to the dyadic relationship. Subordinates may associate attributes of their supervisor such as age to wisdom, tenure with the organization to valuable experience, or amount of education to knowledge (Tsui et al., 1996).

Similarity-Attraction

Perry et al. (1999) studied the similarity-attraction paradigm, and used the age differences between a subordinate and supervisor to predict the number of absences for an employee, their citizenship behavior, and behaviors associated with work changes. They studied the response of lower-level employees to the demographic differences between the employee and their immediate and higher-level supervisor. They found that due to a status differential perception on the part of the lower-level worker to the higher-level supervisor, the lower-level older worker reacted negatively. However, there were positive effects when they studied how the older worker reacts to their immediate supervisor. They found that the lower-level, older workers were absent less and had better citizenship behavior than the younger employees. They also found that older workers may try to compensate for their perceived lower level of training and knowledge when compared with their younger supervisors, while at the same time the younger supervisor may demand more from the older worker because of their own perceived inadequacy. In addition to their study of aspects of relational demography, Perry et al. stated that an older worker with a younger supervisor may violate established norms for age and status. In general, age and status norms suggest that supervisors are normally older and more experienced than younger, less experienced subordinates. Their research found that supervisors liked their subordinates less if they differed in the areas of education, gender, or service, but they found mixed results when looking at age differences. They found that age differences in the supervisor-subordinate dyad can be associated with higher turnover, lower turnover, or no effect. In a study of grounds workers at a large Midwestern university, Perry et al. found that workers who were older

than their supervisors missed less work and displayed characteristics of good citizenship more often than coworkers who were younger than their supervisors.

Age Differences in Supervisor-Subordinate Dyad

In a study of age differences in the supervisor-subordinate dyad, Vecchio (1993) proposed that there is a lack of research regarding the impact that age differences have on work outcomes. His study focused on the difference in age between the employee and supervisor, and he stated that this dyad and the working relationship are extremely important. He hypothesized that older subordinates may be “more loyal and supportive because of greater levels of organizational and professional commitment, whereas younger employees may be comparatively less supportive” (p. 113). He attributed this to the fact that the older employees are more committed to the organization and thus remain in the organization longer while the poorer performers leave the organization. Fisher (1986) reported that employees that are less committed follow specified attrition processes, thus over time the remaining, older employees are those that are more committed to the organization, referred to as the differential attrition rate. According to Vecchio, older employees will, in general, have better attitudes and will perform better than younger, less tenured employees.

Vecchio (1993) tested four competing predictions within a sample of 292 high school teachers by creating age difference variables. His analysis resulted in the conclusion that employees who were older than their supervisors had superior working relations with them. The older workers in his study rated their supervisor’s consideration of them higher, which suggests that their supervisors were more considerate of the older employees. Vecchio discussed the differences between generations and found distinct

differences in attitudes toward work. He supported the research of Cherrington, Condie and England (1979) who found that older workers have greater pride in their work and attribute more moral importance to work, whereas younger workers place more importance on money and friends. He also discussed the age of workers as related to expected age norms and stated that workers who vary greatly from the perceived age norm are treated differently.

Tsui et al. (1996) found that there has been little analysis of demographic diversity between supervisors and subordinates and argued that understanding this relationship is important in improving the relationship between employees and the organization. One example they discussed was the subordinate with a younger supervisor; the subordinate could feel that the supervisor did not have the knowledge, experience or training necessary to lead and mentor the work group. In the case of the younger supervisor with advanced education, the older subordinate may feel they lack the years of working experience necessary and may not support the younger supervisor. The younger supervisor may feel the older subordinate does not have the business management knowledge provided by advanced studies, and this could impact the performance ratings of the older subordinate. Tsui et al. proposed that the exchange relationship in the supervisor-subordinate dyad is negatively affected when expected demographic differences are lacking, especially attributes that are immediately visible. For example, an older supervisor is normally viewed as having a higher level of experience and wisdom, therefore a supervisor that is younger than their subordinates could have a negative impact on the exchange relationship. While a 40 year-old supervisor may be acceptable to a 30 year-old subordinate, a 40 year-old supervisor with a 50 year-old subordinate could

be perceived as not being able to lead. In this example, the relational aspect of the difference in age is the important factor, not the actual age of the supervisor.

Pygmalion

Pygmalion, Self-Fulfilling Prophecy, and Labeling Effect

There is also another line of research, known as the Pygmalion effect, which may be affected by the demographic relationship of the supervisor-subordinate dyad. The Pygmalion effect, also known as the self-fulfilling prophecy, was defined by Eden (1984) as the “enhanced performance of subordinates of whom supervisors expect more” (p. 64). The idea that one person’s expectations about another person’s performance can actually bring about the fulfillment of that expectation is an interesting concept that has been widely researched in various settings including educational settings, the military, training, and the workplace. This concept was also referred to as the *labeling effect* by Schrank (1968) who randomly assigned airmen to class groups based on bogus ability levels. Schrank tested the differences in mathematical achievement of 100 airmen by manipulating instructor expectancy and trainee self-expectancy, and he proposed that posttest differences were caused by instructor expectancy and trainee self-expectancy.

The concept of the self-fulfilling prophecy was introduced by sociologist Merton (1948) who reported an incident at the onset of the Depression in 1932 at the Last National Bank. When bank customers falsely believed that the bank was failing, they began withdrawing their money. Because of the customers’ unfounded belief that the bank was failing, it did fail. Although this example of a self-fulfilling prophecy resulted from a false rumor, other related cases of self-fulfilling prophecies are the result of

purposefully manipulating the expectations of one person regarding the actions of another person or group of persons.

Rosenthal and Jacobsen (1968) first applied the term Pygmalion to a special case of the self-fulfilling prophecy. While testing their theory of interpersonal expectancy effects, they coined the term *Pygmalion effect* to signify a person acting on the expectations of another (Eden, 2000; Kierein & Gold, 2000; McNatt, 2000). Researchers have referred to this concept as the labeling effect, the self-fulfilling prophecy, and the Pygmalion effect; however, for purposes of this paper, this concept will be referred to as the Pygmalion effect.

The Pygmalion Effect Studied in Diverse Disciplines

Research on the Pygmalion effect has focused on many diverse disciplines, such as the behavioral sciences, economics, principles of expectancy, animal experiments, psychotherapy, the placebo effect, military settings, and the workplace. This concept became well known in America in the 1950s mainly as a result of the unrest caused by disadvantaged minority students. Rosenthal and Jacobsen's (1968) classic study at Oak School confirmed that the pupils from whom teachers expected greater intellectual gain actually gained more than the control group. Murphy et al. (1999) found that once teachers believed certain children were under-performers, they no longer spent time teaching those children, giving credence to the concept that segregation and discrimination of minority children led to a self-fulfilling prophecy of inferiority for those children. Consequently, those children later performed poorly in academic studies. The Pygmalion effect has been widely cited as the reason for the poor academic achievement of minority students.

Much of the research on the Pygmalion effect has focused on classroom or training situations. For example, Rosenthal and Jacobsen's (1968) classic study at Oak School focused on teachers and their expectations of the intellectual performance of students in the first through sixth grades. The experiment was designed to test whether the favorable expectations of the teachers could increase pupils' intelligence. All children were given a pre-test. The teachers were told the test would predict students who might be expected to experience rare intellectual or academic growth, referred to as intellectual blooming. After testing, 20% of the pupils were designated to the teachers as having the potential for intellectual blooming. The pupils in this bloomer group had actually been randomly chosen. The only difference between the pupils was in what the teacher had been told about them. A post-test was given a year later to assess intellectual growth, measured by the difference between a child's pretest and post-test. The results showed that the pupils from whom teachers expected greater intellectual gain actually gained more than the control group.

In a study that focused on the leadership of instructors at a military training base, Eden and Shani (1982) tested the applicability of the Pygmalion effect on adults. They wanted to establish that the Pygmalion effect was a valid topic for research in an industrial and organizational setting. They confirmed their hypothesis that instructor expectations influence trainee performance and found that the behavior of teachers is similar to leader behaviors. These behaviors include such things as giving extra attention, expressing satisfaction, encouragement and praise, giving rewards, and communicating in a positive way. Their research was important because of the vast difference in the characteristics of their sample of Israeli soldiers versus the typical sample of American

schoolchildren. In a metaanalysis of Pygmalion studies, White and Locke (2000) found that Eden and Shani's research demonstrated that the Pygmalion effect was generalizable outside the school setting where it was first discovered. Eden and Shani found that leader expectancy, rather than performance of the subordinate, influenced their leadership and concluded that, "leadership may be a means by which superiors unwittingly fulfill their own prophecies" (p. 198).

Livingston (1969) studied Pygmalion in the workplace and specifically focused on the supervisor's expectations of subordinates. Livingston documented a number of case studies to support his findings that what a manager expects of his employees and how he treats them largely determines their performance. He illustrated this theory by relating a study at Tulane University, called "Sweeney's Miracle," in which a janitor with a low IQ became a proficient computer operator. Sweeney, an industrial management professor, set out to disprove the theory that a person with a low IQ could not learn to program a computer. Sweeney began teaching the poorly educated janitor to operate the computer even though his IQ indicated he could not even be taught to type. As a direct result of Sweeney's expectations, the janitor learned to operate the computer and was put in charge of the computer room. Livingston's research found that the janitor was actually training all the new employees to operate and program the computer. This supported Livingston's assertion that a manager's belief about his own ability to train and motivate employees was the key to how the manager acts as Pygmalion. Livingston proposed that a manager's expectations determine the subordinate's performance, thus leading to higher performing managers and subordinates.

Eden (1984) studied the Pygmalion effect in the workplace, and proposed that the Pygmalion effect could be used as a management tool that could possibly raise productivity. He depicted a model based on managerial and organizational psychology that was made up of five variables in the following order: supervisor expectancy, leadership, subordinate self-expectancy, motivation, and performance. According to Eden, the last three variables can become a self-perpetuating cycle of subordinate self-expectancy, motivation, and performance. In a previous study by Eden and Ravid (1982) it was demonstrated that once a subordinate is on a track of high performance as a result of the high expectations of their supervisor, the subordinate would sustain the high performance on his own in a never-ending, self-perpetuating cycle.

Theoretical Underpinnings of the Pygmalion Effect

Crawford, Thomas, and Fink (1980) proposed that the Pygmalion effect, or self-fulfilling prophecy, depends on what is expected of a person as well as self-expectations and can be explained by Bandura's (1977) theory of self-efficacy. Self-efficacy is a person's belief in their capability to perform a specific task leading to certain outcomes. The expectations of the leader interact with the subordinate's belief that they can perform a specific task leading to a desired outcome.

Crawford et al. (1980) also identified Vroom's (1964) expectancy theory of motivation as a second conceptual framework underpinning the Pygmalion effect. Expectancy theory presumes that people will choose to perform activities they believe they can do and that will produce a desired outcome. Theories of expectancy predict that employees will make choices as to which behaviors or tasks they choose to perform, and they will choose those they have a high expectation of performing successfully

(DeSimone & Harris, 1998; Vroom, 1964). White and Locke (2000) also supported the view that the Pygmalion effect is linked to expectancy theory and contend that raising expectations by use of the Pygmalion effect results in higher performance.

In addition to the link of the Pygmalion effect to expectancy theories, White and Locke (2000) stated that the Pygmalion effect has ties to the theory of transformational leadership. Transformational leadership was first introduced by Burns (1978) to describe the concept of leaders that effect radical changes in their followers. Bass (1985) defined transformational leadership as a theory in which leaders show confidence in the abilities of their followers and pursue a common vision. While both transformational leadership and the Pygmalion effect emphasize motivating subordinates with the expectations of their leader, Eden (1992) stated that the Pygmalion model is the only concept that emphasizes *raising* leader expectations of subordinates as a way of initiating more effective leadership. Eden (2003) also proposed that raising the expectations of the leader results in performance improvements. Concepts from the theory of transformational leadership are closely related to the concept of *followership*, which is discussed later in this review.

Harnessing Pygmalion In Reverse

Subordinate Performance Influences Leadership Behavior of Supervisor

Researchers have concluded that the Pygmalion effect extends from the supervisor's expectations to the employee's performance and also from the employee's performance back to the leadership behavior of the supervisor (Eden, 1984; Eden, 1990; Eden & Shani, 1982; Lowin & Craig, 1968). Significant research exists on the Pygmalion effect relating to teachers and pupils, trainers and trainees, and supervisors and

subordinates. There is also research on a related concept that Eden (1984) referred to as harnessing Pygmalion in reverse, meaning how a subordinate's performance influences the leadership behavior or leadership style of their supervisor. In one of the first studies on this subject, Lowin and Craig (1968) found evidence that subordinate performance can shape a supervisor's leadership style in the areas of guidance and supervision of employees, requiring strict adherence to the goals of the organization, and showing concern for the non-job related activities of the employees.

In an experiment in a workplace setting, Lowin and Craig (1968) found that the performance of subordinates influenced the leadership of their superiors. Their hypothesis was that "observational studies which seek to evaluate the effect of various leadership styles on subordinate performance can usually be interpreted in the reverse causal direction" (p. 440). To test this hypothesis, Lowin and Craig deceptively hired subjects for supervisory positions in an office. These supervisors believed they had actually been hired, but they were part of a field study where they were observed as they reacted to pre-determined situations set up with either competent or incompetent subordinates. The supervisors later completed a 14-item post-situation questionnaire with questions about the subordinate such as, "As his supervisor, how do you feel about his taking responsibility for his work?" (p. 450). Lowin and Craig concluded from their study that the performance of subordinates shapes the leadership styles of their supervisors in three areas: (1) how closely the supervisor monitors and guides the subordinate; (2) initiating structure, defined as how much the supervisor emphasizes attainment of the organization's goals; and (3) consideration for the desires and needs of the subordinate. In explanation for the manager's favorable attitude toward a subordinate's performance,

Lowin and Craig cited Adams' Theory of Equity that predicted if a person, such as a supervisor, becomes aware that a subordinate is contributing a great deal to a situation, the supervisor will try to reward the subordinate. As a result of their conclusion that subordinate performance influences supervisory leadership styles, they proposed further empirical research into subordinate productivity and leadership style.

Mutual Effects of Supervisor and Subordinate Behavior on Each Other

Herold (1977) is another researcher who proposed further research into the effects of both leader and subordinate behavior on each other, and he also supported the view that subordinate performance impacts leader behavior. He stated that theoretical and empirical research (Hollander & Julian, 1969; Farris & Lim, 1969; Lowin & Craig, 1968) suggests that the behavior of the leader could actually be caused by the behavior of the subordinate. Herold supported the research of Porter, Lawler & Hackman (1975) that concluded that studying only the leader's effect on the subordinate would not contribute to a generalized theory of the effectiveness of leadership behavior. In a lab experiment using 32 groups of three male undergraduate students from Yale University, Herold used a double-substitution design in which the supervisor and subordinates were separated and substitutions made regarding the work of the subordinates. This experiment manipulated subordinate behavior by substituting work done by one good and one poor subordinate, rather than using the work of an actual subordinate. Herold found that in the supervisor-subordinate dyad each person affects the behavior and attitudes of the other. He also found that the same leader will react differently to multiple subordinates who perform differently, thus supporting what Eden (1984) later called the reverse Pygmalion theory.

Subordinate Performance Triggers Better Supervisory Leadership

Eden and Shani (1982) studied the manner in which instructor expectations enhance the performance of students. They recommended that future research should investigate how leadership behavior is affected by subordinate performance and stated, “the Pygmalion paradigm is appropriate for researching the mutual effects of leadership and performance on each other” (p. 198). Eden (1984) proposed that the high performance of a subordinate may raise the expectations of the supervisor, and, in turn, trigger better leadership on the part of the supervisor. He further stated that a “subordinate could be taught how to behave in a manner that would evoke more effective leadership from their supervisors....triggering Pygmalion in reverse” (pp. 69-70). Eden (1990) also proposed a similar concept in which a subordinate’s high expectations toward their supervisor impact the effectiveness of the supervisor. Eden referred to this as “upward expectancy effects,” (p. 196) and proposed that research of the Pygmalion effect has mainly been top down and involved the expectations of a person in authority about the performance of a lower level subordinate; whereas research on the expectations of the subordinate toward their supervisor have been largely ignored.

Eden’s (1984, 1990) theory of harnessing Pygmalion in reverse would allow an employee whose supervisor had low expectations of their performance to employ Eden’s theory to their own advantage. The employee who is aware of the reverse Pygmalion effect could shape their supervisor’s behavior by their expectations of their supervisor and the way they interact with their supervisor, thus bringing about better leadership from the supervisor, and, in turn, leading to higher supervisory expectations of the employee. In fact, White and Locke (2000) reviewed previous Pygmalion research in the workplace

and determined that if more is expected of a subordinate, the subordinate will report that they receive better leadership from their supervisor.

Followership

Importance of the Effects of Followers on Leaders

A concept closely related to reverse Pygmalion is called followership. In their research on followership, Gilbert and Hyde (1988) focused on the effect of followers on the leader, and they stated that previous researchers, such as Herold (1977) and Farris and Lim (1969), “have even suggested that leadership may be a *consequence* of subordinate behavior” (p. 962). Gilbert and Hyde focused on the importance of followership, rather than romanticizing leadership as so many other authors and researchers have done. Meindl and Ehrlich (1987) stated that leadership has been romanticized and “has assumed a heroic, larger-than-life value” (p. 93). Gilbert and Hyde supported the early work of Mary Parker Follett who stressed that the critical issue is the “dynamic between the leader and follower that enables the ‘team’ to dominate situations, not the ability of the leader to dominate the follower” (p. 962). While there is an overabundance of research and literature about leadership, Gilbert and Hyde point to the lack of empirical studies on followership and emphasize the importance of learning more about subordinate characteristics and behavior. To illustrate their point, they quote from an article by Hansen (1987) that was published in the SAM Advanced Management Journal:

A supervisor’s effectiveness is dependent on the willingness and consent of subordinates to follow, to carry out the wishes of the supervisor; without followers there can be no leaders. (p. 963)

Nolan and Harty (2001) proposed that followership is at least as important as leadership and could possibly be more important. Kelley (1992) stated that almost all

workers play both the roles of leader and follower because even the head of a department also reports to a supervisor who is over them. In support of the theory that followership may be more important than leadership, Kelley proposed that a leader spends more time being a follower than they do actually leading. Brown and Thornborrow (1996) studied ways that followers can contribute to the success of their organization. They found that followers are not born to be followers, and that they can be trained to be more effective followers.

Because of the overwhelming lack of empirical research in the field of followership, Tanoff and Barlow (2002) studied the constructs of leadership and followership and the relationship between the two. They administered surveys to 130 participants who were undergraduate students at a military college and found statistically significant positive relationships between these two constructs. The surveys used were the Leadership Personality Survey (Curphy, 1998) and the Power of Followership Survey (Kelley, 1992). This study is one of the first to research the relationship between leadership and followership, and they proposed that the empirical focus on followership will add to the understanding of this construct. They recommended that future research in this area should expand into the workplace in organizations with a diverse workforce.

Charismatic Leadership

White and Locke (2000) supported the importance of research on followership and recommended that more attention should be directed to the supervisor-subordinate relationship. They proposed that support for the importance of the construct of followership could be found in the literature on charismatic leadership. More importantly, they found that demographic attributes may contribute to the relationship between leaders

and followers and to the Pygmalion effect. In their metaanalysis, they reviewed studies that have been done on the followers of charismatic leaders. They concluded from these studies that charisma can be found in the relationship between a leader with charismatic qualities and followers who are open to charisma (Klein & House, 1995).

Conger and Kanungo (2000) also studied the followers of charismatic leaders. Based on their previously developed model of charismatic leadership within organizational settings, they defined charismatic leadership as “an attribution based on follower perceptions of their leader’s behavior” (p. 748). They found that subordinates of charismatic leaders change their attitudes and behavior to be consistent with the manager’s expectations of them. They recommended that future research focus on follower effects. Shamir, House and Arthur (1993) proposed that subordinate self-esteem could be enhanced by the leader expressing high expectations of the follower and expressing confidence that the follower could meet their expectations.

Follower Characteristics

White and Locke (2000) cited six follower attributes that have been found to be important to charismatic leadership in studies by Conger & Kanungo (1987) and Klein & House (1995). These six characteristics are: “acceptance of authority, trust in the leader, values that are congruent with the leader’s message, an expressive orientation to work and life, affection for the leader, and a principled orientation to social relationships” (p. 400). In their studies of similarities between followership and the Pygmalion effect, White and Locke (2000) proposed that the Pygmalion effect could be due to the interaction between the leader and the follower and stated that any one of the six follower attributes must be present for the Pygmalion effect to occur. In addition, they found that

the gender of the leader (or subordinate) may affect whether any of the six characteristics are present. Considering White and Locke's findings on gender, it may also be possible that the age of the leader (or follower) could determine if any of these six attributes are present, thus confirming that the Pygmalion and reverse Pygmalion effect could be influenced by the age of either the leader or follower.

White and Locke (2000) proposed that future research should examine the characteristics of followers in the areas of "acceptance of authority, trust in the leader, and affection for the leader to determine if their levels affect the emergence of the Pygmalion effect" (p. 401). They proposed that more attention to the characteristics of the follower will lead to greater understanding of the Pygmalion effect. This generalization could possibly extend to greater understanding of the related concepts of reverse Pygmalion and followership.

Interrelationship of Study, Leadership Development, and Management Development

Current demographic trends show a greater incidence of a workplace dyad consisting of an older worker reporting to a younger supervisor. Research has shown that supervisory expectations influence subordinate performance, and that subordinate performance impacts the leadership behavior of their supervisors, thus impacting the overall success of the organization. Research on VDL and LMX has shown the mutual effects of leader and follower behavior and expectations on each other, which have been referred to as an exchange relationship (Tsui et al., 1996). The potential impact of demographic differences on the exchange relationship has been widely researched, and this research shows that close proximity of diverse workers does not automatically improve the relationship, but can actually bring about a decline in the relationship. Tsui et

al. proposed taking an active approach to improve the exchange relationship between supervisor and subordinate through management training of supervisors. Scandura and Graen (1984) have shown that supervisory training significantly improves the quality of the exchange relationship, thus bringing about increased productivity and increased job satisfaction. Tsui et al. proposed that the leader-member exchange relationship could be greatly improved by managerial training that encompasses the “relational and group compositional effects on the expectations and the quality of relationships” (p. 123).

Research on the Pygmalion effect has also shown that leadership behavior is affected by the relationship between the supervisor and the subordinate. Eden (1990) examined the relationship of the Pygmalion effect and the reverse Pygmalion effect to managerial and organizational processes and proposed leadership behavior and skills that could be implemented by management to improve the overall success of the organization. According to Eden, the Pygmalion effect doesn't just happen; in the workplace it is the manager that “behaves in a manner that molds events to conform to his expectations” (p. 7). Some of Eden's (1992) proposed methods of improving managerial performance were leadership training of supervisors to raise expectations of subordinates, behavior modification techniques for managers leading to ways of providing positive reinforcement to subordinates, teaching managers not to apply negative stereotypes to subordinates, and setting challenging goals.

Eden and Shani (1982) proposed that expectancy training of subordinates could cause subordinates to behave in a way that would bring about more effective leadership from their supervisors, thus bringing about the reverse Pygmalion effect in the workplace. Research studies to investigate the effect of harnessing the Pygmalion effect in reverse in

the older worker-younger supervisor dyad will contribute to the understanding of what leads to better leadership and management behavior in this newly evolving dyad. It will also contribute to a better understanding of the subordinate's effect on the supervisor's performance. This understanding will, in turn, lead to the development of new expectancy training methods for the older worker, the younger supervisor, and possibly all workers, that would bring about more effective leadership and management.

While much research exists on both management development and leadership development, Bass (1990) and Yukl (2002) have both proposed that when considering development there is no value in separating the two disciplines. White and Locke (2000) proposed that leaders can be trained to have high expectations of their subordinates, thus bringing about the Pygmalion effect in the workplace. They proposed that Pygmalion training for leaders should have an emphasis on Bandura's (1977, 1986) proven methods and techniques that build manager and subordinate self-efficacy. They also recommended that leader development should emphasize a learning organization rather than focusing solely on performance. The goal of White and Locke's proposed training is to bring the Pygmalion effect from the subconscious to the conscious and then use proven methods from similar theories such as Bandura's theory on self-efficacy.

Relationship of Study to Field of Human Resource Development

Research to discover if older workers elicit better leadership behavior from their younger supervisors is important to the field of human resource development because it would inform organizations of the value of an older workforce, lead to new and innovative training methods for older workers and the field of leadership and management development, and contribute to better overall performance for the

organization. In addition, there is the potential of using studies of the reverse Pygmalion effect in the supervisor-subordinate dyad to add to our understanding of relational demography and leader-member exchange theory. Studies that contribute to the understanding of relational demography are becoming increasingly important because people are more frequently working with others who are different in age, race, gender, and ethnicity (Tsui et al., 1992). If the reverse Pygmalion effect exists within the older subordinate-younger supervisor dyad, there could be a potential benefit to organizations for new and innovative training for subordinates, enhanced management development training for supervisors, and a new appreciation for the value of older workers.

Summary

Due to rapidly changing demographics, research on the new dyad of an older worker with a younger supervisor is becoming increasingly important to organizations. White and Locke (2000) found that demographic attributes, such as age, may contribute to the relationship between workers and supervisors. Other research studies have shown that workers can impact the leadership behavior of their supervisor, which, in turn, impacts the success of the organization (Eden, 1984; Eden & Shani, 1982; Lowin & Craig, 1968). Eden (1984) proposed that a subordinate's high performance might arouse high expectations in the supervisor, triggering better leadership by the supervisor. Researchers have pointed to a lack of empirical research on the effect of subordinates on the leadership behavior of supervisors (Gilbert & Hyde, 1988; Tanoff & Barlow, 2002). It is important to study the older worker-younger supervisor dyad to understand how older workers' expectations and performance influence their younger supervisors' leadership behavior.

CHAPTER III

METHODOLOGY

Introduction

It has been stated that a subordinate's high expectations might elicit better leadership behavior from their supervisor. Eden (1984) coined the phrase "harnessing Pygmalion in reverse" to define this effect and proposed that subordinates could actually mold their supervisor's behavior. In their research on the closely related concept of followership, Gilbert and Hyde (1988) proposed that, "leadership may be a *consequence* of subordinate behavior" (p. 962). In a review of published articles on the Pygmalion effect and related research on the followers of charismatic leaders, White and Locke (2000) recommended that more attention be directed to the supervisor-subordinate relationship. Research on Relational Demography has also documented that in the supervisor-subordinate dyad of today's workforce, the incidence of an older worker reporting to a much younger supervisor is becoming more prevalent (Perry et al., 1999; Shore et al., 2003).

The purpose of this study was to explore this phenomenon and to determine if there was a statistically significant relationship between the expectations of the older worker and the leadership behavior of the younger supervisor. This study examined the following research questions:

1. To what extent do older workers expect more effective leadership than younger workers from their younger supervisors?
2. Do younger supervisors of older workers display more effective leadership behavior than younger supervisors of younger workers?

3. To what extent does subordinate self-efficacy contribute to the leadership behavior of the younger supervisor?
4. Do the demographic attributes of a worker's age, gender, tenure, and educational level have a relationship to the leadership behavior of the younger supervisor?

More effective leadership behavior was operationally defined for this study as individuals who exhibit higher mean performance scores on leadership behavior, as measured by the Leadership Practices Inventory (LPI) (Kouzes & Posner, 2003), a published leadership survey instrument.

Context

This study was conducted by a survey research firm. They administered the survey questionnaires by Internet to workers that were employed in a business environment that employed 100 or more employees. The introductory questions determined if the participant met this requirement and if they willingly consented to participate in the survey. If they did not meet the criteria or did not voluntarily consent to participate in the survey, they did not complete the survey questionnaire.

Population

The population of interest was workers who were employed by a business enterprise that employed 100 or more workers in the Southeastern United States. The research focused on supervisor-subordinate dyads in the workplace. For purposes of comparison, data was collected from four supervisor-subordinate dyads: older worker-older supervisor; older worker-younger supervisor; younger worker-older supervisor; and, younger worker-younger supervisor. This research focused on older workers with a

younger supervisor. For purposes of this research, the older worker was defined as a worker age 50 or above and the younger supervisor was defined as age 39 and below.

Participants

The researcher utilized a proportionately stratified quota sample with 30 participants in each of four dyads. The sampling process involved collecting data until a minimum quota of 30 completed questionnaires was collected in each of the four dyads. Data collection proceeded quickly for all dyads except the older worker-younger supervisor group. A total of 696 responses were received when the data collection process was completed for the fourth dyad. To obtain an equal number of respondents from each of four dyads, 30 individuals were randomly selected by a computer-generated program from the total number of questionnaires returned. The end result was a total of 120 respondents made up of four groups of 30 participants in each group. The four groups were: older worker-older supervisor; older worker-younger supervisor; younger worker-older supervisor; and, younger worker-younger supervisor.

A survey research firm administered the survey questionnaire and collected the data from the population of interest as described by the researcher. The researcher believed that data collection by a professional survey research firm enhanced the reliability and validity of the information collected. The survey research firm utilized an email listing of selected businesses and trade associations that met the demographic criteria defined by the researcher; that is, workers employed in the Southeastern United States in a business enterprise employing one hundred or more workers. No participant names were provided on the listing and survey instruments did not request any names. Since the participants remained anonymous, no consent form was required. The

participants were volunteers that were informed of the nature of the study and had the option of completing the Internet survey questionnaire or declining to participate. There was no coercion at any time, and participants could elect not to complete the survey at any point. Respondents were not compensated by the survey research firm.

Instruments

Demographic information, such as age, gender, tenure, and educational level, was obtained from the respondents at the beginning of the survey instrument. Three surveys were administered to measure worker expectations of his or her supervisor, worker self-efficacy, and the leadership behavior of his or her supervisor. The first survey to be administered was the Leadership Effectiveness Instrument (LEI) (Gurie, 2002). The LEI was the only survey instrument found to be appropriate to measure worker expectations of their supervisor. In its original form, the LEI contained twelve items in which fraternity members at Louisiana State University were asked to rate their feelings concerning their fraternity president. For purposes of this research, the introductory statement of the LEI was changed from, "I feel that my fraternity president is," to "I expect my supervisor to be." The LEI contains twelve items that are rated on a five-point Likert scale from Never to Always, such as, I expect my supervisor to be "overall a strong leader," I expect my supervisor to be "an effective communicator," and I expect my supervisor to be "a good encourager" (Gurie, 2002, p. 195). For purposes of consistency in data collection across all instruments used in this research, a ten-point Likert scale was utilized, and Questions 2 and 3 of the LEI were each asked as two separate items. In addition, one additional leadership descriptor was added to the LEI asking if the participant expected their supervisor to be *helpful*. The LEI was originally

designed to measure perceived leader effectiveness and contained 12 items focusing on effective leadership traits. A Pilot Study was conducted prior to use of the LEI survey instrument. The reliability of the LEI was measured by Cronbach's alpha internal consistency coefficient as $\alpha = .96$ (Gurie, 2002). The researcher obtained permission from the author to use the LEI for research purposes and to make changes as previously described. A pilot study was conducted using the revised LEI survey instrument. The results of the pilot study were very favorable.

Worker self-efficacy was measured by administering the new General Self-Efficacy Scale (NGSE) (Chen et al., 2001). The NGSE contains eight items that are rated on a five-point Likert scale from Strongly Disagree to Strongly Agree, such as, "When facing difficult tasks, I am certain that I will accomplish them" and "I believe I can succeed at most any endeavor to which I set my mind" (Chen et al., 2001). Internal consistency reliability for the NGSE scale was $\alpha = .86$ and $.90$, and the test-retest coefficient was $r = .67$. The researcher also reviewed the Sherer General Self-Efficacy Scale (SGSE) that measures "a general set of expectations that the individual carries into new situations" (Chen et al., 2001, p. 63). Since studies have found that the NGSE has higher construct validity, the SGSE was ruled out for this study. Permission was granted from the authors to use the NGSE for research purposes. For this research study, a ten-point Likert scale with Strongly Disagree to Strongly Agree endpoints was utilized.

The Leadership Practices Inventory (LPI) (Kouzes and Posner, 2003), Observer version, was administered to rate the worker's perception of their supervisor's leadership behavior. The LPI measured five leadership behavior attributes: "Challenging the Process, Inspiring a Shared Vision, Enabling Others to Act, Modeling the Way, and

Encouraging the Heart” (Leong, 1992, p. 2). The LPI contains 30 items and uses a ten-point Likert format. Reliability means that an instrument measures consistently what it is designed to measure. The LPI – Observer-Assessment version has internal reliability ranging from .81 to .92; test-retest reliability ranges from .93 to .95. Validity means a test measures what it claims to measure. The LPI has excellent face validity. Construct validity was determined by a study that found that the five leadership behavior attributes were “significantly related to subordinates’ rating of managerial effectiveness” (Leong, 1992, p. 2). This instrument and the software package to evaluate the responses were purchased from the publisher. The researcher also considered utilizing the Ohio State Leadership Behavior Description Questionnaire (LBDQ), which has been widely used for research. The LBDQ was not selected because the researcher concluded that the LPI-O was a more thorough instrument because the LBDQ only measured two dimensions of leadership behavior, Consideration and Initiation of Structure (Stogdill, 1963).

Research Design

This study measured the differences between the workers’ expectations and the supervisor’s leadership behavior among four categories: (1) older worker-younger supervisor; (2) older worker-older supervisor; (3) younger worker-younger supervisor; and, (4) younger worker-older supervisor. Workers’ expectations were measured by administering the new General Self-Efficacy Scale (Chen et al., 2001) and the Leadership Effectiveness Instrument (Gurie, 2002). Leadership behavior was measured by administering the Leadership Practices Inventory-Observer (LPI-O) (Kouzes and Posner, 2003). Leadership qualities measured by Kouzes and Posner’s LPI-O are: 1) propensity to seek out challenges; 2) enlist others to follow their vision; 3) create an atmosphere of

trust and mutual respect; 4) set an example for others to follow and create opportunities for victory; and (5) encourage others by recognizing contributions and celebrating their accomplishments. Factor analysis (Hair et al., 2006) was conducted on leadership behavior, subordinate expectations, and subordinate self-efficacy. It demonstrated the validity of these instruments. ANOVA (Hair et al., 2006) was used to examine the relationships among the leadership expectations, self-efficacy and leadership behavior instruments. Chi-square and ANOVA were used to examine the worker's demographic attributes of age, gender, tenure and educational background. Table 1 provides a list and description of the variables.

Table 1

Dependent and Independent Variables

<u>Dependent Variable</u>	<u>Description</u>
Supervisors' Leadership Behavior	Leadership Behaviors: Challenging The Process, Inspiring a Shared Vision, Enabling Others to Act, Modeling the Way, Encouraging the Heart (Leong, 1992, p. 2)
<u>Independent Variable</u>	<u>Description</u>
Workers' Expectations	Self-Efficacy Expectations: Goals, Tasks, Outcomes, Endeavors, Challenges Leadership Effectiveness Expectations: Strong Leader, Honest, Sincere, Responsible, Dependable, Communicator, Listener, Motivator, Encourager, Confident, Decisive, Cooperative, Organized, Effective Leader

Procedures

1. Data was collected by a professional survey research firm. The survey research firm utilized an email listing of selected businesses and trade associations that met the demographic criteria defined by the researcher. The employees of these organizations were given the option of voluntarily taking an Internet survey questionnaire relating to the supervisor-subordinate dyad that contained questions as described in the section labeled *Instruments*. The researcher believed this method of gathering research data assured that confidentiality of human participants was protected and that no coercion of participants existed. This method of data collection also provided a more demographically balanced sample of workers and a more accurate view of the workforce than research performed at a single business enterprise.

2. Participants were at all times anonymous. No identifying information was collected by the survey research firm and a consent form was not required. The participants acknowledged their willingness to take the survey by completing and submitting the survey.

3. The researcher prepared the survey questionnaire in the following order: (a) initial questions; (b) demographic data; (c) age of supervisor; (d) LEI; (e) GSES; and, (f) LPI-O. The demographic data collected were age, gender, tenure, and educational level. Participants were asked to estimate the age of their immediate supervisor. The participants were provided with the email address of the researcher in the event that there were questions about the survey.

4. The survey questionnaire documents and instructions were emailed by the Researcher to the survey research firm.

5. The participants were given an explanation of the nature of the research, informed that the survey would take approximately ten minutes to complete, and that their submission would be totally anonymous. No participant identifying information was part of this procedure. No feedback was provided at any time to any participant, their employer, or the supervisor of any participant.

6. The survey questionnaires were automatically submitted to the survey research company by each participant by Internet submission. This process took approximately two months to complete.

7. All information was emailed by the survey research firm to the researcher in a Format compatible with SPSS.

8. No identifying information was collected or provided to the researcher. Participant information was provided by participant number only.

9. Data analysis was done by the researcher by utilizing SPSS.

10. All data will be stored in a locked file cabinet in the researcher's office and will be destroyed after 5 years.

Data Analysis

Factor analysis was used to analyze the data gathered in the described survey instruments. The survey instruments were designed to measure the supervisor's leadership behavior, the worker's expectations of their immediate supervisor, and the worker's self-efficacy. Differences between the supervisor's leadership behavior and the demographic variables were analyzed using Chi-square and ANOVA at the 5 percent significance level.

Summary

It has been stated that a subordinate's high expectations might elicit more effective leadership behavior from their supervisor, called harnessing Pygmalion in reverse. To determine if this hypothesis was true in the older worker-younger supervisor dyad, the following items were addressed.

Table 2

Matrix of Study Plan

<u>Research Questions</u>	<u>Research Hypotheses</u>	<u>Survey/Item(s)</u>	<u>Analysis</u>
To what extent do older workers expect more effective leadership than younger workers from their younger supervisors?	Older workers with younger supervisors will expect more effective leadership than will younger workers with younger supervisors.	LEI: 1-12	Factor Analysis, ANOVA
Do younger supervisors of older workers display more effective leadership behavior than younger supervisors of younger workers?	There is a statistically significant difference between the leadership behavior of the younger supervisor of an older worker versus the younger supervisor of a younger worker.	LPI: 1-30	Factor Analysis, ANOVA
To what extent does subordinate self-efficacy contribute to the leadership behavior of the younger supervisor?	A relationship exists between subordinate self-efficacy and the supervisor's leadership behavior.	NGSE: 1-8	Factor Analysis, ANOVA
Do the demographic attributes of a worker's age, gender, tenure, and educational level have a relationship to the leadership behavior of the younger supervisor?	The leadership behavior of the younger supervisor is affected by the following worker demographic attributes: (a) age; (b) gender; (c) worker tenure; and, (d) educational level.	Demographic Data	Chi-Square, ANOVA

The stated purpose of this study was to determine if there was a statistically significant relationship between the expectations of older workers and the leadership behavior of their younger supervisor. Demographic data was obtained and three leadership instruments were administered by a survey research firm. The survey research firm provided information to the researcher in a format compatible with SPSS from a total of 696 surveys that were submitted to the firm by means of the Internet. Analysis was performed utilizing SPSS on a computer-generated random sample of 120 workers employed in a business environment of 100 or more employees. For purposes of comparison, data was analyzed from a total of 120 workers made up of the four previously described supervisor-subordinate dyads consisting of 30 participants in each group. The researcher performed the proposed research and analyzed the data as previously outlined. Chapter 4 presents the findings of this research study, and Chapter 5 summarizes the research, addresses conclusions, and makes recommendations for future research. As the demographics in the workplace continue to evolve into a more diverse workforce in which older workers increasingly report to a younger supervisor, research studies of the reverse Pygmalion effect in the older worker-younger supervisor dyad will become increasingly important.

CHAPTER IV

RESULTS

Introduction

The findings of the proposed research are presented in the following chapter. The data was collected by utilizing a survey questionnaire. Demographic information, such as age, gender, tenure, educational level, and approximate age of the supervisor, was obtained from the respondents. Three surveys were administered to measure worker expectations of their supervisor, worker self-efficacy, and the leadership behavior of their supervisor. For consistency, a ten-point Likert scale was utilized in all three surveys. The expectations of the workers were measured by administering the Leadership Effectiveness Instrument (LEI) (Gurie, 2002). Worker self-efficacy was measured by administering the new General Self-Efficacy Scale (NGSE) (Chen et al., 2001). Kouzes and Posner's (2003) Leadership Practices Inventory-Observer (LPI-O), was administered to rate the worker's perception of their supervisor's leadership behavior.

The research data was collected by a professional survey research firm that provided the information to the researcher in a format compatible with SPSS. Analysis was performed utilizing SPSS on a computer-generated random sample of 120 workers employed in a business environment of 100 or more workers. For purposes of comparison, data was analyzed from a total of 120 workers made up of four supervisor-subordinate dyads consisting of 30 participants in each group. The four supervisor-subordinate dyads consisted of older worker-older supervisor, older worker-younger supervisor, younger worker-older supervisor, and younger worker-younger supervisor. For purposes of this research study, the older worker and older supervisor were defined

as age 50 and above, and the younger worker and younger supervisor were defined as age 39 and below. Each research question and hypothesis is addressed individually in the following chapter with appropriate tables within the text. The findings and analysis are discussed comprehensively by the researcher and summarized at the end of the chapter.

Findings

To determine if a subordinate's high expectations in the older worker-younger supervisor dyad elicit more effective leadership behavior, the researcher proposed four research questions. Each research question is stated below and the findings are discussed individually. Overall findings are presented in the *Discussion* section.

Reliability analyses were performed to determine that the three instruments utilized in this study consistently measured what they were designed to measure. For the LEI (Gurie, 2002), as revised for this research study, reliability was measured by Cronbach's alpha internal consistency coefficient as $\alpha = .97$. For the LPI-O (Kouzes & Posner, 2003), reliability for this research study was measured as $\alpha = .98$. For the NGSE (Chen et al, 2001), the reliability coefficient was $\alpha = .92$. The Reliability Analysis Scales for the LEI, LPI-O and NGSE are presented in Appendices F, G, and H respectively.

Research Question #1

The Leadership Effectiveness Instrument (LEI) (Gurie, 2002) was administered to participants to address research question #1: *To what extent do older workers expect more effective leadership than younger workers expect from their younger supervisors?* The original 15 variables in the LEI (Gurie) were condensed using Factor Analysis (Hair et al., 2006). The results revealed that there was only one factor. Table 3 presents the results of the Factor Analysis for research question #1.

Table 3

*Factor Solution for Research Question #1 - Worker Expectations***Unrotated Component Matrix – N = 120**

<u>Statements</u>	<u>Factor Loadings</u>
X13 - An Effective Leader	.928
X10 - A Good Motivator	.928
X1 - Overall a Strong Leader	.911
X14 - Cooperative	.910
X8 - An Effective Communicator	.908
X11 - A Good Encourager	.901
X5 - Responsible	.901
X9 - A Good Listener	.897
X7 - Helpful	.877
X4 - Sincere	.846
X3 - Honest	.843
X6 - Dependable	.825
X15 - Organized	.822
X12 - Decisive	.821
X2 - Confident	.805

Extraction Method: Principal Component Analysis, 1 Component Extracted

Total Variance Explained

<u>Com- ponent</u>	<u>Initial Eigenvalues</u>			<u>Extraction Sums of Squared Loadings</u>		
	<u>Total</u>	<u>% of Variance</u>	<u>Cumula- tive %</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumula- tive %</u>
1	11.504	76.695	76.695	11.504	76.695	76.695
2	.840	5.602	82.297			
3	.465	3.100	85.397			
4	.392	2.611	88.008			
5	.318	2.121	90.129			
6	.270	1.802	91.931			
7	.255	1.702	93.633			
8	.195	1.299	94.932			
9	.179	1.192	96.125			
10	.153	1.023	97.148			
11	.140	.932	98.079			
12	.115	.767	98.846			
13	.071	.470	99.316			
14	.057	.377	99.693			
15	.046	.307	100.000			

Extraction Method: Principal Component Analysis

The above factor analysis demonstrated that the expectations statements of the LEI form a single factor and can be summated as one variable. Therefore, the researcher calculated the summated score for all fifteen questions and used a single summated variable in the analysis.

After performing Factor Analysis, the mean from the older worker-younger supervisor dyad was compared to the mean from the younger worker-younger supervisor dyad using ANOVA. Table 4 presents the findings.

Table 4

Descriptives for Research Question #1- Worker Expectations

Descriptives

Expectations Summated

	N	Mean	Std. Deviation
OW-YS	30	7.10	2.563
YW-YS	30	7.83	2.188
Total	60	7.47	2.391

ANOVA

Expectations Summated

	Sum of Squares	F	Sig.
Between Groups	7.921	1.395	.242
Within Groups	329.337		
Total	337.258		

The Research Hypothesis that *older workers with younger supervisors will expect more effective leadership than will younger workers with younger supervisors* was not confirmed in this research study using this survey instrument. Utilizing a sample of N = 30 in the older worker-younger supervisor dyad, the mean of the leadership expectations scale was 7.10. In contrast, for the sample of N = 30 in the younger worker-

younger supervisor dyad, the mean was 7.83. The two means were not significantly different at the .05 level.

Research Question #2

The Leadership Practices Inventory – Observer version (Kouzes & Posner, 2003) was administered to participants to address research question #2: *Do younger supervisors of older workers display more effective leadership behavior than younger supervisors of younger workers?* Factor analysis was used to reduce the initial 30 LPI-O questions to 5 composite leadership attributes. The 5 leadership behavior attributes were: “Modeling the Way, Inspiring a Shared Vision, Challenging the Process, Enabling Others to Act, and Encouraging the Heart” (Kouzes & Posner, 2003, pp. 13-14). Table 5 presents the results of the Factor Analysis.

Table 5

*Factor Solution for Research Question #2 – Leadership Behaviors***Rotated Easy-Read Component Matrix**

<u>LPI-O Statements</u>	<u>Factor Loadings</u>				
	1	2	3	4	5
X52 - Paints "Big Picture" of Group Aspirations	.713				
X57 - Speaks with Conviction Meaning of Work	.697				
X33 - Seeks Challenging Opportunities to Test Skills	.682				.424
X32 - Talks About Future Trends Influencing Our Work	.681				
X43 - Searches Outside Organization for Innovative Ways to Improve	.670				.472
X48 - Asks "What can we learn?"	.654				.275
X38 - Challenges People to Try New Approaches	.632				.085
X37 - Describes a Compelling Image of the Future	.587				
X58 - Experiments and Takes Risks	.515				.261
X59 - Ensures that People Grow in their Jobs	.513			.429	
X53 - Makes Certain that Goals, Plans, and Milestones are Met	.416				.104
X55 - Finds Ways To Celebrate Accomplishments		.755			
X45 - Creatively Rewards People for Their Contributions		.695			
X60 - Gives Team Members Appreciation and Support		.624			
X35 - Praises People for a Job Well Done		.567			
X50 - Recognizes People for Commitment to Shared Values	.541	.541			
X34 - Develops Cooperative Relationships		.504		.486	
X36 - Makes Sure People Adhere to Agreed-on Principles			.763		
X56 - Is Clear about his/her Philosophy of Leadership			.690		
X41 - Follows Through on Promises and Commitments			.629		
X31 - Sets A Personal Example Of What Is Expected			.607		
X51 - Builds Consensus around Organization's Values			.573		
X54 - Gives People Choice about how to Do Their Work				.833	
X44 - Treats Others with Dignity and Respect				.642	
X49 - Supports Decisions Other People Make				.638	
X39 - Actively Listens to Diverse Points of Views				.551	
X40 - Expresses Confidence in People's Abilities		.469		.476	
X46 - Asks For Feedback on How his/her Actions Affect People's Performance			.429		.689
X42 - Appeals to Others to Share Dreams of the Future	.506				.575
X47 - Shows Others How Their Interests Can Be Realized	.472				.551

Extraction Method: Principal Component Analysis. Rotation Method: Varimax.

Five-factor solution.

Total Variance Explained

<u>Component</u>	<u>Rotation Sums of Squared Loadings</u>		
	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>
1	6.699	22.330	22.330
2	4.844	16.147	38.477
3	4.781	15.937	54.414
4	4.506	15.020	69.434
5	3.203	10.678	80.112

Extraction Method: Principal Component Analysis.

The above factor analysis demonstrated that the original 30 statement LPI-O instrument can be summated as 5 variables. Therefore, in the analysis, the researcher calculated summated scores for the 5 factors. To examine whether the current study produced a factor solution similar to the published LPI-O instrument, the researcher ran a 5 factor solution. The factor analysis indicated that the factor structure of the current sample of workers was reasonably consistent with the published solution. For the current 5 factor solution based on the original 30 statement LPI-O instrument, most of the 30 statements loaded in a consistent pattern. Twelve statements had patterns that were inconsistent. Of those 12, 7 were reasonably consistent with the original study in that they were the secondary loading for a particular factor. The other 5 had substantially higher loadings on factors other than the published results for previous studies. Based on this result, the researcher concluded that the factor solution for the current study was comparable to the previously published research, and that a 5 factor structure was reasonable. Therefore, the researcher calculated summated scores for the 5 factors. The analysis of hypotheses 2 and 3 is based on the summated scores for the 5 factors of the LPI.

Following the factor analysis of the LPI-O, for each of the five leadership attributes, the mean from the older worker-younger supervisor dyad was compared to the mean from the younger worker-younger supervisor dyad utilizing ANOVA. Table 6 summarizes the findings.

Table 6

Descriptives for Research Question #2 – Leadership Behaviors

<u>Descriptives – Leadership Behavior</u>				
<u>LPI Attributes</u>		<u>N</u>	<u>Mean</u>	<u>Std. Deviation</u>
Modeling the Way	YS-OW	30	5.03	2.558
	YS-YW	30	6.28	2.421
	Total	60	5.65	2.548
Inspiring a Shared Vision	YS-OW	30	4.70	2.705
	YS-YW	30	5.94	2.598
	Total	60	5.32	2.703
Challenging the Process	YS-OW	30	4.57	2.485
	YS-YW	30	5.89	2.601
	Total	60	5.23	2.609
Enabling Others to Act	YS-OW	30	4.94	2.597
	YS-YW	30	6.82	2.579
	Total	60	5.88	2.734
Encouraging the Heart	YS-OW	30	4.91	2.782
	YS-YW	30	6.06	2.710
	Total	60	5.48	2.784
ANOVA				
<u>LPI Attributes</u>			<u>F</u>	<u>Sig.</u>
Modeling the Way	Between Groups		3.779	.057
Inspiring a Shared Vision	Between Groups		3.303	.074
Challenging the Process	Between Groups		4.052	.049
Enabling Others to Act	Between Groups		7.850	.007
Encouraging the Heart	Between Groups		2.631	.110

Research Hypothesis #2 that *there is a statistically significant difference between the leadership behavior of the younger supervisor of an older worker versus the younger*

supervisor of a younger worker will first be discussed as individual attributes relating to the attributes measured by the LPI-O (Kouzes & Posner, 2003). Each attribute is measured by five questions that have been shown to be related to the attribute being measured. The first attribute to be measured, Modeling the Way, measured the leader's ability to set an example by clearly conveying their values to others and living by those values. In the older worker-younger supervisor dyad, the mean for this attribute was 5.03, while the mean for the younger worker-younger supervisor dyad was 6.28. Although the older worker rated their younger supervisor lower on this attribute than the younger worker did, there was not a statistically significant difference between the means of the two groups at the .05 level of significance, but it was very close: .057. The second attribute measured, Inspiring a Shared vision, measured the leader's ability to "envision the future ... and enlist others" (p. 13) in a common vision. For this attribute, the mean for the older workers' rating of their younger supervisor (4.70) was lower than the mean for the younger workers' rating of their supervisor (5.94), but there was no statistically significant difference at the .05 level of significance.

Attribute #3, Challenging the Process, measured the leader's propensity to "search for opportunities by seeking innovative ways to change, grow, and improve ... experiment and take risks" (p. 14), learning from mistakes, and emphasizing the importance of small victories. For this attribute, older workers rated their younger supervisor statistically significantly lower than younger workers rated their younger supervisors at the .049 level. The mean for the older workers' rating of their younger supervisor (4.57) was significantly lower than the mean for the younger workers' supervisor (5.89). For attribute #4, Enabling Others to Act, workers rated their supervisor

on their ability to foster cooperation and build trust by strengthening others. Older workers rated their younger supervisors statistically significantly lower than did younger workers of younger supervisors at the .007 level. The mean for the older workers' rating of their younger supervisor (4.94) was significantly lower than the mean for the younger workers' rating of their supervisor (6.82). For attribute #5, Encouraging the Heart, workers rated their supervisors on their ability to recognize contributions, show appreciation for accomplishments, and create a community spirit. Older workers rated their younger supervisor lower (4.91) than younger workers did their younger supervisors (6.06), but the differences were not statistically significant at the .05 level.

In each of the five measures of leadership attributes measured by the LPI-O (Kouzes & Posner, 2003), older workers consistently rated their younger supervisors lower than younger workers rated their younger supervisors, although only two attributes were statistically significant at the .05 level. The Research Hypothesis that *there is a statistically significant difference between the leadership behavior of the younger supervisor of an older worker versus the younger supervisor of a younger worker* was not confirmed in this research study utilizing the stated sample and the LPI-O survey questionnaire.

Research Question #3

The new General Self-Efficacy Scale (NGSE) (Chen et al., 2001) was administered to participants to address research question #3: *To what extent does subordinate self-efficacy contribute to the leadership behavior of the younger supervisor?* To determine if self-efficacy of the worker was related to the worker's perception of the leadership behavior of their supervisor, the researcher first performed a factor analysis of

the eight statements on the NGSE (Chen et al.). The results revealed that there was only one factor. Therefore, the researcher calculated the summated score for all eight questions and used it in the analysis. Table 7 presents the findings of the factor analysis.

Table 7

Factor Solution for Research Question #3 – Worker Self Efficacy

Unrotated Component Matrix – N = 120

<u>Statements</u>	<u>Factor Loadings</u>
X20 - Able to Successfully Overcome Many Challenges	.837
X23 - When Things Are Tough Can Perform Quite Well	.819
X19 - Can Succeed At Most Any Endeavor	.817
X18 - Can Obtain Important Outcomes	.816
X21 - Confident Can Perform Effectively on Many Tasks	.794
X17 - Certain Can Accomplish Difficult Tasks	.791
X22 - Can Do Most Tasks Very Well	.766
X16 - Able to Achieve Most Goals	.710

Extraction Method: Principal Component Analysis. 1 component extracted.

Total Variance Explained

<u>Component</u>	<u>Initial Eigenvalues</u>			<u>Extraction Sums of Squared Loadings</u>		
	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>
1	5.051	63.142	63.142	5.051	63.142	63.142
2	.702	8.778	71.920			
3	.556	6.944	78.864			
4	.477	5.957	84.820			
5	.366	4.573	89.393			
6	.342	4.277	93.670			
7	.292	3.645	97.315			
8	.215	2.685	100.000			

Extraction Method: Principal Component Analysis.

The factor analysis demonstrated that the self-efficacy statements form a single factor and can be summated as one variable.

Following Factor Analysis, the researcher compared the leadership behaviors of the supervisors, as perceived by the workers and rated on the LPI-O, with the worker's rating of their own self-efficacy. To do so, the workers initially were divided into two categories: high self-efficacy and low self-efficacy. High self-efficacy was operationally defined for this study as a rating above the mean NGSE score. Low self-efficacy was defined as a rating below the mean NGSE score. The high self-efficacy group consisted of 94 respondents and the lower self-efficacy group consisted of 26 respondents.

Next, the supervisor leadership behaviors for each of the five composite attributes were compared for the high and low self-efficacy groups. For example, the means of respondents' perceptions of their supervisors' leadership behavior in the high self-efficacy group (N = 94) were determined. Then the means of the respondents' perceptions of their supervisors' leadership behavior for the low self-efficacy group (N = 26) were determined. These two means were then statistically compared using ANOVA to determine if they were significantly different. The results of this comparison are reported in Table 8.

Table 8

Descriptives for Research Question #3 – Worker Self Efficacy and Leadership Behaviors

<u>Descriptives</u>				
<u>Five LPI Attributes</u>	Self-Efficacy (SE)		<u>Mean</u>	<u>Std. Deviation</u>
	<u>Clusters</u>	<u>N</u>		
Modeling the Way	High SE	94	6.25	2.557
	Lower SE	26	5.63	1.877
	Total	120	6.12	2.432
Inspiring a Shared Vision	High SE	94	5.91	2.592
	Lower SE	26	4.75	1.917
	Total	120	5.66	2.501
Challenging the Process	High SE	94	5.94	2.531
	Lower SE	26	4.79	2.063
	Total	120	5.69	2.474
Enabling Others to Act	High SE	94	6.75	2.682
	Lower SE	26	5.79	2.281
	Total	120	6.54	2.622
Encouraging the Heart	High SE	94	6.36	2.812
	Lower SE	26	5.16	1.866
	Total	120	6.10	2.675
Self-Efficacy Summated	High SE	94	8.80	.724
	Lower SE	26	6.60	1.347
	Total	120	8.32	1.272

ANOVA			
<u>Five LPI Attributes</u>		<u>F</u>	<u>Sig.</u>
Modeling the Way	Between Groups	1.315	.254
Inspiring a Shared Vision	Between Groups	4.550	.035
Challenging the Process	Between Groups	4.473	.037
Enabling Others to Act	Between Groups	2.753	.100
Encouraging the Heart	Between Groups	4.206	.042
Self-Efficacy Summated	Between Groups	123.226	.000
	Within Groups		
	Total		

The Research Hypothesis that *a relationship exists between subordinate self-efficacy and the supervisor's leadership behavior* was confirmed. The analysis was based on a two group comparison of high versus lower self-efficacy for the total sample of N = 120 workers. The researcher compared the mean scores of the perceived leadership behaviors of the supervisors, as rated on the LPI-O by the workers, to determine if a worker's self-efficacy is related to the worker's perception of their supervisor's leadership behavior. For the three attributes of Inspiring a Shared Vision, Challenging the Process, and Encouraging the Heart, there was a statistically significant relationship. That is, higher worker self-efficacy is associated with higher perceived supervisory leadership effectiveness. For the other two attributes of Modeling the Way and Enabling Others to Act, the higher self-efficacy group also reported a higher perception of supervisory leadership effectiveness but the differences were not statistically significant at the .05 level. The researcher concluded, therefore, that higher worker self-efficacy is associated with the worker's higher perceived supervisory leadership behaviors.

Research Question #4

Demographic data was collected as part of the research study to address Research Question #4: *Do the demographic attributes of a worker's age, gender, tenure, and educational level have a relationship to the leadership behavior of the younger supervisor?* To determine if there was a relationship between demographics and the leadership behavior of the younger supervisor, ANOVA was used to compare the perceptions of leadership behavior for supervisors that exhibited high versus low leadership behavior with the workers' demographic attributes of age and gender. Chi-Square was used to compare the perceptions of leadership behavior for supervisors that

exhibited high versus low leadership behavior with the workers' demographic attributes of tenure and educational level. First, this research question dealt only with workers who had younger supervisors so the analysis sample was 60 respondents. Next, the workers were divided into two categories: those who perceived their supervisors exhibited higher leadership performance behaviors versus those who perceived their supervisors exhibited lower leadership performance behaviors. Higher performance of younger supervisors was operationally defined for this study as a rating above the overall mean LPI-O score of 5.5139. Lower performance of younger supervisors was defined as a rating equal to or below the overall mean LPI-O score of 5.5139. The high performing and low performing groups were developed by using the LPI-O variables and calculating the overall mean performance score for younger supervisors, and then assigning individuals to groups on the basis of whether they were above or below the mean score of 5.5139. The two groups were then coded for analysis purposes as 1=High Performers and 2=Low Performers. The results of this analysis are presented in Table 9.

Table 9

Grouping Results of Younger Supervisors' Leadership Behavior

Group Statistics for Younger Supervisors' Leadership Behavior (LPI-O)

Groups		Mean	Std. Deviation	N
2=Low	Total Score – LPI-O	3.3689	1.44832	30
Performance	Model Factor	3.7222	1.88579	30
Group	Inspire Factor	3.0722	1.57305	30
Mean =< 5.5139	Challenge Factor	3.1222	1.59737	30
	Enable Factor	3.6611	1.81706	30
	Encourage Factor	3.2667	1.76362	30
1=High	Total Score – LPI-O	7.6589	1.26617	30
Performance	Model Factor	7.5833	1.39495	30
Group	Inspire Factor	7.5722	1.38456	30
Mean => 5.5140	Challenge Factor	7.3444	1.44101	30
	Enable Factor	8.1000	1.30985	30
	Encourage Factor	7.6944	1.58603	30
Total for Group	Total Score – LPI-O	5.5139	2.54913	60
	Model Factor	5.6528	2.54846	60
	Inspire Factor	5.3222	2.70312	60
	Challenge Factor	5.2333	2.60905	60
	Enable Factor	5.8806	2.73416	60
	Encourage Factor	5.4806	2.78381	60

Tests of Equality of Group Means – High Performers vs. Low Performers

	F	Sig.
Total Score – LPI-O	149.190	.000
Model Factor	81.287	.000
Inspire Factor	138.335	.000
Challenge Factor	115.558	.000
Enable Factor	117.812	.000

The above Tests of Equality of Group Means indicates there was a very highly statistically significant difference between the high performers versus lower performers at the .05 level.

Next, the demographic characteristics of the workers who had high versus lower performing supervisors were compared. For example, the average age of respondents who perceived their supervisors as high performers was compared with the average age of those who perceived their supervisors as lower performers. The two means were then statistically compared using ANOVA to determine if they were significantly different. There was no statistical significance at the .05 level between the two groups. Therefore, the age of the respondent did not contribute to the performance ratings of the supervisor.

In analyzing the demographic characteristic of *gender*, a dummy variable was set up in which the male respondents were coded as '0' and the female respondents were coded as '1.' Therefore, the mean of .70 can be interpreted that 70% of the respondents were female that rated their supervisor as a high performer and 30% of the respondents were male that rated their supervisor as a high performer. Of the supervisors that were rated as lower performers, the mean was .62 and can be interpreted that 62% of the respondents for this category were female and 38% were males. There was no statistical significance at the .05 level between the two groupings. Therefore, the gender of the respondent did not contribute to the performance ratings of the respondent's supervisor.

Table 10 below contains the analysis of the demographic characteristics of age and gender.

Table 10

Descriptives for Research Question #4 – Demographic Attributes of Age and Gender compared to Leadership Behavior

Descriptives – Younger Supervisors (N = 60)
(N=30 older worker-younger supervisor dyads; N=30 younger worker-younger supervisor dyads)

<u>Demographics</u>	<u>Younger Supervisors' Leadership Behaviors</u>	<u>N</u>	<u>Mean</u>	<u>Std. Deviation</u>
Age	High Performers	30	37.63	16.031
	Lower Performers	30	45.10	14.397
	Total	60	41.12	15.535
Gender	High Performers	30	.70	.466
	Lower Performers	29	.62	.494
	Total	59	.66	.477

Note: N=59 for gender because one case was eliminated as a result of missing data.

ANOVA

<u>Demographics</u>	<u>Comparisons</u>	<u>F</u>	<u>Sig.</u>
Age	Between Groups	3.625	.062
Gender	Between Groups	.403	.528

The demographic variable of *tenure* was analyzed by performing a Chi-Square test, which indicated that there was no statistical significance between the tenure of the respondent and their perception of their younger supervisor's leadership behavior. The demographic variable of *educational level* was analyzed by performing a Chi-Square test, which indicated that there was no statistical significance between the educational level of the respondent and their perception of their younger supervisor's leadership behavior.

Table 11 below contains the Chi-Square analyses of the demographic characteristics of tenure and educational level.

Table 11

Crosstabs: High Performers vs. Low Performers – Younger Supervisors

Crosstab – Tenure – Two Groups

Count

Performance Groups (Divided using mean of 5.5139)	Time at Current Employer		Total
	0 - 5 Years	6 or More Years	
Low Performance Group	21	9	30
High Performance Group	24	6	30
Total	45	15	60

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.800	1	.371
N of Valid Cases	60		

The minimum expected count is 7.50.

Crosstab – Educational Level - Three Groups

Count

Groups	Educational Level			Total
	High School or Some College	Undergraduate College Degree	Graduate Degree	
Low Performers	9	12	9	30
High Performers	12	11	7	30
Total	21	23	16	60

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.722	2	.697
N of Valid Cases	60		

The minimum expected count is 8.00.

The Research Hypothesis that *the leadership behavior of the younger supervisor is affected by the following worker demographic attributes: (a) age; (b) gender;*

(c) worker tenure; and (d) educational level was not confirmed in this research study.

There was no statistical significance at the .05 level of significance between the leadership behavior of the younger worker and the demographic attributes of age, gender, worker tenure or educational level; therefore, it is concluded that demographics did not contribute to the younger supervisor's high or lower performance ratings in this research study.

Discussion

Utilizing the LEI (Gurie, 2002) research instrument within the population of interest, Research Hypothesis #1 that *older workers with younger supervisors will expect more effective leadership than will younger workers with younger supervisors* was not confirmed. The researcher believes that older workers do not expect more from their younger supervisor because the older worker historically has had an older supervisor that was more experienced and more indoctrinated to the culture of the particular organization involved. The respondents to this survey were employed at a company of 100 or more employees. The researcher believes that in a much larger, corporate environment the older worker's expectations of their younger supervisor might, in fact, be much higher due to the educational level and corporate experience of the younger supervisor. In a much larger corporation, younger supervisors would more frequently be found to have advanced college degrees and be exposed to rotational or leadership development programs that expose them to all the many facets of organizational structure.

Research Hypothesis #2 that *there is a statistically significant difference between the leadership behavior of the younger supervisor of an older worker versus the younger supervisor of a younger worker* was not confirmed for the population being surveyed. The LPI-O (Kouzes & Posner, 2003) survey questionnaire was utilized to determine if older workers rated their younger supervisor's leadership behavior as more effective than did younger workers with younger supervisors. The researcher believes this is related to the previously discussed construct of the Pygmalion effect. The Pygmalion effect proposes that higher expectations in a leader-follower relationship elicit more effective performance and lower expectations elicit less effective performance. Since older workers in this research study did not expect more than younger workers expected from their younger supervisor, the younger supervisor did not perform at a higher level.

The NGSE (Chen et al., 2001) was administered to determine if *a relationship exists between subordinate self-efficacy and the supervisor's leadership behavior*. Research Hypothesis #3 that a worker's higher self-efficacy is associated with the worker's perception that their supervisor displays more effective leadership behavior was confirmed in this research study. The researcher believes that a worker with high self-efficacy would, in general, have a higher appraisal of their world, their organization, and their supervisor.

Demographic data was analyzed to determine if *the leadership behavior of the younger supervisor is affected by the following worker demographic attributes: (a) age; (b) gender; (c) worker tenure; and (d) educational level*. Research Hypothesis #4 was not confirmed for the population surveyed in this study. For this research study, the researcher believes that it is possible that the worker's demographic attributes did not

contribute to their perception of the younger supervisor's leadership behavior because many of these workers were not employed in a larger, corporate environment where the younger supervisor would be more highly educated and experienced.

Summary

The findings of the research study described and for the population surveyed were that older workers do not expect more than younger workers expect from their younger supervisors, older workers did not rate their younger supervisor's leadership behavior significantly different than younger workers did, the worker's self-efficacy did contribute to their perception of their younger supervisor's leadership behavior, and the demographic attributes of age, gender, worker tenure, and educational level did not contribute to the worker's perception of the leadership behavior of their younger supervisor. The researcher believes that further research in a larger, corporate environment could reveal additional data that is relevant to the study of an older worker with a younger supervisor. Chapter V will summarize the research findings, formulate conclusions, and make recommendations for future research relating to the older worker-younger supervisor dyad in the workplace.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary

The aging of America's workforce is a demographic trend that will have far reaching consequences in the future for corporations and businesses that will find it necessary to employ a much higher percentage of older workers than in the past. In addition, the proportion of young supervisors is increasing, which has reversed the tradition of younger workers reporting to older supervisors. As part of these demographic trends, there is an emerging dyadic relationship of an older worker with a younger supervisor. Little is known at the present time about this new relational dynamic: a supervisor-subordinate dyad made up of the older worker-younger supervisor relationship that is creating distinctive challenges in the workplace.

Although many negative myths and stereotypes exist about older workers' performance, significant research also exists supporting the fact that the older worker is an asset in many ways to organizational effectiveness. Studies have shown the older worker to be dependable and loyal (Peterson & Coberly, 1988), just as productive as younger workers (McEvoy & Cascio, 1989), and they cost less because they have fewer accidents and better attendance than younger workers (Rix, 1997). In addition, generational evidence shows that they enjoy working and are hard workers, take pride in their work achievements, have common sense, display emotional maturity, and think that retirement would be boring (Ramsey, 2003). In contrast, the younger generation, called Generation X, is reported to distrust big business and be less loyal, due in part to the experiences of their parents and grandparents: "Many Xers in their childhood saw their

workaholic parents suffer from fatigue, illness, substance abuse, and divorce. So Xers entered their career years less loyal to the company and more determined to work a reasonable workday and leave the office sharply at 5” (Gardner, 2005).

Research on relational demography has offered insight into the supervisor-subordinate relationship and shown that demographic similarities and differences, such as age, are important to the supervisor-subordinate dyad and the organization as a whole (Tsui & O’Reilly, 1989; Tsui et al., 1996; Vecchio, 1993). Previously reviewed research studies have shown that demographic similarity at times increases attraction within the supervisor-subordinate dyad (Tsui et al., 1996), while in some instances dissimilarity increases attraction. Research studies have also found that an employee’s and manager’s age both affect how the manager perceives an employee (Shore et al., 2003). Clearly the need to study relational demography in the workforce relative to age is becoming increasingly important as the workforce ages and the traditional age norms of the critical supervisor-subordinate relationship are confounded.

This new dyadic relationship between the older worker who reports to a younger supervisor offers new areas of research for the field of human resources development. Previous research has begun to reveal several of the issues that may be critical to understanding these relationships. There is also another construct that could open the door to an entirely new perspective in the older worker-younger supervisor dyadic relationship: the Pygmalion effect in reverse. It has been documented in this study and by numerous researchers that subordinate performance influences the leadership behavior of supervisors. In Eden’s (1984) study in a workplace setting, he proposed that a reverse Pygmalion effect exists in which a subordinate’s high performance may raise the

expectations of the supervisor, and, in turn, trigger better leadership on the part of the supervisor. Eden (1990) also postulated that a subordinate's high expectations toward their supervisor, called upward expectancy effects, could impact the effectiveness of the supervisor. Eden proposed that research of the Pygmalion effect has mainly been top down and involved the expectations of a person in authority about the performance of lower level subordinates; whereas research on the expectations of the subordinates toward their supervisor (Pygmalion in reverse) have been largely ignored.

The present research study was designed to add to the body of knowledge surrounding the supervisor-subordinate dyadic relationship and the construct of harnessing Pygmalion in reverse in the older worker-younger supervisor dyad.

Conclusions

Current demographic trends show that, while the workforce is growing older as a group, the proportion of younger supervisors is increasing as the need for current technological knowledge leads to the promotion of younger workers to positions in management at an earlier time in their careers. Although older workers suffer negative stereotypes in the workplace, research supports their positive attributes including dependability, loyalty, high work ethic, exemplary attendance, and good citizenship. As changing demographics point to an increase in older workers reporting to younger supervisors, research studies have confirmed the importance of the supervisor-subordinate relationship to organizations. In addition, studies of the Pygmalion and reverse Pygmalion effects have shown that supervisory expectations impact the performance of the subordinate (Eden, 1984) and that a subordinate's high performance or high expectations of their supervisor can have a positive impact on the leadership

behavior of the supervisor (Eden, 1990). Given what is known about the positive attributes of older workers, this researcher believes that older workers – in general – may also have high expectations of their younger supervisors, particularly in the areas of dependability, loyalty, and good citizenship behaviors. Although this was not confirmed in this particular research study, the researcher believes that additional research in larger, highly industrialized, and high tech organizations could reveal that the older worker does, in fact, have higher expectations, in a global sense, of any supervisor.

The Leadership Effectiveness Instrument (Gurie, 2002) was administered within the population of interest to test Research Hypothesis #1 that *older workers with younger supervisors will expect more effective leadership than will younger workers with younger supervisors*. For this research study, Hypothesis #1 was not confirmed. The respondents to this survey were employed at a company of 100 or more employees. The researcher believes that in a larger, corporate environment the older worker's expectations of younger supervisors might, in fact, be higher due to the educational level and corporate experience of the younger supervisor. In a much larger corporation, younger supervisors would more frequently be found to have advanced college degrees and be exposed to rotational or leadership development programs that expose them to the many facets of organizational structure.

Research Hypothesis #2 that *there is a statistically significant difference between the leadership behavior of the younger supervisor of an older worker versus the younger supervisor of a younger worker* was not confirmed for the population being surveyed. The Leadership Practices Inventory–Observer Version (Kouzes & Posner, 2003) survey questionnaire was administered to determine if older workers rated their

younger supervisor's leadership behavior as more effective than did younger workers with younger supervisors. The researcher believes that older workers with younger supervisors did not rate their leadership behavior higher than did younger workers due to the inexperience of the younger supervisor. The older worker may have a previously formed bias that leaders are made and not born, and that leadership must be developed over time. Another issue this researcher believes could have influenced the outcome of the present research is the work ethic of the older worker who actually thrives on hard work; this stringent work ethic of the older worker might lead them to have higher performance standards in general, leading them to rate their own supervisor's leadership behavior, or performance, on a different, more rigorous scale than younger workers would rate their supervisors.

The New General Self Efficacy scale (Chen et al., 2001) was administered to determine if *a relationship exists between subordinate self-efficacy and the supervisor's leadership behavior*. Research Hypothesis #3 that a worker's higher self-efficacy is associated with the worker's perception that their supervisor displays more effective leadership behavior was confirmed in this research study. The researcher believes that a worker with high self-efficacy would, in general, have a higher appraisal of their world, their organization, and their supervisor.

Demographic data was analyzed to determine if *the leadership behavior of the younger supervisor is affected by the following worker demographic attributes: (a) age; (b) gender; (c) worker tenure; and, (d) educational level*. Research Hypothesis #4 was not confirmed for the population surveyed in this study. For this research study, the

demographic attributes of age, gender, worker tenure and educational level did not contribute to the perception of the younger supervisor's leadership behavior.

The major findings of the previously described research study for the population surveyed were that older workers do not expect more than younger workers expect from their younger supervisors, older workers did not rate their younger supervisors' leadership behavior significantly different than younger workers did, the workers' self-efficacy did contribute to their perception of their younger supervisors' leadership behavior, and the demographic attributes of age, gender, worker tenure, and educational level did not contribute to the worker's perception of the leadership behavior of their younger supervisor.

Significance of Study to the Field of Human Resource Development

Much has been made of the impact of changing demographics in the workforce and the impact of older workers on organizations. Unfortunately, negative stereotypes of the older worker have too often dominated the concerns of both management and Human Resource Development professionals, whereas significant research supports the fact that older workers are an asset in many ways to organizational effectiveness. The concept of harnessing Pygmalion in reverse in the older worker-younger supervisor dyad casts a new light on these traditional concerns and has important implications for the field of Human Resource Development. If future research confirms that characteristics of older workers lead them to expect more from a supervisor, thus triggering the Pygmalion effect in reverse, Human Resource Development professionals might harness this power to increase performance by designing and implementing new expectancy training methods

that would bring about more effective leadership, a new appreciation for the value of older workers, and contribute to the overall success of the organization.

Future research based on the concept of harnessing Pygmalion in reverse in the older worker-younger supervisor dyad is necessary to the field of Human Resource Development to increase our understanding of this new demographic dynamic in organizations. The increased understanding of the potential performance effects emanating from these relationships could help Human Resource Development professionals to tap this previously hidden potential and enhance performance in ways that positively impact organizations of the future. Future research is needed to identify characteristics of the older worker that might cause them to elicit more effective leadership behavior from their younger supervisors. Future studies of the reverse Pygmalion effect in the older worker-younger supervisor dyad could contribute to the field of Human Resource Development in the following areas: (1) enlighten organizations of the value of older workers; (2) enable organizations to harness Pygmalion in reverse in the younger supervisor-older subordinate dyad; (3) contribute to new expectancy training methods for both older and younger workers that would impact supervisory leadership behavior, and (4) disclose new expectancy training methods that could add value to the organization by enhancing leadership behavior and performance of managers. If future research supports the reverse Pygmalion effect in the older worker-younger supervisor dyad, Human Resource Development professionals would have a new performance lever to add to their performance improvement arsenal. Future research might lead to new ways of improving the performance and motivation of both workers and supervisors, thus developing a company's best resource, their employees.

Recommendations

The researcher believes that further research in a larger, corporate environment could reveal additional data that is relevant to the study of an older worker with a younger supervisor. In addition, a qualitative study in which the researcher could explore the older workers' global expectations of any supervisor, while observing the leadership behavior and performance of their supervisor, could lead to additional important data relevant to this newly emerging dyad of an older worker with a younger supervisor.

Future research should address the issue of worker expectations from a global perspective. Whereas this research study surveyed the workers' expectations of their immediate supervisor, the researcher believes that the workers' feelings toward their immediate supervisor were reflected in their responses to the survey questionnaire regarding expectations. For example, if an older worker reported to a younger, inexperienced supervisor with a low work ethic, the older worker would naturally expect less of that supervisor; thus the survey results would have reflected those lower expectations. Future research involving the expectations of the older worker should address this particular issue from a global aspect so that the measure reflects the true expectations of the older worker toward any supervisor, in general, rather than being influenced by a specific supervisor.

The changing demographic composition of the workforce makes future research studies of the older worker and the theories of Pygmalion in reverse and relational demography extremely important to the field of Human Resource Development. These theories can be helpful in defining the impact of upward expectancy effects in the newly emerging supervisor-subordinate dyadic relationship represented by an older worker with

a younger supervisor. This research study, as previously described and for the designated population, did not confirm the researcher's hypothesis that older workers have higher expectations than do younger workers of their younger supervisor, thus harnessing Pygmalion in reverse and bringing about better leadership behavior from their supervisor. However, the researcher believes that if this research study leads to further scholarly research of the reverse Pygmalion effect in the older worker-younger supervisor dyad, the study can be deemed a success.

REFERENCES

- Argyris, C. (1990). *Overcoming organizational defenses: Facilitating organizational learning*. Boston: Allyn & Bacon.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, N.J.: Prentice Hall.
- Bandura, A. (1986). *Social foundations of thought and action: A social-cognitive view*. Englewood Cliffs, NJ: Prentice-Hall.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.
- Bass, B. M. (1990) *Handbook of leadership: A survey of theory and research*. New York: Free Press.
- Birdi, K., & Pennington, J. (1997). Ageing and errors in computer-based work. An observational field study. *The British Psychological Society, 70*, 35-47.
- Bronte, L., & Pifer, A. (Eds.). (1986). *Our aging society: Paradox and promise*. New York: Carnegie Corporation.
- Brown, A. D. & Thornborrow, W. T. (1996). Do organizations get the followers they deserve? *Leadership & Organization Development Journal, 17(1)*, 5-11.
- Burns, J. M. (1978). *Leadership*. New York: Harper & Row.
- Byrne, D. 1971. *The Attraction Paradigm*. New York: Academic Press.
- Chen, G., Gully, S. M., & Eden, D. (2001, January). Validation of a new general self-efficacy scale. *Organizational Research Methods, 4(1)*, 62-83.
- Cherrington, D. J., Condie, S. J., & England, J. L. (1979). Age and work values. *Academy of Management Journal, 22*, 617-623.

- Conger, J. A. & Kanungo, R. N. (1987). Toward a behavioral theory of charismatic leadership in organizational settings. *Academy of Management Review*, 12(4), 637-647.
- Conger, J. A. & Kanungo, R. N. (2000, November). Charismatic leadership and follower effects. *Journal of Organizational Behavior*, 21(7), 747-753.
- Crampton, S., & Hodge, J. (1996, Summer). Transition—Ready or not: The ageing of America's work force. *Public Personnel Management*, 25(2), 243-256.
- Crawford, K. S., Thomas, E. D., & Fink, J. J. (1980). Pygmalion at sea: Improving the work effectiveness of low performers. *The Journal of Applied Behavioral Science*, 16(4), 482-505.
- Curphy, G. J. (1998). *Leadership Personality Survey: User's Guide*. Minneapolis, MN: Personnel Decisions International.
- Dansereau, F., Jr., Cashman, J., & Graen, G. (1973). Instrumentality theory and equity theory as complementary approaches in predicting the relationship of leadership and turnover among managers. *Organizational Behavior and Human Performance*, 10, 184-200.
- DeSimone, R. L., & Harris, D. M. (1998). *Human Resource Management*. Fort Worth: The Dryden Press.
- Dienesch, R. M., & Liden, R. C. (1986). Leader-member exchange model of leadership: A Critique and further development. *Academy of Management Review*, 11, 618-634.
- Drucker, P. E. (1997, September-October). The future that has already happened. *Harvard Business Review*, 20-24.

- Eden, D. (1984). Self-fulfilling prophecy as a management tool: Harnessing Pygmalion. *Academy of Management Review*, 9(1), 64-73.
- Eden, D. (1990). *Pygmalion in management*. Lexington, Ma: Lexington Books.
- Eden, D. (1992). Leadership and expectations: Pygmalion effects and other self-fulfilling prophecies in organizations. *Leadership Quarterly*, 3(4), 271-305.
- Eden, D. (2000). Implanting Pygmalion leadership style through workshop training: Seven field experiments. *Leadership Quarterly*, 11(2), 171-211.
- Eden, D. (2003). Self-fulfilling prophecies in organizations. *Organizational Behavior: The State of the Science*, 2, 107-122. Manwah, NJ: Lawrence Erlbaum.
- Eden, D., & Ravid, G. (1982). Pygmalion versus self-expectancy: Effects of instructor- and self-expectancy on trainee performance. *Organizational Behavior and Human Performance*, 30, 351-364.
- Eden, D., & Shani, A. B. (1982). Pygmalion goes to boot camp: Expectancy, leadership, and trainee performance. *Journal of Applied Psychology*, 67(2), 194-199.
- Farris, G. F. & Lim, F. G., Jr. (1969). Effects of performance on leadership cohesiveness, influence, satisfaction, and subsequent performance. *Journal of Applied Psychology* (53), 490-497.
- Fisher, C. D. (1986). Organizational socialization: An integrative review. In K. Rowland & G. Ferris (Eds.), *Research in personnel and human resources management*, (4), 101-145. Greenwich, CT: JAI Press.
- Fitter, F. (1994, January 10). Careers. *Boston Herald*, p. 37.
- Fullerton, H. N., Jr. & Toossi, M. (2001, November). Labor force projections to 2010: steady growth and changing composition. *Monthly Labor Review*, p. 21-38.

- Gardner, M. (2005, January 3). Meet the young(er) boss; Older Americans are increasingly likely to work for someone younger. *The Christian Science Monitor*, p. 13.
- Gilbert, G. R., Collins, R. W., & Brenner, R. (1990, Summer). Age and leadership effectiveness: From the perceptions of the follower. *Human Resource Management, 29*, 2, 187-196.
- Gilbert, G. R., & Hyde, A. C. (1988). Followership and the federal worker. *Public Administration Review, 962-968*.
- Graen, G., & Cashman, J. (1975). A role-making model of leadership in formal organizations: A development approach. In J. G. Hunt & L. L. Larson (Eds.), *Leadership frontiers*, (pp. 143-165). Kent, OH: Kent State University Press.
- Graen, G., Novak, M. A., & Sommerkamp, P. (1982). The effects of leader-member exchange and job design on productivity and satisfaction: Testing a dual attachment model. *Organizational Behavior and Human Performance, 30*, 109-131.
- Gurie, J. R. (2002, April). The relationship between perceived leader behavior and alcohol consumption among university students who are members of social fraternities. Doctoral dissertation, Louisiana State University, LA. (URN etd-0417102-2 01343).
- Hair, J. F., Jr., Black, W. C., Babin, B. J., Anderson, R. E. & Tatham, R. L. (2006). *Multivariate Data Analysis* (6th Ed.). Upper Saddle River, New Jersey: Pearson/Prentice Hall.

- Hansen, T. L., Jr. (1987, Winter). Management's Impact on First Line Supervisor Effectiveness, *SAM Advanced Management Journal*, 52, 41-45.
- Herold, D. M. (1977). Two-way influence processes in leader-follower dyads. *Academy of Management Journal*, 20(2), 224-237.
- Hirsch, J. S. (1990, February 26). Older Workers Chafe Under Young Managers. *The Wall Street Journal*, p. B1.
- Hollander, E. P. & Julian, J. W. (1969). Contemporary trends in the analysis of leadership processes. *Psychological Bulletin* (71), 387-397.
- Kelley, R. E. (1992). *The power of followership: How to create leaders people want to follow, and followers who lead themselves*. New York: Currency and Doubleday.
- Kierein, N. M. & Gold, M. A. (2000). Pygmalion in work organizations: a meta-analysis. *Journal of Organizational Behavior*, 21, 913-928.
- Klein, K. J., & House, R. J. (1995). On fire: Charismatic leadership and levels of analysis. *Leadership Quarterly*, 6(2), 183-198.
- Kouzes, J. M. & Posner, B. Z. (2003). *Leadership Practices Inventory Facilitator's Guide* (3rd Ed.) San Francisco, CA: Pfeiffer, An Imprint of John Wiley & Sons.
- Lawrence, B. S. (1988). New wrinkles in the theory of age: demography, norms, and performance ratings. *Academy of Management Journal*, 31(2), 309-337.
- Leong, T. T. L. (1992). Review of the leadership practices inventory. *Mental Measurements Yearbook*, (12), 1-4.
- Livingston, J. S. (1969). Pygmalion in management. *Harvard Business Review*, 47(4), 81-89.

- Livingston, J.S. (2002). Pygmalion in management. How to get the best from employees? Expect it. *HBR On Point*, 1-13.
- Loftus, P. (1995). The Pygmalion effect. *Industrial and Commercial Training*, 27(4), 17-20.
- Lowin, A., & Craig, J. R. (1968). The influence of level of performance on managerial style: an experimental object-lesson in the ambiguity of correlational data. *Organizational Behavior and Human Performance*, 3, 440-458.
- McEvoy, G. M. & Cascio, W. F. (1989). Cumulative evidence of the relationship between employee age and job performance. *Journal of Applied Psychology*, 74(1), 11-17.
- McNatt, D. B. (2000). Ancient Pygmalion joins contemporary management: A meta-analysis of the result. *Journal of Applied Psychology*, 85(2), 314-322.
- Meindl, J. R., & Ehrlich, S. B. (1987). The romance of leadership and the evaluation of organizational performance. *Academy of Management Journal*, 30(1), 91-109.
- Merton, R. K. (1948). The self-fulfilling prophecy. *The Antioch Review*, 8, 193-210.
- Murphy, D., Campbell, C., & Garavan, T. N. (1999). The Pygmalion effect reconsidered: its implications for education, training and workplace learning. *Journal of European Industrial Training*, 23(4/5), 238-250.
- Nolan, J. S., & Harty, H. F. (2001). Followership – Leadership. *Education*, 104, 3.
- Perry, E. L., Kulik, C. T., & Zhou, J. (1999). A closer look at the effects of subordinate-supervisor age differences. *Journal of Organizational Behavior*, 20, 341-357.

- Peterson, D., & Coberly, S. (1988). The older worker: Myths and realities. In R. Morris & S. A. Bass (Eds.), *Retirement reconsidered: Economic and social roles for older people*, 116-128. New York: Springer Publishing Co.
- Porter, L. W., Lawler, E. E., & Hackman, J. B. (1975) *Behavior in Organizations*. New York: McGraw Hill.
- Ramsey, R. D. (2003, June). Tapping the strengths of older workers. *SuperVision*, 64(6), 9-12.
- Reingold, J. (1999, September 20). Brain drain. *Business Week*. 113-126.
- Rix, S. E. (1997). IMR 101: Workforce age composition. *Comprehensive Issue Management Report*. St. Petersburg, FL: Human Resource Institute, Eckerd College.
- Rosenthal, R. (1973). The Pygmalion effect lives. *Psychology Today*, 7(4), 56-63.
- Rosenthal, R. (1985). From unconscious experimenter bias to teacher expectancy effects. In J. G. Dusek, V. C. Hall, & W. J. Meyer (Eds.), *Teacher expectancies*, (pp. 37-65). Hillsdale, NJ: Erlbaum.
- Rosenthal, R., & Jacobsen, L. (1968). *Pygmalion in the classroom*. New York: Holt, Rinehart & Winston.
- Salomon, G. (1981). Self-fulfilling and self-sustaining prophecies and the behaviors that realize them. *American Psychologist*, 36, 1452-1453.
- Scandura, T. A., & Graen, G. (1984) Moderating effects of initial leader-member exchange status on the effects of a leadership intervention. *Journal of Applied Psychology*, 69, 428-436.

- Schrank, W. R. (1968). The labeling effect of ability grouping. *The Journal of Education Research*, 62(2),51-52.
- Shamir, B., House, R. J., & Arthur, M. B. (1993, November). The motivational effects of charismatic leadership: A self-concept based theory. *Organization Science*, 4(4), 577-594.
- Shore, L. M., Cleveland, J. N., & Goldberg, C. B. (2003). Work attitudes and decisions as a function of manager age and employee age. *Journal of Applied Psychology*, 99(3), 529-537.
- Sopranos, K. (1999, January 24). It's the age of the younger boss. Sparks may fly when older workers are asked to report to a younger supervisor. *Chicago Tribune*, p. 1.
- Stogdill, R. M. (1963, January 1). *Manual for the leader behavior description questionnaire – form XII: an experimental revision*. Ohio State University: Bureau of Business Research, College of Commerce and Administration.
- Tanoff, G. F. & Barlow, C. B. (Summer 2002). Leadership and followership: Same animal, different spots? *Consulting Psychology Journal: Practice and Research*, 54(3), 157-165.
- Tsui, A.S., Egan, T.D., & O'Reilly, C.A. (1992). Being different: Relational demography and organizational attachment. *Administrative Science Quarterly*, 37(4), 549-580.
- Tsui, A. S. & O'Reilly, C. A. (1989). Beyond simple demographic effects; the importance of relational demography in superior-subordinate dyads. *Academy of Management Journal*, 32(2), 402.

- Tsui, A. S., Xin, K. R., & Egan, T. D. (1996). Relational Demography: The missing link in Vertical Dyad Linkage. In S. L. Jackson & M. N. Ruderman (Eds.), *Diversity in Work Teams: Research Paradigms for a Changing Workplace* (pp. 97-129). Washington, DC, American Psychological Association.
- Vecchio, R. P. (March 1993). The impact of differences in subordinate and supervisor age on attitudes and performance. *Psychology and Aging*, 8(1), 112.
- Vroom, V. H. (1964). *Work and motivation*. New York: John Wiley & Sons.
- White, S. S. & Locke, E. A. (Fall 2000). Problems with the Pygmalion effect and some proposed solutions. *Leadership Quarterly*, 11(2), 389-415.
- Yukl, G. (2002). *Leadership in Organizations* (5th Ed.). Upper Saddle River, New Jersey: Prentice Hall

Appendix A
Barry University
Cover Letter

Dear Research Participant:

Your participation in a research project is requested. The title of the study is *Harnessing Pygmalion in Reverse: The Effect of Older Workers' Expectations on their Younger Supervisors' Leadership Behavior*. The research is being conducted by Mary Collins, a student in the Human Resources Development department at Barry University, and is seeking information that will be useful in the field of Human Resources. The aims of the research are to contribute to the knowledge of the reverse Pygmalion effect in the older worker-younger supervisor dyad. In accordance with these aims, the following procedures will be used: data will be collected anonymously and analyzed by the researcher. The research will be published in a doctoral dissertation. We anticipate the number of participants to be 120.

If you decide to participate in this research, you will be asked to answer demographic questions and survey questions about your expectations of your immediate supervisor, your self-efficacy, and the leadership behavior of your immediate supervisor. The survey will take approximately 10 minutes to complete.

Your consent to be a research participant is strictly voluntary and should you decline to participate or should you choose to drop out at any time during the study, there will be no adverse effects on your employment. There are no known risks to you as a participant. The benefits to you for participating in this study are that it will focus your attention on the importance of the relationship with your immediate supervisor and how you interact with her/him. Your participation in this study may also help our understanding of the older worker-younger supervisor dyad.

As a research participant, information you provide will be kept anonymous, that is, no names or other identifiers will be collected on any of the instruments used. Data will be kept in a locked file in the researcher's office. By completing and returning this survey you have shown your agreement to participate in the study.

If you have any questions or concerns regarding the study or your participation in the study, you may contact Mary Collins at (407) 892-5637, my supervisor, Dr. Betty Hubschman, at (305) 899-3724, or the Institutional Review Board point of contact, Ms. Nildy Polanco, at (305) 899-3020.

Thank you for your participation.

Sincerely,

Mary Frances Hair Collins

Appendix B

Eligibility Question

1. Do you work at a company that employs at least 100 workers? Yes_____ No_____

Demographic Information

Please answer the following demographic questions so that we may obtain some general information about you.

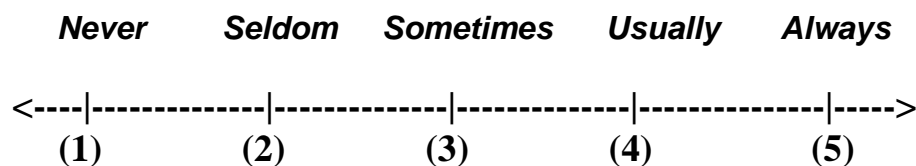
1. Your age: _____
2. Gender: 1. Female
2. Male
3. Length of Time Employed by Present Employer: 1. 1 - 5 Years
2. 6 - 10 Years
3. Over 10 Years
4. Educational Level: 1. Less than high school diploma
2. High school diploma
3. Some college
4. Undergraduate college degree
5. Graduate degree (Master's, Ph.D., J.D., M.D.)
5. Estimate the age of your immediate supervisor: _____

Appendix C

Leadership Effectiveness Instrument (LEI)

Please read over the following instrument and answer it to the best of your ability

Instructions: Please use the scale below to rate your agreement (or disagreement) with each of the following statements about your supervisor as an individual. Select only one response for each statement.



I expect my supervisor to be:

1. _____ overall a strong leader.
2. _____ honest and sincere with others.
3. _____ responsible and dependable.
4. _____ an effective communicator.
5. _____ a good listener.
6. _____ a good motivator.
7. _____ a good encourager.
8. _____ confident.
9. _____ decisive.
10. _____ cooperative.
11. _____ organized.
12. _____ an effective leader for our organization.

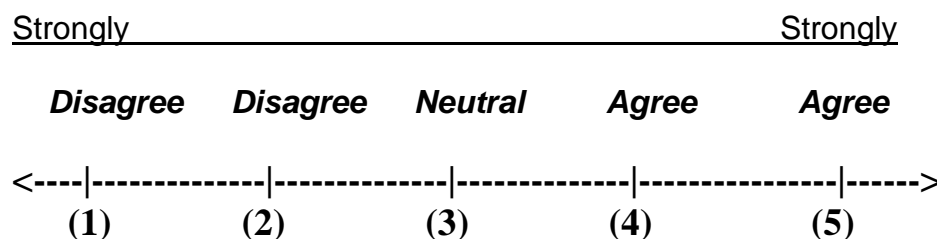
Notes:

- (1) Permission was granted by Dr. J. R. Gurie to use this instrument for research purposes and to change the wording of the introductory sentence to, "I expect my supervisor to be".
- (2) For consistency, a ten-point Likert scale was utilized in all three surveys.

Appendix D

General Self-Efficacy Scale (Chen, Gully, & Eden, 2001, ORM)

Please use the scale below to rate your agreement (or disagreement) with each of the following statements about yourself .



1. _____ I will be able to achieve most of the goals that I have set for myself.
2. _____ When facing difficult tasks, I am certain that I will accomplish them.
3. _____ In general, I think that I can obtain outcomes that are important to me.
4. _____ I believe I can succeed at most any endeavor to which I set my mind.
5. _____ I will be able to successfully overcome many challenges.
6. _____ I am confident that I can perform effectively on many different tasks.
7. _____ Compared to other people, I can do most tasks very well.
8. _____ Even when things are tough, I can perform quite well.

Notes:

- (1) Permission granted by Dr. G. Chen to use questionnaire for research purposes
- (2) For consistency, a ten-point Likert scale was utilized in all three surveys.

Appendix E

Leadership Practices Inventory-Observer (Kouzes & Posner, 2003)

Please read the thirty statements below describing various leadership behaviors. Read each statement carefully, and using the rating scale below, ask yourself:

“How frequently does my supervisor engage in the behavior described?”

Rating Scale

1 = Almost Never	6 = Sometimes
2 = Rarely	7 = Fairly Often
3 = Seldom	8 = Usually
4 = Once in a While	9 = Very Frequently
5 = Occasionally	10 = Almost Always

For each statement, decide on a response and then record the corresponding number in the space to the left of the statement.

1. ____ Sets a personal example of what he/she expects of others.
2. ____ Talks about future trends that will influence how our work gets done.
3. ____ Seeks out challenging opportunities that test his/her own skills and abilities.
4. ____ Develops cooperative relationships among the people he/she works with.
5. ____ Praises people for a job well done.
6. ____ Spends time and energy making certain that the people he/she works with adhere to the principles and standards that we have agreed on.
7. ____ Describes a compelling image of what our future could be like.
8. ____ Challenges people to try out new and innovative ways to do their work.
9. ____ Actively listens to diverse points of view.
10. ____ Makes it a point to let people know about confidence in their abilities.
11. ____ Follows through on promises and commitments he/she makes.
12. ____ Appeals to others to share an exciting dream of the future.
13. ____ Searches outside the formal boundaries of his/her organization for innovative ways to improve what we do.
14. ____ Treats others with dignity and respect.

15. _____ Makes sure that people are creatively rewarded for their contributions to the success of projects.
16. _____ Asks for feedback on how his/her actions affect other people's performance.
17. _____ Shows others how their long-term interests can be realized by enlisting in a common vision.
18. _____ Asks, "What can we learn?" when things don't go as expected.
19. _____ Supports the decisions that people make on their own.
20. _____ Publicly recognizes people who exemplify commitment to shared values.
21. _____ Builds consensus around a common set of values for running our organization.
22. _____ Paints the "big picture" of what we aspire to accomplish.
23. _____ Makes certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs we work on.
24. _____ Gives people a great deal of freedom and choice in deciding how to do their work.
25. _____ Finds ways to celebrate accomplishments.
26. _____ Is clear about his/her philosophy of leadership.
27. _____ Speaks with genuine conviction about the higher meaning and purpose of our work.
28. _____ Experiments and takes risks, even when there is a chance of failure.
29. _____ Ensures that people grow in their jobs by learning new skills and developing themselves.
30. _____ Gives the members of the team lots of appreciation and support for their contributions.

Notes:

- (1) From Leadership Practices Inventory, Third Edition, Observer, by J. M. Kouzes and B. Z. Posner, 2003, San Francisco, CA: Pfeiffer.
- (2) (2) An LPI-O instrument was purchased for each participant utilized in this study.
- (3) For consistency, a ten-point Likert scale was utilized in all three surveys.

Appendix F

Expectations Scale

Leadership Effectiveness Instrument (Gurie, 2002)

RELIABILITY ANALYSIS - SCALE (ALPHA)

		Mean	Std. Dev	Cases
1.	Q1	8.1083	2.4212	120.0
2.	Q2	7.9833	2.0903	120.0
3.	Q3	8.6083	2.3165	120.0
4.	Q4	7.8000	2.4170	120.0
5.	Q5	8.4750	2.1379	120.0
6.	Q6	8.3333	2.3275	120.0
7.	Q7	7.8583	2.3418	120.0
8.	Q8	8.1167	2.3911	120.0
9.	Q9	7.7750	2.4235	120.0
10.	Q10	7.5000	2.5272	120.0
11.	Q11	7.6833	2.3904	120.0
12.	Q12	8.0083	2.2247	120.0
13.	Q13	8.1083	2.3721	120.0
14.	Q14	7.8833	2.2610	120.0
15.	Q15	7.7667	2.3217	120.0

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
Q1	111.9000	776.0235	.8944	.9717
Q2	112.0250	801.9405	.8127	.9731
Q3	111.4000	790.4437	.8193	.9729
Q4	112.2083	790.3008	.7829	.9736
Q5	111.5333	787.9317	.9167	.9715
Q6	111.6750	797.3473	.7590	.9739
Q7	112.1500	788.1454	.8282	.9728
Q8	111.8917	776.6016	.9020	.9716
Q9	112.2333	779.6762	.8643	.9722
Q10	112.5083	772.2688	.8819	.9719
Q11	112.3250	780.0363	.8746	.9720
Q12	112.0000	809.7143	.6940	.9749
Q13	111.9000	775.9731	.9151	.9714
Q14	112.1250	790.6145	.8400	.9726
Q15	112.2417	797.5461	.7595	.9739

RELIABILITY ANALYSIS - SCALE (ALPHA)**Reliability Coefficients**

N of Cases = 120.0

N of Items = 15

Alpha = .9745

Appendix G

Leadership Behavior Scales

Leadership Practices Inventory – Observer Version (Kouzes & Posner, 2003)

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

		Mean	Std. Dev	Cases
1.	Q31	6.5417	2.9673	120.0
2.	Q32	6.2333	2.8513	120.0
3.	Q33	5.7250	2.8667	120.0
4.	Q34	6.4167	2.9777	120.0
5.	Q35	6.6333	2.9759	120.0
6.	Q36	6.4167	2.7853	120.0
7.	Q37	5.2083	2.8429	120.0
8.	Q38	5.7917	2.6848	120.0
9.	Q39	6.4917	2.9420	120.0
10.	Q40	6.5667	2.9125	120.0
11.	Q41	6.9000	2.8326	120.0
12.	Q42	5.2833	2.8907	120.0
13.	Q43	5.4750	2.8402	120.0
14.	Q44	7.0750	3.0353	120.0
15.	Q45	5.4333	2.8865	120.0
16.	Q46	4.8000	3.0226	120.0
17.	Q47	5.3583	2.8189	120.0
18.	Q48	5.5833	3.2632	120.0
19.	Q49	6.3417	2.7424	120.0
20.	Q50	6.1333	3.0180	120.0
21.	Q51	5.9417	2.8174	120.0
22.	Q52	5.9000	3.0025	120.0
23.	Q53	6.2083	2.6942	120.0
24.	Q54	7.0333	2.8044	120.0
25.	Q55	5.7833	3.0601	120.0
26.	Q56	6.1083	2.9557	120.0
27.	Q57	5.9917	3.0856	120.0
28.	Q58	5.3583	2.9012	120.0
29.	Q59	5.9083	2.9874	120.0
30.	Q60	6.0500	3.0149	120.0

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Appendix G (continued)

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
Q31	174.1500	4819.5067	.7760	.9827
Q32	174.4583	4864.3008	.6929	.9830
Q33	174.9667	4831.6627	.7732	.9827
Q34	174.2750	4771.2431	.8943	.9822
Q35	174.0583	4787.1814	.8547	.9823
Q36	174.2750	4854.8229	.7354	.9829
Q37	175.4833	4814.8232	.8240	.9825
Q38	174.9000	4819.7546	.8612	.9824
Q39	174.2000	4774.4471	.8975	.9822
Q40	174.1250	4813.5389	.8066	.9826
Q41	173.7917	4814.7546	.8274	.9825
Q42	175.4083	4815.0335	.8092	.9825
Q43	175.2167	4835.6501	.7704	.9827
Q44	173.6167	4787.6669	.8360	.9824
Q45	175.2583	4809.1512	.8256	.9825
Q46	175.8917	4837.5092	.7168	.9830
Q47	175.3333	4818.2745	.8223	.9825
Q48	175.1083	4749.0890	.8633	.9823
Q49	174.3500	4816.1790	.8520	.9824
Q50	174.5583	4773.5932	.8760	.9822
Q51	174.7500	4813.9034	.8343	.9824
Q52	174.7917	4816.9058	.7728	.9827
Q53	174.4833	4827.1258	.8377	.9824
Q54	173.6583	4882.1596	.6583	.9832
Q55	174.9083	4806.9075	.7818	.9827
Q56	174.5833	4849.8081	.7032	.9830
Q57	174.7000	4803.5059	.7832	.9827
Q58	175.3333	4847.8039	.7223	.9829
Q59	174.7833	4772.0199	.8894	.9822
Q60	174.6417	4771.5932	.8819	.9822

Reliability Coefficients

N of Cases = 120.0

N of Items = 30

Alpha = .9831

Appendix H

Self Efficacy Scales**New General Self-Efficacy Scale (NGSE) (Chen et al, 2001)****RELIABILITY ANALYSIS - SCALE (ALPHA)**

		Mean	Std. Dev	Cases
1.	Q16	7.9167	1.7080	120.0
2.	Q17	8.1750	1.6686	120.0
3.	Q18	8.3500	1.6017	120.0
4.	Q19	8.5083	1.6140	120.0
5.	Q20	8.2833	1.5993	120.0
6.	Q21	8.6750	1.5072	120.0
7.	Q22	8.3833	1.5073	120.0
8.	Q23	8.2833	1.6150	120.0

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
Q16	58.6583	81.2352	.6281	.9130
Q17	58.4000	79.4017	.7164	.9052
Q18	58.2250	79.5036	.7499	.9023
Q19	58.0667	79.3569	.7487	.9024
Q20	58.2917	78.9478	.7736	.9003
Q21	57.9000	81.5529	.7224	.9047
Q22	58.1917	82.2571	.6935	.9070
Q23	58.2917	79.2672	.7516	.9021

Reliability Coefficients

N of Cases = 120.0

N of Items = 8

Alpha = .9156